An Exploration of Contact Centre Service Management Within a Service Science Context

PARIKH, Vishal <http://orcid.org/0000-0002-0739-7544>

SHEFFIELD HALLAM UNIVERSITY

An Exploration of Contact Centre Service Management Within a Service Science Context

Vishal Parikh

A thesis submitted in partial fulfilment requirements of
Sheffield Hallam University
for the degree of Doctor of Philosophy

January 2018

Author's Declaration

I, Vishal Parikh, the author of this thesis certify that this thesis is my own work and confirm that the work undertaken towards the above named Thesis has been conducted in accordance with the SHU Principles of Integrity in Research and the SHU Research Ethics Policy.

I declare that NONE of the material contained in the thesis has been used in any other submission for an academic award.

I declare that I will submit an electronic version of the thesis to be lodged within the Sheffield Hallam Research Archive (SHURA) and Electronic Thesis On-line Service (EThOS) in order to increase dissemination of research findings.

Abstract

This research explores the strategic purpose and value of contact centres and service management practice within a service science context. Within this context, contact centre services were viewed as evolving service systems that are too complex to be understood using 'one-best' management paradigm. The literature of the last two decades revealed four irreconcilable strands of research on contact centres: cost focused, quality focused, hybrid, and systems' thinking oriented contact centres. However, the alignment of value propositions of contact centres with the nature of customer service work performed and service management practice adopted in these centres remains to be clarified. Within the emerging service science discipline, this issue deserved further attention given the evolving importance of contact centres to the organisations and customers.

A qualitative approach was undertaken to address the aim and research questions set out for this study. Semi structured interviews were conducted with elites - independent consultants that design contact centre services for telecommunication services organisations and senior managers from one of the biggest telecommunications service providers in the UK. In addition, secondary data sources including industry reports and organisation specific documentation were used to triangulate the findings of this study.

Thematic analysis of the data revealed that the service management practice in contact centres is driven by three objectives: reducing cost-to-serve, leveraging quality of service, and seeking opportunities to add value to both organisations and customers. The attributes of customer service work and management practice are informed by Taylor's scientific and Fayol's administrative management, and Seddon's systems' thinking approach. As such, service management practice requires Ambidexterity - a 'fit-for-purpose' adoption of scientific, administrative and systems' thinking by managers - to attain the objectives of service management. This study contributed to service science discipline by abstracting a deeper understanding of contact centre services and developing a theoretical framework of service management.

Table of contents

List of tables

List of figures

Chapter 1 : Introduction

1.1 Background of the research

The purpose of this research is to explore contact centre services and service management practice within the context of service science. Service science is a multi-disciplinary approach introduced by IBM in late 2004 that is concerned with the study of service systems and their management (Huo and Hong, 2013; Spohrer et al., 2007). These service systems are a dynamic value co-creating configuration of people, technology, organisations and shared information (Maglio and Spohrer, 2008; Spohrer et al., 2007; Ng et al., 2009). As such, the focus of this thesis is on the study of call centres and contact centres as service systems, their strategic value to the organisations and management of these systems as a whole.

Call centres have existed for more than 50 years (Holman, 2002:115) however the last two decades have seen significant growth of call centres globally (e.g., Holman et al., 2007: v; Brown and Maxwell, 2002:309). Today, call centres - where services were delivered via telephone only - have now transformed into contact centres, with the adoption of multi-channelled technology to delivery services. Within the context of service science, both call centres and contact centres can be collectively described as:

> *service functions, organisations or multi-channelled co-ordinated system of people, processes and technologies internal or external to the organisation boundaries that deliver information, product support, administration, and sales services and manage relationship with customers over service channels such as telephone, web based portals, e-mail, chat, fax and social media, to create value for the customer and organisation (adapted from Saberi et al., 2017; Holland and Lambert, 2013 and; Cleveland, 2012).*

In the UK, there are approximately 6200 contact centres as of 2017, against 5180 contact centres in 2008 (Contact Babel, 2015; 2017). The industry now accounts for approximately 766, 000 employees. Overall, Europe (including the UK) accounted for 35000 contact centres in 2012, against 15,000 in 2005 -

growing at the rate of 10% per year (Connell and Burgess, 2006; ECCBP, 2012).

In addition, Romero (2014) recently reported that approximately 3.7 million people are employed across the 35,000 contact centres in Europe. Furthermore, it is estimated that in countries such as India and Philippines, contact centres employs between 300,000 and 400,000, serving international markets such as the US and the UK (Bajaj, 2011). The size and scale of these processes, in-house or outsourced, range from a very small unit of fewer than 20 people to large warehouse modelled contact centres with hundreds of agents (Jack et al., 2006).

Contact centres span across and within a range of industries (e.g. banking, retail, telecommunications), sectors (e.g. public or private), customer segments (business-to-business(B2B) or business-to-consumer(B2C)) and organisational and geographical boundaries. Due to the wide-spanning nature of these service functions across various sectors and industries, it has been a continual challenge for scholars, firstly, to assess and record the scale and growth of contact centres (Connell and Burgess, 2006; Weinkopf, 2006; Shire et al., 2002) and secondly, to establish whether contact centres should be treated as isolated entities or a sector in their own right (Burgess and Connell, 2004; Houlihan, 2001; Lankshear et al., 2000; Taylor and Bain, 1999).

Since the emergence of contact centres, their strategic purpose and value to the businesses have undergone a tremendous shift, from merely being simplistic telephone based support functions replacing face-to-face service provision to customers, to being multi-channelled or omni-channelled (integration of service delivery channels to provide seamless service) giving a personalised customer experience (Dimension Data, 2016; Bamforth and Longbottom, 2010). Contact centres are becoming increasingly a central point for all customer interactions. Many customers interact with organisations through contact centre and Internet channels rather than visiting shops or branches (KeyNote, 2015; Das, Nandialath, & Mohan, 2013; Malhotra and Mukherjee, 2004).

With the growth and advancements of contact centres, however, customers' expectations have risen alongside. For example, Allway and Corbett (2002) suggested that organisations are constantly faced with increasing customer expectations and competition from the market against rising operational costs to create, manage and deliver the service.

These pressures are now further compounded in case of multi-channel contact centres as customers expect more flexibility of channels when contacting their service providers (KeyNote, 2015).

As a result of such competitive pressures and consumer demands, organisations that once perceived their service functions as 'cost' centres are now re-considering this perception and are moving towards being service quality focused, using contact centres as a competitive differentiator (Dimension Data, 2013). Some studies refer to these centres as 'profit' or 'value' centres where in addition to service quality, the focus is on customer loyalty by providing a personalised service and also seeking revenue generating opportunities. Given the evolving role and nature of contact centres, and challenges arising from competitive pressures and expectations of consumers, contact centres qualify as complex service systems that are worthy of exploration within service science context.

1.2 Background: contact centres' research

The academic literature thus far has generally depicted two contrasting images of contact centres: a utopian (positive) and a dystopian (negative) image (e.g., Richardson and Howcroft, 2006; Korcyznski, 2001; Frenkel et al., 1998). The utopian image, according to Richardson and Howcroft (2006) reflects contact centres as knowledge-intensive, the focus of which is to provide quality service by high-skilled service personnel in an empowered, flexible and relaxed environment. This quality focused image of contact centres somewhat coincides with the evolving image of contact centres portrayed by industry, as discussed above.

In contrast, the dystopian image of contact centres highlights that these service organisations are low-skilled environments, the focus of which is to provide a service, however, with the aim to reduce costs and maximise efficiency (Richardson and Howcroft, 2006). These contact centres were often seen as exemplars of 'Taylorism' or 'mass-production' in service provision (e.g., Korczynski, 2001; Bain et al., 2002; Batt and Moynihan, 2002; Curry and Lyon, 2008; Paton, 2012; Sinha and Gabriel, 2016). As such, the customer service work in these centres can be seen to be highly organised, standardised and de-skilled by manifestation of scientific management using Information, Communication and Technology (ICT). Service personnel were often found to be tightly controlled, monitored and measured through technological and other forms of control (Callaghan and Thompson, 2001) in order to attain the cost and efficiency based objectives of contact centres.

Alongside such positive or utopian portrayal of contact centres and the dystopian image of contact centres, some authors have also highlighted the hybrid combination of these two images existing within contact centres. These hybrids have been labelled as 'mass-customised' contact centres (e.g., Frenkel et al., 1998; 1999; Korczynski, 2001; Batt and Moynihan, 2002; Deery and Kinnie, 2002; Jenkins et al., 2010) and supposedly focus on both cost reduction and service quality. Although the evidence and examination of these centres is limited, some authors have highlighted that mass-customised contact centres adopt characteristics of mass-production contact centres along with high-commitment, flexible, empowered and incentive driven strategies to attain quality objectives (D'Cruz and Noronha, 2012; Jenkins et al., 2010; Russell, 2008; Batt and Moynihan, 2002; Korczynski, 2001). Such dual focus of mass-customised contact centres was, however, often perceived as exhibiting contradictory or competing logics (Frenkel et al., 1998, Korczynski, 2001, Batt and Moynihan, 2002, Raz and Blank, 2007). Within the management literature, organisations with such competing focus are also referred to as 'stuck in the middle' (Porter, 1985: 17).

Since the early 2000's, another view of contact centres is emerging, and embracing systems' thinking logic with regard to service management issues of mass-customised contact centres. As opposed to earlier perspectives, Seddon (2000; 2003) argued that viewing contact centres as production entities lead contact centre managers to believe that everything that comes into contact centres is work that needs to be fulfilled. As a result, service management, like managing factories, is seen to be about managing this work in the most cost-effective and efficient manner. Instead, it is suggested that contact centres should be viewed as systems and as such, managers should adopt a systems' thinking to view these systems from a customer's perspective and the requirements of service quality (Seddon, 2003; Seddon et al., 2009). By doing so managers can identify the true source of service failures and the source of value for the customers thereby, eliminating the costs associated with service failures and leverage quality by providing what is of value to the customer Seddon and Caulkin (2007). Since then, studies have also suggested that the dual focus of cost and quality may be mutually re-enforcing rather than mutually exclusive and hence, simultaneously attainable through the application of a systems' thinking approach (Piercy and Rich, 2009; Piers William Ellway, 2014).

1.3 Rationale

The rationale of this research stems from service management research conducted in contact centres for the past two decades. In particular, the literature can be broadly categorised into four camps: the first camp comprises of abundant and it can be said, overly generalised views that are deeply rooted in perspectives of efficiency driven service management practice. The second camp comprises studies in contradistinction that suggest contact centres can be quality driven, exhibiting flexible and organic service management practices. In the third camp are studies that highlight the blended or hybrid service management practices in contact centres driven by the competing logics of efficiency and quality. Finally, the fourth camp (systems' thinking camp) offers limited yet emerging research highlighting a systems' thinking approach in managing contact centre services. This embraces the efficiency-quality logic but detaches from the conventional narratives of scientifically managed contact centres. Following issues arise from these camps that are of concern to this study:

Firstly, it is difficult to establish the true focus of contact centres. At a strategic level, both industrial and academic research entails sweeping references and suggestions that contact centres could be 'cost' focused, 'quality' or 'value' focused, or both. Although there are organisations which perceive contact centres as a competitive differentiator and focus on improving service quality rather than reducing costs and leveraging efficiency, customer satisfaction and experience has been continually declining across the contact centre services (DimensionData, 2013; 2016). As such, the strategic value of contact centres to the businesses today is yet to be established.

The second issue stems from the current treatment of contact centres in academic literature. The overarching theme is that of mass-production logic (Seddon, 2000) or *Taylorism* in contact centres and how its manifestation varies from the contact centre to contact centre, across a spectrum of being fully existent (Taylorist) to non-existent (anti/post-Taylorist) (discussed later in Chapter 2). Such a portrayal offers limited confidence as to whether hybrid contact centres exist and if they do, then how they manage quantity/quality priorities.

Thirdly, the focus of contact centres research has been mainly on examination of the labour process of contact centres. However, to assume that management is about managing labour process neglects various elements of managerial work which are not directly concerned with the control of the labour (Armstrong, 1989; Teulings, 1985). In the case of contact centres then, there is a limited underpinning of what constitutes management in these centres. 'Service management' is a sweeping term, referred to in contact centres literature but understanding of what constitutes service management in contact centres is limited. Rather, scientific management or mass-production logic is assumed to be the overarching philosophy of contact centres management as was the case in manufacturing (see Seddon, 2000).

The lack of focus on understanding and developing service management in contact centres leads to the fourth issue - the lack of contextualisation of contact centres within service science. If contact centres are becoming increasingly important to the organisations and if the aim of service science is to provide a holistic understanding of service systems and their management (Huo and Hong, 2013; Spohrer et al., 2007), then contact centres are worthy of exploration and appraisal within the emerging discipline of service science. Yet, these are the most neglected service systems in service science literature thus far. Contact centre service systems are yet to be fully observed with an aim to understand the management of these systems or at least understand them as complex service systems interconnected with rest of the organisation.

Although, limited studies have focused specific issues relating to contact centres within service science literature (e.g., Le Dinh and Leonard, 2009; Parry et al., 2011) or have referred to contact centres as service systems (e.g., Maglio et al., 2006; Spohrer et al., 2013). Nonetheless, the state of contact centre service research within service science literature is similar to the reductionist and silo nature of contact centre service research scattered across various strands of management. As such, this study not only aims to explore the service systems and their management but also seeks conciliation and strengthening of existing research, which is fundamental to the inter-disciplinary goals of service science (see Maglio and Spohrer, 2008).

Lastly, the rationale of doing this research also stems from my experiences of working in outsourced and in-house contact centres in India and the United Kingdom as well as reading about their development and management during my post-graduate study in the UK. I feel that there is a lack of knowledge in terms of how contact centre services have evolved in terms of products, services, customer expectations, and hence, management perspectives. There are issues arising from such evolution and increasing importance services that are yet to be fully appraised. If contact centres are to be seen as complex service systems of modern corporations today, then these services deserve further attention within the context of service science.

1.4 Aim and research questions

Therefore, the aim of this study is: *to conduct an in-depth evaluation of service management practice in a telecommunication services contact centre.* To achieve this aim and to maintain the consistency with ongoing debates highlighted above, the following research questions were addressed:

1. What is the strategic value of contact centre to organisations?

2. What are the attributes of customer-service work and its management in contact centres?

3. How do the existing narratives of service management practice of contact centres?

4. How do these narratives inform the service management practice of the contact centre under examination and more widely?

For this study, telecommunications, media and technology (TMT) services (referred to as telecom services hereafter) contact centres have been chosen.

This is because firstly, telecom services are one of the fastest growing sectors (Key Note, 2015). However, according to a recent report by the Institute of Customer Service, the telecom services sector has been reported as having one of the lowest customer satisfaction rates in comparison to other sectors (ICS, 2015). This immediately links with the concerns highlighted earlier, that is, the incompatible perception of the strategic value of contact centres to the businesses with declining service quality provided by these centres. Secondly, despite the evidence of research in telecom services contact centres (e.g., see van der Aa et al., 2015; Piers William Ellway, 2014; van der Aa et al., 2012; Doellgast, 2010; Jack et al., 2006; van den Broek et al., 2004; Bain et al., 2002), the knowledge about the products and services offered by this sector in the UK and their implications for service management practice is somewhat limited.

To address the aim and answer the research questions in wider context, interviews were conducted with consultants involved in helping telecom organisations to design and manage IT-enabled services and with senior managers of telecommunication services contact centres, named throughout this thesis as Telecom X. Organisation specific documentation obtained during interviews, industry reports and data from Internet forums were also used to triangulate the findings. The following section illustrates the structure of the thesis.

1.5 Structure of the thesis

This thesis comprises of seven chapters.

Chapter 1 Introduction:

The reader is introduced to the background of contact centres within the context of services science. The rationale for conducting this research and within the telecommunications sector is established. Thereafter, the aim and research questions are set out for this study followed by the structure of this thesis.

Chapter 2 Understanding and contextualising contact centres and their management:

This chapter provides a comprehensive review of the extant literature including a discussion of definitions, types and purpose(s) of contact centres. More importantly, the antecedents used to analyse contact centres to date are reviewed to establish a traditional and contemporary paradigm of customer service work and management in contact centres. The departure for service management as a foundational paradigm of service science is established.

Chapter 3 Research methodology:

This chapter highlights the ontological and epistemological foundation of this thesis within a services science discipline and systems' thinking paradigm and accordingly, the philosophical commitments of this thesis are presented. Further, the exploratory research approach is explained highlighting elite interviewing as a key data collection technique. The data collection stages and considerations made for each stage, ethics and the limitations of the adopted approach are discussed. Finally, thematic approach to the analysis of the data is described.

Chapter 4 Strategic value of contact centres to Telecom services' organisation:

Chapter 4 then represents the findings relevant to the first research question set for this study. In particular, the strategic value and focus of contact centre are debated by comparing the views of consultants and managers with the literature. Conclusions are drawn by highlighting the three focal points of service management, the plurality of the focus and its alignment with managerial thinking and approach.

Chapter 5 Attributes of customer service management in Telecom services' contact centres

This chapter presents the findings and discusses the key attributes of both management activities and attributes of customer service work within the contact centre. Conclusions are drawn by highlighting the attributes, how varied these attributes are within a single service provision and their alignment with the pluralist strategic focus of contact centres. In addition, the managerial thinking and approach to service management are re-visited taking the attributes into consideration thereby, further emphasising the need for a pluralist approach to service management in contact centres.

Chapter 6 Service Management Practice in Telecom services' contact centres

This chapter consolidates findings discussed in Chapter 5 and Chapter 6 in order to establish the key tenets of service management along with the philosophies that underpin service management practice in Telecom X's contact centres. It also looks how these philosophies converge and complement both traditional and contemporary paradigms of managing services in contact centres. As such, the service management framework is presented and discussed.

Chapter 7 Conclusion and directions for future research

Finally, chapter 7 presents the conclusions and the theoretical, methodological and practical contributions. Limitations and future research directions with reference to the emerging discipline of service science are examined. The chapter is concluded with a personal reflection on my journey as a doctoral researcher.

Chapter 2 : Understanding and contextualising contact centres and their management

2.1 Introduction

The purpose of this chapter is to provide a comprehensive review of contact centre services and their management. It outlines what contact centres are, the types of contact centres and their strategic purpose to the organisations.

Thereafter, the traditional antecedents used to describe and characterise the customer service work and management are reviewed and discussed. In doing so, this chapter establishes grand narratives of the contact centre services research of the last two decades that could be categorised into three strands. The first strand is informed by scientific management practice founded by Frederick Winslow Taylor and labour process theory conceptualised by Harry Braverman as a critique to scientific management. The second strand is of the nuances of scientific management (neo-/post-/anti-Taylorism) emerged as a result of organisational inefficiencies and human agency issues resulting from the applications of scientific management in modern corporations. The third strand is that of the emerging yet limited application of systems thinking paradigm in contact centre services, which is sometimes referred to as a new managerial paradigm or new managerial science (see Freedman, 1992).

Management literature consists of other schools such as the human relations movement, socio-technical systems, quality of work life, lean production, business process re-engineering and many others (see Robinson, 2005 and Morris, 2013). According to Hales (2013:27) these schools are often perceived as managerial ideas or 'styles' which emerged (Hales, 2013:27) as either direct or indirect response to the criticisms of 'stem cells' (Hales, 2013:15) or 'grand theories' (Gill et al., 2010: 181) of contact centres research. As such, whereas some of these schools such as the human relations by Mayo (1933) were specific to human relations studies and hence, excluded due to their unsuitability with the aims of this study, others such as the lean, Business Process Re-engineering by Hammer and Champy (1993), and quality circle (e.g. service management) are still considered as sub-sets of neo-Taylorist and anti-Taylorist movements discussed in this chapter. In particular, this chapter also considers administrative management principles by Henri Fayol which have been largely ignored in contact centres research, despite its temporal significance and similarities to Taylorism and systems' thinking paradigm. Such systematic consideration provides a platform to develop specific and relevant understanding of contact centres as service systems and service management practice which are basic foundations of service science. The chapter is then concluded with a detailed summary of the review including the implications for further research which shaped this thesis.

2.2 Defining call centres and contact centres

To date, various definitions of call centres exist. The literature published in the past twenty six years has defined and described call centres in multiple ways. Appendix I provide a comprehensive review of these definitions that aid in the general understanding of the common features of call centres and the successor of call centres, namely contact centres.

Generally, call centres have been described as a facility or an operation that manage in-bound calls or outbound calls to customers using some form of call distribution technology or predictive dialling system (e.g., Harvey et al., 1991; Richardson and Marshall, 1996; Taylor and Bain, 1999). These facilities existed to, for example, conduct sales, marketing, product-based technical support, deal with queries/complaints/requests or merely provide information to either business clients or end-consumers (e.g., Richardson and Marshall, 1996; Prabhakar et al., 1997; Batt, 2000); Miciak and Desmarais, 2001; McPhail, 2002; D'Cruz and Noronha, 2007).

Earlier definitions of call centres emphasised the functional and utilitarian aspects of the call centre, however, without much reference to their strategic purpose.

This changed with studies from 2001 however (e.g., Marr and Neely, 2004) that emphasised the strategic purpose of these service functions, that is, to develop relationships with customers in addition to offering utilitarian services. In addition, with the emergence of ICT and world-wide web (WWW) services, contact centres were described as service functions wherein service personnel delivered services via web based channels such as fax, e-mail, chat, text and social media (Reuters, 2001cited in Marr and Neely, 2004; Hale and Owen, 2002 cited in Langley et al., 2006; Shah et al., 2007; Rijo, 2011). Later, further definitions emerged which emphasised the increasing importance of contact centres in enhancing customer relationships and leveraging value for both organisations and customers through multi-channelled service provision and personalised knowledge about customers (see Cleveland, 2012; Kallberg, 2013; Saberi et al., 2017).

Several inconsistencies were encountered when establishing what call/contact centres are for the purpose of this study. For example, the earlier definitions of call centres lacked holistic consideration of both the strategic and utilitarian purpose of call centres. This was also the case with the definition of contact centres, with early definitions being simplistic providing limited awareness of their functional aspects (e.g., see Marr and Neely, 2004; Langley et al. 2006).

Despite such parallel evolution of contact centres, however, some authors continued to define 'call centres' as 'contact centres'. For example, D'Cruz and Noronha (2007) used the term 'call centre' but highlighted the 'contact centre' characteristics as has McPhail (2002). Vice versa, whereas some authors have appraised contact centres as successors of call centres (e.g., Calvert, 2001), others use the term 'contact centre' synonymously to 'call centre' (e.g., Moberg et al., 2004; Chambel and Alcover, 2011). Even those authors that have highlighted the differences noticeably interchange the terminology in their work (e.g., Larner, 2002), thereby blurring the differences between the two.

Only recently, some authors have been able to distinguish contact centres from call centres clearly and provide a holistic definition of contact centres by referring to the purpose, the key components, and channels used for service provision (e.g., Cleveland, 2012; Kallberg, 2013; Holland and Lambert, 2013; Saberi et al., 2017).

For the purpose of this study, therefore, call centres are defined as:

> *"functions of organisations, organisations or co-ordinated system of people, processes and technologies, internal or external to the organisation boundaries that deliver information, product support, administration, and sales services and manage the relationship with customers using the* ***telephone****."*

As successors of call centres, contact centres can be defined as:

> *"multi-channelled co-ordinated system of people, processes and technologies internal or external to the organisation boundaries that deliver information, product support, administration, and sales services and manage the relationship with customers over service channels such as* ***web based portals, e-mail, chat, fax and social media, in addition to the telephone****."*

Different types of call/contact centres have also emerged in the last two decades. These types are discussed in the following section.

2.3 Types of contact centres

Despite the channel-specific difference between call centres and contact centres, both can be typified using some common dimensions. The literature thus far has characterised call centres using various dimensions, which can be extended to contact centres as well. As a result, 'contact centres' is used here onwards to collectively refer to both call centres and contact centres and to relate to the dimensions.

As highlighted in Table 2.1 below, the basic characterisation of contact centres relates to whether the centre is handling inbound transactions (e.g. account administration, technical support, customer service) from customers or making outbound contacts (e.g. sales, marketing) to the customer, (Rod and Ashill, 2013). However, some contact centres may manage both inbound and outbound contacts. Contact centres can perform various activities including Account Administration, Marketing, Sales, Technical Support and Customer Analytics (Robinson et al., 2005; Goffin and New, 2001).

Further, these activities might be performed in isolation (single skilled contact centres), as different contact centre functions, or blended with one or more activities within the same centre (multi-skilled contact centres) (Gans et al. 2003).

The activities performed and skills based configuration of contact centres illustrated in Table 2.1 span across a range of industries including travel, telecommunications, banking, energy utilities, and government administration (Bishop et al., 2003). Further, contact centres may also be typified on the basis of customer segment, that is, whether the centre serves another business (B2B) or retail or individual consumers (B2C) (Lampell and Bhalla, 2011; Miciak and Desmarais, 2001).

Dimension used for Classification	Author(s)
The direction of contact (e.g. inbound call handling, outbound call handling or both)	Taylor and Bain (1999) Brown and Maxwell (2002) Jayaraman and Mahajan (2015) Rod and Ashill (2013)
The type of activity performed or service provided (e.g. telemarketing, telebanking, product sales, information service, account administration, billing and payments, after-sales technical support services)	Brown and Maxwell (2002) Robinson and Kalakota (2004) D'Cruz and Noronha (2007) Rod and Ashill (2013) Jansen and Callaghan (2014)
Single Skilled or Multi-skilled	Gans et al. (2003) Molnar et al. (2016)
The industry of operation (e.g. consumer products, financial services, tour-ism/transport, remote shopping, tele-coms, entertainment).	Brown and Maxwell (2002) Bishop et al. (2003) Sarkar and Charlwood (2014) KeyNote(2015)
Type of customers being served (Busi-ness-to-Business or Business-to-Consumer)	Miciak and Desmarais (2001) Payne and Frow (2004) Lampel and Bhalla (2011)
On the basis of insourcing, outsourcing, on-shoring, and offshoring	Metters (2008) Shah et al. (2007;2006) Dašić and Kostić-Stanković (2015) Oshri et al. (2015).
Production models (Mass production, professional services, mass customization)	Kinnie et al. (2000) Batt and Moynihan (2002) Thite and Russell (2010)

Table 2.1 Dimensions used to classify Contact (Call) Centres (Source: Author)

By nature, contact centres are labour intensive - about 65% costs of service operations are labour costs (Bryson, 2007; Bristow et al., 2000). Due to the electronic mode of service delivery and collapse of telecommunications costs (Jeong et al., 2012) firms in developed countries are engaged in outsourcing and offshoring of these service operations to avail lower service operation costs through economies of scale, labour arbitrage, and resourcing needs (Owens, 2014; McIvor, 2010; Olsen, 2006; Taylor and Bain, 2005). Accordingly, contact centres may also be characterised and distinguished according to their distance from the supply chain of parent organisation, such as in-house or outsourced and/or according to the geographical distance from the parent organisation, such as so-called captives (in-house offshored) or off-shore-outsourced contact centres, respectively (Metters, 2008).

Lastly, contact centres have been often characterised on the basis of service design, operation and management practices in these centres. Depending upon the strategic focus of service strategy and the degree of standardisation of customer service work, skills, discretion and autonomy of service personnel over tasks, and managerial control, contact centres were often classified as either 'mass-production', 'professional services' or 'mass-customised' centres (e.g., Batt and Moynihan, 2002; Budhwar et al., 2009; Taylor et al., 2013).

As with the issue of defining contact centres and even services in general, there is a lack of a specific taxonomy or classification scheme for contact centres in the literature, except that provided by Brown and Maxwell (2002). Given the wide spanning nature of contact centres in terms of sectoral spread and diversity of activities, characterising contact centres is a difficult task (Bain et al., 2002).

Due to such diversity, contact centres could not be labelled as an 'industry' in its own right, as these service operations exhibit characteristics of a wide range of industries (Jobs et al., 2007; Glucksmann, 2004; Richardson et al., 2000). The task of characterising and classifying contact centres becomes further challenging when other dimensions such as channels, skills, organisational and geographical spread, and service design, operations and managerial variations in contact (call) centres are taken into account.

Indeed, as Russell (2008) highlighted and as evident from above, many studies were found to be preoccupied with the classification of contact (call) centres. Further, as Lloyd (2016) suggests, this preoccupation is a result of the relative newness of contact centre research. This study considered the review of the classifications as it enables understanding the nature of contact centres as emerging service systems, the interconnections between entities and hence, varieties that exist between in terms of design and management of these service systems within the context of service science. In particular, such variety and the fuzzy nature of contact centre services highlights the inherent complexity of contact centres as service systems (e.g., Donofrio et al., 2010:23). However, understanding and appraisal of such complexity is still limited and can only be achieved if some consistency and convergence are attained, in terms of the existing literature. This study aims to offer this consistency, so that the evolution of contact centres and service management in contact centres can be explored further.

The next section reviews the strategic purposes of contact centres to the organisations that have been highlighted in the literature thus far.

2.4 Purpose of contact centres

Several studies have described contact centres as service functions, the strategic purpose of which was to handle a large volume of telephone based transactions in a cost-efficient manner (e.g., Laureani et al., 2010; Sattar Chaudhry and Jeanne, 2004; Gable, 1993). Similar to the traditional after-sales services of manufacturing companies, dedicated centralised customer service operations such as contact centres were perceived as cost-effective alternative to the 'brick and mortar' approach to deliver different types of services, that is, via retail outlets and shops on High Street (Mack and Bateson, 2002; Kernaghan and Berardi, 2001; Kinnie et al.. 2000).

Organisations often perceived these service centres as a 'necessary evil' or cost-overheads to the organisation (e.g., Cavalieri et al., 2007; Saccani et al., 2007:52; Price and Jaffe, 2011; Willis and Bendixen, 2007; Gans et al., 2003). Organisations thus held a dilemmatic perception about contact centres, that is, as a cost-effective service provision as well as a cost-overhead to the organisation. However, it is the 'cost-overhead' perception of contact centres that has been widely acknowledged in the literature. This primarily stems from the high labour costs-marginal revenue contribution of contact centres (Hannif et al., 2008; Taylor and Bain, 2001). Similar to after-sales services (cf. Lele, 1997), contact centres were perceived as a low profit value adding activity (Hannif et al., 2008) primarily providing product based support to customers and hence, they were deemed as secondary or derivative to other critical functions of manufacturing organisations (Connell and Burgess, 2006). Revenue generated from support services once considered fruitful, with competitive pressures from markets, however, with competitive pressures, the opportunities to generate revenues through these functions are limited. (Lele, 1997). It is for this reason that the strategic purpose of contact centres is currently aimed at the maximisation of efficiency whilst minimising the cost-to-serve (total costs incurred in delivering the service).

In sharp contrast to 'cost-focused' contact centres, however, several studies have also reported 'quality-focused' or 'customer care driven' strategies. For example, Shah et al. (2007), Robinson and Morley (2006:286) citing Frenkel and Donoghue (1996), Taylor et al. (2002) and Taylor and Bain (1999) indicated that call centres could be 'quality' or customer service focused. In other words, the purpose of contact centres could be to prioritise the quality of service delivered to the customers rather than to focus on a high turnover and volume of transactions.

The 'quality-focused' contact centres further extended to so-called 'profit' centres or 'value' centres, meaning that the emphasis here is on leveraging loyalty of customers through a personalised service provision, in addition to enhancing customer satisfaction (e.g., van der Aa et al., 2015; Hsu and Peng, 2012; van Dun et al., 2011).

As sophisticated service functions (Holland and Lambert, 2013), these contact centres aimed at providing a personalised customer experience (Bamforth and Longbottom, 2010) by offering multi-channel communication preferences to customers and cross-selling/up-selling relevant products/services (Jansen and Callaghan, 2014; Jack et al., 2006). Furthermore, according to a recent industry report, contact centres were emerging to be seen by organisations as a key differentiator in the market place (Dimension Data, 2016).

The first concern that this study raises is that it has always been unclear what organisations expect of contact centres. For example, the very purpose that contact centres came into existence was to reduce the overhead costs incurred from service provision through high street and retail stores. These overhead costs were often higher compared to revenues earned from certain services as exemplified by Payne and Frow (1999) in case of insurance services. As a result, contact centres were borne out of the desire of organisations to reduce costs (Korczynski, 2001). It seems, however, that now contact centres inherited the similar reputation of being a cost-overhead to the organisation as face-to-face service provision once did. Secondly, several authors have pointed out that even those contact centres that are 'quality focused' are in fact 'volume focused' operationally thereby, further exhibiting an ambiguous strategic focus (e.g., see Taylor and Bain, 1999; Wallace et al., 2000; Weinkopf, 2006; Robinson and Morley, 2006; Raz and Blank, 2007).

The strategic focus of contact centres has an impact on the nature and management of customer service work and as such, these are discussed next.

2.5 Antecedents of customer service management

Contact centre research thus far has examined and described customer service work using various classical organisation theories as frames of references. These frames of references serve as antecedents in understanding the labour process in contact centres.

2.5.1 Scientific management and standardisation of service work

Scientific management, conceptualised by F.W Taylor (1911), has been one of the most widely cited classical management theory, reflecting the traditional 'single best way' of management when applied to contact centres (e.g., Taylor and Bain, 1999; McPhail, 2002; Russell, 2008; Paton, 2012; Sinha and Gabriel, 2016). As such, it deserves primary attention in this study in order to appraise its relevance in the understanding of contact centres today.

As a management practice, scientific management originates from manufacturing environments of the 19th century, the aim of which was to eliminate inefficiency allegedly induced by employees through 'rule of thumb' work procedures and 'soldiering' (restriction of output by workers), with a professed aim to maximise the prosperity for both employer and employees

(Taylor, 1911:11). In addition, the lack of managerial control over activities of employees, it was suggested, induced further inefficiency, thereby restricting overall output in factories.

Taylor (1911) conceptualised four fundamental principles aimed at maximising the efficient organisation of activities and management and monitoring of employee behaviours by:

- Designing the work practice using ‘scientific laws' that is most efficient and profitable to the employer;
- Train the workforce to learn the designed work practice;
- Monitor the workforce to ensure that the designed work practice is being adhered to;
- Ensure equal division of work and labour to perform the designed work practice.

The above principles fundamentally emphasised on attaining 'one best way' (Taylor, 1947) of performing any work that could be attained by the scientific organisation, standardisation, training of workers, and monitoring their activity and performance. In addition, Taylor (1947) believed that the pay of the workers should be differential and output specific, in order to encourage them to adopt the principles of scientific management. In other words, they should be incentivised for submitting to the rigid standardisation but also penalised should they perform lower than the targets set for them. Thus, not only Taylor (1911) incorporated methods of obtaining maximum efficiency and prosperity for the employer, but also rewarded or punished employees depending on whether they co-operated with the employer to achieve these objectives or not.

Complementary to, but also diverging from Taylor (see Parker and Ritson (2005) is the management philosophy of Fayolism. Fayol (1949) is often remembered as a founding father of the classical management school of thought (Parker and Ritson, 2005). His contributions were three folded (Parker and Ritson. 2005; Fells, 2000):

- Fayol categorised all organisational activities into six functions namely, technical, commercial, financial, security, accounting and; management;

- He identified five key management functions namely, forecasting and planning, organising, co-ordination of activities and control;
- He advocated 14 principles of management, namely, division of labour; authority; discipline; unity of command; unity of direction; sub-ordination of individual interests to general interest; remuneration; centralisation; scalar chain; order; equity; stability of tenure of personnel; initiative; Esprit de Corps (Harmony and teamwork)

In many ways, Fayol's (1949) principles of management were similar to that of Taylor's (1911) principle of scientific management. For instance, emphasis on the division of labour, authority, discipline, the unity of command, remuneration, centralisation, scalar chain, and order could be perceived in Taylor's (1911) recommendation of managerial responsibility and control on employees. However, unlike Taylor (1911) who did not make a further attempt to describe managerial activities, Fayol (1949) focused on the very division of managerial activities into elements of planning, organising, co-ordinating and controlling - not just the labour and tasks performed by workers, but by the organisation as a whole.

Despite Fayol's holistic focus on administrative management, scientific management has been largely popular, first in manufacturing environments to achieve standardization and efficiency and later in the service sector (Leffingwell, 1917; Brown et al. 2010). Traditionally, according to Miles and Boden (2000), services referred to activities or employments in domestic care and religious services that did not contribute to the economy (at least not directly). The output of services was difficult to measure and hence, their economic contribution was considered negligible (Quin, 1988).

Services could not be standardized or produced with a consistent output compared to that of manufactured goods. This was considered due to the heterogeneous variations induced by human involvement as both service provider and consumer, in the production of services (Edvardsson et al., 2005). Furthermore, the inseparability of producers and service production as a process, from consumers, implied an inability of services to be traded (Gadrey and Gallouj, 1998; Yotopoulos, 2005). This then restricted the accessibility and availability of services. When such attributes of services were viewed in conjunction with what scientific management principles had to offer, the application of scientific management could be seen as an obvious choice in attaining standardization of service processes and the removal of uncertainty in the work process and outcome (see Leffingwell, 1917).

Contact centres were no exception to above - 'primarily driven by logic of rationalisation and routinisation of human interactions' (Jarman et al., 1998:2 in Belt, Richardson & Webster, 2000), these service organisations exhibited the attributes of scientific management in the design, management and delivery of services. Attributes such as for example, fragmentation and standardization of service processes; prescribed workflows; scripted conversations; predictable outputs and solutions; activity and skills based on the division of labour; limited autonomy of service personnel over service provision and managerial control have been frequently cited in contact centres research thus far (Russell, 2008; Gray and Durcikova, 2005; Dossani and Panagariya, 2005; Bain et al., 2002). Service personnel were rigorously trained on company's products, policy and processes (Frenkel et al., 1998), to manage conversations with the customers (Korczynski, 2001; Townsend, 2007). Workers were also given feedback by managers through regular coaching sessions (Russell, 2002). In international contact centres, additional cultural training was embedded within the overall training programme before service personnel hit the shop floor (Taylor and Bain, 2005). From a service delivery perspective, the attributes of scientific management were evident in performance monitoring and surveillance of front line employees (Robinson and Morley, 2006). This included using real-time metrics, such as the amount of time taken to serve the customer, the time is taken by a front line employee to update customer's records and other performance based metrics specific to the type of service. These attributes are summarised in the table below.

Although the above attributes of contact centres reflect characteristics of scientifically managed organisations, there is no evidence to suggest that contact centres were actually subjected to scientific management. For example, Leffingwell (1917) explicitly narrated the application of scientific management in office work. In the case of contact centres, however, there is no precedence to support whether contact centres were designed using the principles of scientific management as were the manufacturing environments, by Taylor (1911) and later by Henry Ford in 1923.

Elements of scientific management	**Evident in the form of…**
Designing the work practice using laws of science, that is most efficient and profitable to the employer - the one best way to do the job	▪ Scripted conversations ▪ Prescribed Knowledge solutions for resolution of the problems; ▪ Prescribed workflow and use of software packages.
Select and train the workforce to learn the designed work practice	▪ Employees trained to use the designed work package, software, information and communication scripts. ▪ Handling communication inefficiencies using prescribed culture-training packages.
Supervise and monitoring of workforce and the work flow	▪ Monitoring schedule adherences (log-in/log-out times; tea/lunch breaks). ▪ Real time metrics (e.g. time spent on the call, hold-time on the calls; post-call administration time). ▪ Tracking the employee's availability to perform the next transaction. ▪ Real-time quality audits
Ensure equal division of work and labour to perform the designed work practice	▪ Division of labour according to skills and type of troubleshooting ▪ Staffing/Scheduling of calls according to the forecast.

Table 2.2 Attributes of scientific management in customer service work (Source: Author)

However, scientific management had a profound contribution to the development of management thinking and practice (Taneja, 2011). As such, when a service industry emerged, limited knowledge existed of how to manage services and hence, proven management practices in manufacturing were often replicated to overcome the standardisation, productivity and measurement issues to design, manage and deliver services. This was referred to as *'industrialisation of services'* (Miles, 2007: 259; Marshall and Richardson, 1996:1846).

The principles of scientific management have been both critiqued and extended and underpinned by various other perspectives. Especially relevant to contact centres research and hence this study is Braverman's (1974) labour process theory and Foucault's (1977) and Edwards' (1979) perspectives on managerial control.

2.5.2 Labour Process Theory

Examining the labour process in contact centres is not central to this study however, it is imperative to highlight what has been considered as the labour process so that the elements of service management in contact centres can be understood.

The earliest formation of Labour Process Theory (LPT) has often been credited to Braverman (1974), whose work was largely drawn from Marx's thesis of capitalism (Armstrong, 1989; Stokes, 2011). Labour process, for Braverman (1974), could be seen as primarily an agreement yet a critique of manifestation of scientific management which was further suggested by him as instrumental in leveraging capitalism in the 20th century. His central critique was that the very occupation of organisations with Taylorisation (application of scientific management) and in particular, separation of the concept of production from execution, the de-skilling of work, and managerial control describes the labour process of large-scale offices and corporations (Braverman, 1974; Armstrong, 1989).

Braverman was, however, cynical about scientific management in the sense that in his view Taylor was not concerned with "the scientific organisation of work but rather a science of the management of others' work" (Braverman, 1974:62). In contact centres research thus far, however, Braverman's thesis could be seen as complementing the attributes of both 'service work design' and 'management of service work' and therefore, often found to be lending support to the claims of the manifestation of scientific management in contact centres (see Mulholland, 2002; Russell, 2002; 2008). Of the four principles of scientific management, Braverman's focus was more importantly on the de-skilling of work and managerial control, which, in a way could be perceived as key tenets of the principles of scientific management. His thesis evidenced the manifestation of technology as means to incorporate standardisation of tasks, de-skilling, managerial control and electronic surveillance of employees in modern capitalist corporations (Carter et al., 2011). It is precisely why Russell (2008) suggests that central to LPT in contact centres is the inducement of scientific management elements in contact centres through technology manifestation. Carey (2009:510) referred to this phenomenon collectively as "Braverman's scientific management" and later, Brown et al. (2010) referred to as "Digital Taylorism". As such, manifestation of ICT is detailed in the following section.

ICT Manifestation in Standardising Customer Service Work

Harvey et al. (1991) highlighted several computing, networking and telephony technologies including voice response units (VRUs), Integrated Services Digital Network (ISDN), Automatic Call Distribution (ACD), Automatic Number Identification (ANI) and Call Management System (CMS) as fundamental to contact centres. Such technologies are integral to the basic architecture of any contact centre (Harvey et al., 1991). For instance, networking technology such as VRUs, ISDN and ACD enabled contact centres to make intelligent call routing so that calls could be efficiently managed within and across multiple centres. Sophisticated CMS allow management of calls including real-time reporting of a number of calls in queue, the number of agents available and their real-time status to manage those calls. Furthermore, ISDN and ANI allow efficient retrieval of customer accounts through automatic recognition of caller's number thereby, increasing accessibility and efficient handling of calls as well as being able to serve customers readily. Technology also enables managers to predict and forecast calls inflow (demand) and the number of agents (capacity) required to manage those calls, using historical reports.

In addition to above, the manifestation of ICT in contact centres is often in the form of electronic repositories that are used for storing and managing work processes and sophisticated information systems for workflow efficiency (Carter et al., 2011). So that the amount of variation in service work can be minimised (Russell, 2008; 2004) and efficiency could be attained (Russell, 2008), service activities are narrowly defined, scripted or even automated (Hannif et al., 2014). Such a complementary role of ICT and scientific management principles is also perceived as instrumental in reducing complexities imposed by certain service characteristics that once restrained the measurability and tradability of those services (Bryson, 2007). As such, ICT can be further seen as an enabler for service organisations to distribute or re-locate part or the whole of service work (Connell and Burgess, 2006) across organisational and/or geographical boundaries. It could be argued that the national (UK) and international growth of contact centres was primarily driven by such induction of ICT in designing, managing and delivering services and the lower telecom costs (Panda, 2012) in countries like India.

Developments in ICT over the last twenty years have enabled customers to interact with organisations through various channels including fax, e-mail, instant messaging, social media and web-based portals (Saberi et al., 2017). The power of soft computing (Shah et al., 2006), Information Technology, the Internet, mobile and cloud computing, (e.g., Jayaraman and Mahajan, 2015; Peppard and Ward, 2016: x) enabled organisations and hence, contact centres to re-engineer, re-configure and deliver services of different types through less labour intensive (e.g. social media, web-chat) and self-assisted channels (e.g. self-service) and within or from outside organisational and geographical boundaries. Not only can customers access services through various communication channels now, but service providers can leverage cost savings, efficiency as well as manage the customer experience through these channels and sophisticated ICT infrastructure. Examples of infrastructure technology in include the adoption of modern ICTs such as Computer Telephony Integrated Systems (Rijo et al., 2012), sophisticated use of Customer-Relationship Management (CRM) systems (Abdullateef et al., 2010) and Knowledge Management information systems (Langley et al., 2006; Koh et al., 2005).

Furthermore, the role of ICT has often been elicited in aiding managerial control in contact centres, which is discussed in the following section.

Managerial Control in contact centres

In the late 1990s, Fernie and Metcalf (1998) were the first to highlight managerial control as one of the key attributes of customer service work in contact centres. Their conceptualisation stemmed from Foucault's (1977) comparison of Bentham's Panopticon to workplace organisation. In particular, Fernie and Metcalf (1998:8) iterated Foucault's (1977) description of the panopticon prison to compare that with the contact centre environment, where

> *"each individual is securely confined to a cell from which he is seen from the front by the supervisor, but the side walls prevent him from coming into contact with his companions"*

In addition to the ICT driven distribution and management of work, they describe how service personnel are in sight of the supervisor through ICT driven real-time monitoring of the workflow (e.g. number of calls in queue, oldest call in the queue) as well as service personnel's activity when they are on duty including whether they are on a call, on a break, or offline. More importantly, managers can identify which service personnel are adhering to the schedule set by the planning team at the contact centre. Further, technology also enabled managers to identify service personnel's activities whilst on calls with the customer, by recording their inputs on the tools used by them. Thus, the surveillance, which Fernie and Metcalf (1998: 9) compared with panopticon surveillance rendered managerial control through ICT as 'ultimate' and 'total'.

However, such conceptualisation seemed incomplete and inaccurate for various reasons. Firstly, Bain and Taylor (2000) critiqued such a comparison by suggesting counter-productive behaviours at an individual level and also collective resistance, especially from trade unions. Secondly, Fernie and Metcalf's (1998) study was not actually about examining the labour process of contact centres and hence very little evidence existed to be able to make any comparison with the panopticon prison conceptualisation by Foucault (1977). This was also supported by Bain and Taylor (2000). In this sense, nothing new could be established beyond what Braverman (1974) suggested about managerial control at work.

Thirdly, Fernie and Metcalf's (1998) conceptualisation portrayed an incomplete picture of managerial control in contact centres. A more thorough conceptualisation was provided by Callaghan and Thompson (2001) who evidenced that managerial control could be composed of three elements derived from Edwards (1979) description of control namely, control of the pacing and direction of work, monitoring and evaluation of performance and the reward/discipline system. These elements were referred to as "Technical Control" by Callaghan and Thompson (2001). Pacing and Direction of work commonly included the use of ICT in distributing and managing the workflow of contact centres. Similarly, monitoring of service work entailed intensive gathering of statistical data relating to the centre and service personnel's quantitative and qualitative performance using indicators. Examples of quantitative indicators include Calls Offered, Abandonment rate, Average Speed to Answer, Average Handling Time, Adherence to schedule and Service Level whereas qualitative indicators commonly include First Call Resolution and Customer Satisfaction, that are measured within regular intervals. Some other common indicators exemplified by Willis and Bendixen (2007) are illustrated in Table 2.3.

Table removed for copyright reasons

Table 2.3 Key Performance Indicators (KPIs) used in contact centres (Source: Willis and Bendixen, 2007)

The recording of calls and monitoring of service personnel's conversation with the customers also formed a key element of control (Russell, 2008; Bain et al., 2002; Callaghan and Thompson, 2001).

Reward and Discipline in contact centres have also been apparent. In contact centres, performance based pay and incentives are not uncommon (e.g., McGuire and McLaren, 2009; Bain et al., 2002; Hutchinson et al., 2000). These incentives can be awarded on the basis of qualitative and quantitative targets achieved.

In addition to Technical Control, Callaghan and Thompson (2001) also identified "Bureaucratic control" and "Normative Control". Bureaucratic control was evidenced by agreed performance standards, norms of the code of conduct during conversations with customers and at the workplace. In addition, having a ‘customer centric’ attitude with skills such as business awareness, decision-making, numeracy, planning and organisation, teamwork and leadership, and use of ICT equipment, policies, procedures and processes were some of the key attributes of Bureaucratic control. 'Normative control', as further described by Callaghan and Thompson (2011:28) was found in the formal manifestation of bureaucratic elements through training and regular feedback wherein, in addition to managing bureaucratic elements, service personnel are *taught* to perform ‘emotional labour’ (Hochschild, 1983: 26) regardless of whether they genuinely feel those emotions.

Callaghan and Thompson (2001) also highlighted how skills and complexity in service processes are worthy of discussion when the labour process of contact centres is analysed. As such, these elements are discussed in the following sections.

Structure of customer service work

The structures of contact centres have been mostly described in terms of its organisational design and how detailed the division of labour is within and across organisational and geographical boundaries, as a consequence of standardisation, the manifestation of ICTs and managerial control. As such, these two attributes are discussed in this section.

In terms of the management structure, contact centres are often holistically described as hierarchical, mechanistic and bureaucratic in nature, fundamentally driven by the efficiency, cost-controlled and standardisation of service (e.g., see Jaaron and Backhouse, 2011a; Hannif, 2006; Gilmore and Moreland, 2000). The attributes of such a mechanistic structure are often exemplified in terms of the restriction of roles and responsibilities, narrow task designs, restricted decision-making authority of teams and team leaders, top-down managerial control and co-ordination of activities and boundaries of remit within contact centres (Jaaron and Backhouse, 2011a; Deery et al., 2010; Curry and Lyon, 2008).

Various facets of the division of labour have been elicited in the contact centre literature thus far. According to Houlihan (2001) for example, contact centres are reflective of the functional division of labour or functional specialisation (Jaaron and Backhouse, 2014) wherein, contact centres may be actually distanced from those that possess the power or 'strategic apex' (Mintzberg, 1980). Such conception and management of service further exemplified the manifestation of Braverman's (1974) and Taylor's (1911) principles of the labour process and its management. Such specialisation can, create a 'silo', wherein each department is viewed as a separate entity (Jaaron and Backhouse, 2011a; Botla, 2009) and creating inefficiencies within and across the organisation.

Further, division of labour may exist in form of multi-layered service delivery in which a layer represents a defined boundary of a service that can be provided by the service personnel at that level. Customers may be transferred to another level or 'tier' for further support (Gray and Durcikova, 2005). Moreover, it has been highlighted that in case of telecommunication services contact centres, the division of labour may be further specialised to for example, provide customer services, repair and billing related support to the customers (Piers William Ellway, 2014).

Within these sub-functions, there may be several teams of service personnel, yet the purpose of team and teamwork in contact centres has been questioned (Hannif et al., 2013; Russell, 2008; van den Broek et al., 2004; Townsend, 2004; Mulholland, 2002; Batt, 1999). Team and teamwork have been positively associated with attributes such as productivity enhancement, task interdependence, flexible allocation of work, autonomy and empowerment (Townsend, 2004; Proctor and Mueller, 2000). However, research in contact centres suggests the complete opposite. Townsend (2004) for example, suggested that contact centre work has generally been recognised as individualised wherein any interaction between the service personnel is not a prerequisite to complete the production process (Russell, 2008; Townsend, 2004; Taylor et al., 2002). Secondly, given the standardised and routine nature of customer service work, flexibility in terms of task allocation is a rarity in contact centres (Hannif et al., 2013; Knights and McCabe, 2003). Rather, team and team work have often been perceived as an extension of managerial control and surveillance (van den Broek et al., 2004). Some positive aspects of the team and team work - including providing emotional support, coaching and offering a collective approach to performance attainment - have been elicited (Hannif et al., 2013; Russell, 2008; Korczynski, 2003; Holman, 2002). However, there appears to be the existence of teams but not teamwork in contact centres (van den Broek et al., 2004).

The division of labour has been further exemplified in contact centres as a spatial or international division of labour (e.g., see Taylor et al., 2010; Glucksmann, 2009; Russell and Thite, 2008), and is largely discussed as the outsourcing and offshoring of contact centres across the organisation and geographical boundaries.

Within these contexts, the application of scientific management and associated antecedents are often seen as instrumental in attaining cost and efficiency benefits through the tradability of contact centre services. This means that as a result of technological advancements and their role in attaining standardisation, measurability and control on services, service organisations could leverage cost and efficiency benefits through regional and international labour arbitrage and labour access, cheaper infrastructure and cheaper technology (Burgess and Connell, 2004).

The terms 'outsourcing' and 'offshoring' have been often used synonymously and interchangeably (Bunyaratavej et al., 2011; Chakrabarty, 2006) especially, in the case of contact centres. In addition, the term 'Business Process Outsourcing' has been widely used to cover both organisational and geographical relocation of contact centres. As Noronha and D'Cruz (2009) highlight, contact centres in India are considered within the ITES-BPO (Information Technology Enabled Services - Business Process Outsourcing) sector, the major constituent of which is offshored contact centres. Similarly, Cronin et al. (2004) highlighted that BPO in UK and India constitute the majority of local (UK) and offshore service providers (Indian) that are delivering services through a complex locational mix of sourcing and shoring thereby blurring the differences between the two.

In its very basic form, Sourcing is:

> *"an act through which work is contracted or delegated to an external or internal entity, that could be physically located anywhere"* (Oshri et al., 2009:2).

From an organizational boundaries' perspective, two broad arrangements could exist:

- Outsourcing, defined as "the procurement of products or services from sources external to the firm (Lankford and Parsa, 1999: 310). This means that the operations are managed partially or wholly by the external entity, often called as *"vendor", "supplier", or "external service provider"* (Lacity and Hirschheim, 1993:2), for a specific period, on behalf of the firm.
- In-sourcing, defined as *internal allocation or re-allocation of resources within the same organization, regardless of its physical location* (Schniederjans et al., 2005).

From the perspective of geographical boundaries, "Shoring" refers to the sourcing of business activities, either from the country of origin of the sourcing entity (Onshore) or from a different country (Near Shore or Offshore) (Chakrabarty, 2006: 26). However, using Onshoring or Offshoring in isolation from organisational boundaries may raise ambiguities, that is, whether the service is being provided 'in-house' or through an external supplier. Figure 2.1 represents four basic sourcing models considering the organizational and geographical boundary in a matrix (Olsen, 2006).

Figure removed for copyright reasons

Figure 2.1 Sourcing-Shoring Matrix (Source: Olsen, 2006)

The above matrix is used to contextualise contact centres arrangements, considering geographical and organizational boundaries further, in Figure 2.2 (see next page). Jeong et al. (2012:3) highlighted different entities involved in the contact centres service delivery model. They view the interaction between the four key entities:

- Firm or Principal: Organizations that offer products and/or services to customers.
- Vendor or Agent: Companies that are based onshore or offshore and operate and deliver services [partially or fully] on behalf of the firm.
- Contact Centre Representatives (CSR): who are responsible for interacting with the end-customers of the firm.
- Customer: Consumers of the product/service offered by the firm directly or through the Vendor.

Figure 2.2 contextualises the above entities within the following simplistic arrangements:

a. Onshore in-sourcing/Domestic in-house: The Firm retains its contact centre within its organizational boundary and decides to manage by itself.
b. Onshore outsourcing: The Firm delegates the contact centre [partially or fully] to the vendor(s) based within the same geographical boundary.
c. Offshore in-sourcing: The Firm manages and delivers services through the contact centre [owned or rented] outside its own geographical boundary.

d. Offshore outsourcing: The Firm delegates the contact centre [partially or fully] to the vendor(s) based, but in a different geographical boundary.

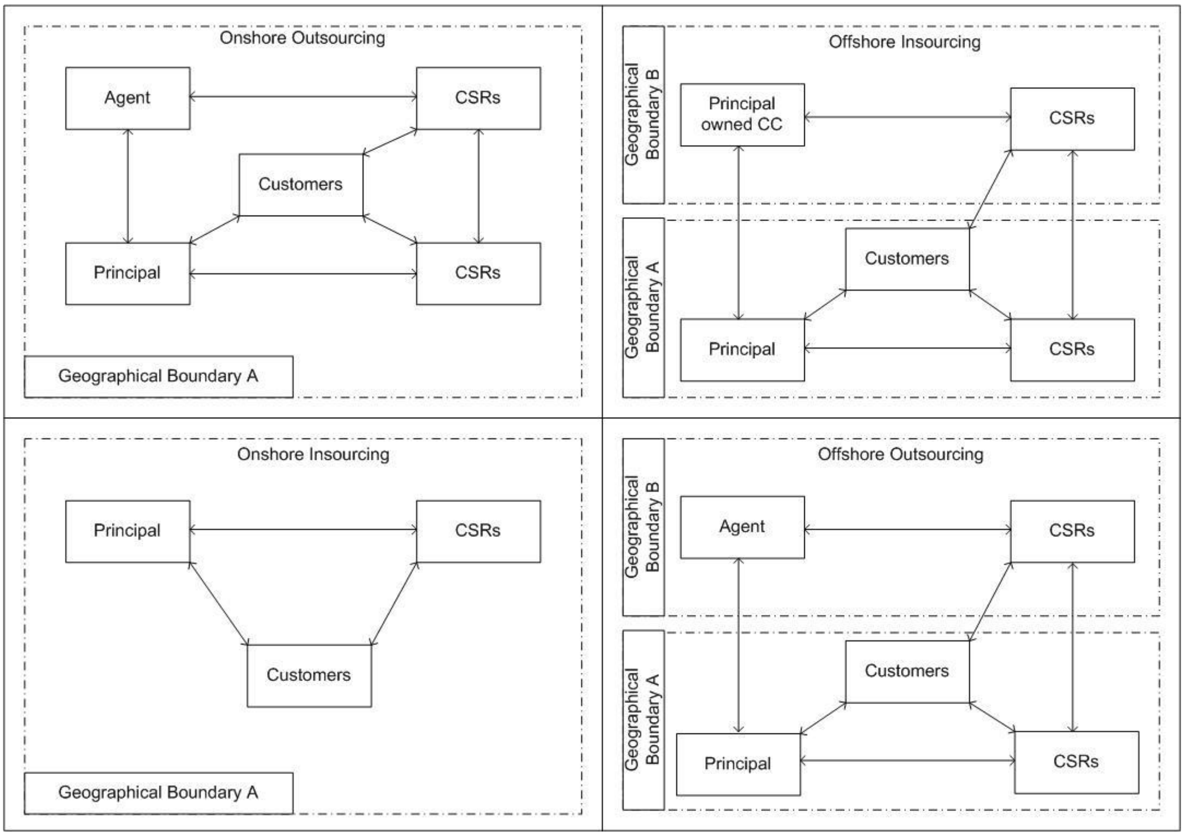

Figure 2.2 Contact centres sourcing built on stakeholders identified (Source: Author)

In summary, the sourcing strategy of businesses could be determined on the basis of organizational and geographical boundaries. In a survey by Chakrabarty (2006), a firm may have approximately 50 different type of sourcing arrangements including national and international engagements. In addition, "Hybrid" arrangements could exist that exhibit a complex combination of insourcing, outsourcing within and across multiple domestic and international locations.

To date, contact centres have been mostly discussed in the context of international outsourcing or offshoring. That is, in addition to local contact centres based in the UK, offshoring of contact centres from the UK, USA and Australia to India, Netherlands, Ireland, Philippines and South Africa have often been discussed in the literature (e.g., Taylor et al., 2013; Kinnie et al., 2008; Burgess and Connell, 2004; Russell, 2004).

As highlighted earlier, the primary motive of firms to source business activities externally is to reduce the costs of those activities incurred by operating them "in-house" (or in-sourced) (Lonsdale and Cox, 2000).

Offshoring enabled reduce costs further through cross-border labour arbitrage, cheaper infrastructure and economies of scale. Kakabadse and Kakabadse (2002:17), through their extensive survey of firms that were engaged in national and international sourcing, confirmed that:

> *"…as much attention is given to reducing costs as to strategically focusing the organization to gain a greater competitive advantage".*

Similarly, Lewin and Peeters (2006) conclude from the Offshoring Research Network (ORN) Survey, that slicing costs is the top driver of offshoring, followed by competitive pressures, access to qualified personnel at relatively cheaper costs - closely associated with cost reduction - for both specialized and low-skill jobs, and offering 'round the clock' service support.

However, there are perceived risks to sourcing and shoring too. For example, Kakabadse and Kakabadse (2002) in their critical review of outsourcing point out the accumulation of hidden costs as a result of a firm's dependency on service vendor and loss of ownership and control over business processes. Other concerns are human resource issues such as loss of motivation in permanent employees and costs incurred in cross-training those employees as a result of redeployment (Schillen and Steinke, 2011). In addition to this then, offshoring imposes greater risks such as a lack of national culture fit, data service quality and security issues, employee turnover and infrastructure instability (Lewin and Peeters, 2006). In the case of contact centres, service quality issues as a result of language and cultural differences (Lewin and Peeters, 2006) and customer resistance to offshoring (Thelen et al., 2008; Sharma et al., 2009) have been reported.

Research has also focused on strategic aspects of sourcing and shoring such as:

- make-or-buy decision making (e.g., Shook et al., 2009; Jahns et al., 2006; Lacity and Hirschheim, 1993),

- location selection (e.g., Mihalache and Mihalache, 2016; Oshri et al., 2009; Metters, 2008),
- contractual issues borne out of outsourcing (Aksin et al. 2007; Ren and Zhou, 2008) and more recently,
- implications surrounding backshoring of services (Campagnalo and Gianecchini, 2015; Madsen and Slepniov, 2008; McLaughlin and Peppard, 2006).

These studies have mainly focused on strategic aspects and management of these aspects within a wider context of manufacturing or services, however, without much specific attention to the context of contact centre services.

Lastly, despite evidence of mechanistic and hierarchic structures within contact centres several studies have reported the 'flat' nature of their structure (cf. Lloyd, 2016; Deery et al., 2013; Russell, 2008; and Taylor and Bain, 1999). 'Flatness' in this sense means that the majority of the employees that are engaged in the production of the services are service personnel, with fewer managers managing them (Brannan, 2005). In addition, therefore, 'flatness' is often described in terms of limited scope for promotions and career development opportunities (Russell, 2008; Callaghan and Thompson, 2002). As a result, some have also referred to contact centres' jobs as 'dead-end' jobs (Deery and Kinnie, 2004; Taylor and Bain, 1999) thereby, compounding the degraded perception of the nature of customer service work in contact centres.

The above narrative of service structure and managerial control and surveillance imposed by the division of labour in contact centres impacts on the accurate appraisal of the discretion of service personnel over service work, which is discussed in detail the following section.

Discretion in customer service work

Several studies indicated discretion as one of the key attributes in labour process of contact centres (e.g., see van den Broek et al., 2004; Townsend, 2007; Lloyd and Payne (2009); Taylor et al., 2013). Discretion can be described as an extent to which workers are allowed initiative within their role and could range from being 'low-discretion' where power or 'coercion' (enforcement) is evident outright, to 'high-discretion where 'consent' (voluntary compliance) is aimed by management (Fox, 1974:16,36-37).

As a consequence of managerial control studies have often cited that contact centres are environments wherein service personnel have low-discretion over service activities. For example, Taylor and Bain (1999) highlighted discretion in terms of adherence to the scripted workflows service personnel have to follow. Houlihan (2001) further details discretion as restrictions imposed on service personnel in terms of the rules and procedures that have to be followed. In addition, Discretion could be evident in terms of the restricted duration within which they have to serve customers or the degree of flexibility by which service personnel could exercise in interaction with their customers (Houlihan, 2001; Benner et al., 2007). Hannif et al. (2014), and Sinha and Gabriel (2016) exemplified discretion in terms of service personnel's decision-making freedom and judgement within their role. Tanim (2016) suggested that the more discretion service personnel have over the pace and method in which they perform the work, the more autonomy they have in their job, thus exemplifying some flexibility in terms of input and work management. In the case of contact centres, however, there is a lack of understanding about the degree of discretion and its management in hybrid or mass-customised contact centres.

In addition, discretion has been often associated and discussed in conjunction with skills. As such, skills in customer service work is discussed next.

Skills in customer service work

The concept of de-skilling has often been elicited in analysing the application of scientific management and labour process theory in contact centres (e.g., see Hannif et al., 2014; Belt et al., 2002). As such, early literature has often highlighted customer service work in contact centres as 'low-skilled' (Russell and Thite, 2008; Rose and Wright, 2005; Belt et al., 2002) or semi-skilled (Russell (2008) given the highly standardised and low-discretion attribute of the customer service work in contact centres. However, what constitutes skills in customer service work is yet to be fully articulated.

A consensus is yet to be achieved whether formal education is required to perform or manage customer service work in contact centres as the recruitment and selection is often focused on "flexibility and customer service rather than skill or qualification level" (Redman and Matthews, 1998:60 in Callaghan and Thompson, 2002) although, education levels may be taken into account when recruiting service personnel (Callaghan and Thompson, 2002). Moreover, in countries like India or South Africa, contact centres seek English speaking university graduates generally (Taylor and Bain, 2005), or higher level of education attainment for, for example, technical support services (Fisher et al., 2007). In the UK, an undergraduate degree in contact centre planning and management has been recently launched (see Planning Forum, 2013).

In contact centres, however, it could be argued that what was considered as a 'skill' in the past, for example, 'hard technical abilities' and 'know-how' of the craft worker is actually absorbed by the standardisation and de-skilling of tasks (Lloyd and Payne, 2009). Despite the fulfilment of English language as a requirement, Taylor and Bain (2005) suggested a communication disconnect between the CSR and, for example, UK customers. Skills is also about managing the actual role of delivering service to the customer by performing various activities, emotional labour and exchange with the customer (Lloyd and Payne, 2009). Hampson and Junor (2005) suggested that routine service work entails 'work articulation skills' which is "a blend of emotional, cognitive, technical and time-management skills, performed often at speed" (Lloyd and Payne, 2009:620).

When service work such as that performed in contact centres is deemed as 'low-skilled', the complex blend of knowing, sense, and rule applying along with performing multiple tasks and managing emotions in a controlled, target driven environment (Lloyd and Payne, 2009; Hampson and Junor, 2005) is ignored. Rather, not only managers but even service personnel may largely take emotion work and articulation work skills for granted. As with skills however, complexity entailed in customer service work often goes unrecognised (Lloyd and Payne, 2009) and hence, is yet to be conceptualised.

Job Complexity in customer service work

'Job complexity', 'task complexity' or 'work complexity' entailed in customer service work is difficult to define (Lloyd and Payne, 2009). This is because the 'complexity' has rarely been fully explored within the context of contact centre services. For example, several studies have highlighted customer service work in contact centres as that of low complexity (For example, see Miller and Hendrickse, 2016; Aksin et al., 2007; Noronha and D'Cruz, 2006) whereas in some cases such as that offering technical support services or managing customer complaints, service has been characterised as that of high complexity (e.g., see Kjellberg et al., 2010; Shah and Bandi, 2003); Miciak and Desmarais, 2001).

Niranjan et al. (2007), while assessing the outsourcing and offshoring of business processes, describes complexity using Perrow's (1970) description of task variability- degree of variety or exceptions entailed within a task, and task analysability - degree of search activity required to complete a task. In addition, they also highlight Woodard's (1958) description of technical complexity - degree to which a task can be programmed and controlled - to describe complexity of a business process.

In the context of contact centre services however, Niranjan et al. (2007) offered no explanation as to what makes a type of customer service work complex over other types. Thus, the complexity of customer service work in contact centres is yet to be fully understood. In order to understand nature of customer service work and its implications on the management of customer service work therefore, it is important to explore the complexity of customer service work further.

In summary, customer service work has been characterised using six key dimensions namely:

- Technology Manifestation in Standardisation
- Managerial Control
- Organisational and Service Structure
- Discretion
- Skills
- Job Complexity

These attributes of customer service work have frequently been emphasised in the literature, portraying the general perception of the labour process and characterising management of customer service work in contact centres.

In summary, scientific management (Taylor, 1911), LPT (Braverman, 1974), Bentham's panopticon (Foucault, 1977) and a typology of organisational control (Edwards, 1979) were some of the most common antecedents used to analyse and describe attributes of labour process and management within contact centres. It could be argued, however, that Taylor's (1911) scientific management practice remained dominant with the latter studies focusing only on specific principles of scientific management namely, de-skilling and separation of conception of work from execution (Braverman, 1974), and managerial control (Foucault, 1977; Edwards, 1979).

Earlier studies often described these service organisations as deeply rooted in efficiency maximisation and routinisation, which are the key objectives of the Taylorist organisation. As such the customer service management focus in contact centres is generally portrayed as volume driven, that is, to be able to serve as many customers as possible in shortest possible time (Strandberg and Dalin, 2010; Deery and Kinnie, 2002). Proponents of this camp have consistently demonstrated how attributes of Taylorism (or those of related antecedents discussed above) are evident in characteristics of customer service work and its management to achieve the efficiency in contact centres (Lloyd, 2016; Robinson and Morley, 2007; Korczynski, 2001; Taylor et al., 2002; Callaghan and Thompson, 2001; Taylor and Bain, 1999; Fernie and Metcalf, 1998). Service activity has been often described as standardised, routinised and performed by low-skilled, low paid, tightly controlled and less empowered workers (e.g., Lloyd, 2016; Deery et al., 2013; Thite and Russell, 2010; Rose and Wright, 2005;). Consequentially contact centres were often labelled as 'bright satanic offices' (Baldry et al., 1998:163), sweatshops (Garson, 1998:1), ‘an assembly line in the head’, or factories of the 21st century (Taylor and Bain, 1999; Shankar Mahesh and Kasturi, 2006; and Hudson, 2011) thereby, establishing a Taylorist view of contact centres management.

2.6 Contemporary narratives of management in contact centres

Although Taylor was noted highly for offering systematic methods of analysis, improvement and management of human work (Taneja et al., 2011), he was also critiqued for his methods and associated limitations.

His methods were often criticised for ignoring the human agency and consequentially, negatively impacting the organisation through 'de-skilling and systematic disempowering of workers (Nyland, 1996:986 in Taneja et al., 2011). Pruijt (1997) exemplified issues in relation to detrimental working conditions of employees as a result of discipline, control and the restricted discretion of those on the shop floor of automobile manufacturing environments, administrative offices and public services.

As a consequence, he further highlighted that turnover and absenteeism were some of the key challenges faced by managers adopting Taylorist management regimes. Even in case of contact centres, poor working conditions and quality of work life were seen as a consequence of Taylorist work design and management of service personnel thereby, drawing a negative portrayal of scientific management.

Secondly, Pruijt (1997) highlighted several organisational level issues emerging from Tayloristic organisations. Pruijt (1997) suggested that Taylorism was fundamentally based on maximising efficiency through specialisation and detailed division of labour. However, the specialisation of activities and division of labour was also found to incur system losses if, for example, certain activity areas are under-utilised or there are idle-waiting times in case of dependency between activities. In addition, specialisation may lead to increase in complexity of information processing within that specialised area although such complexity could be reduced by automation (Hammer and Champy, 1993). However, Pruijt (1997) argued that when work variety from the external or unstable environment is induced then organisations based on the division of labour are too inflexible to handle any turbulence resulting from this variety. Rather, specialisation and division of labour only lock organisations "into high volume, low-variety production" (Pruijt, 1997:19) thereby, making the organisations less capable to respond to market demand and hence, Taylorism less suitable to such organisations.

Yet, as a response to criticisms and limitations of Taylorism and the demand for flexibility in organisations, several management narratives emerged that exhibited alternative forms of Taylorism. Some even presented management practices which were perceived as a breakthrough from traditional Taylorist management methods namely 'neo-Taylorism' (e.g., Pruijt, 1997:2000; Boje and Winsor, 1993) or digital Taylorism (Brown et al., 2010) 'post-Taylorism' (e.g., Peaucelle, 2000; Lomba, 2005; Walton and Parikh, 2012) or anti-Taylorism (de

Montmollin, 1975; Pruijt, 1997; 2000; Kim, 2007). These nuanced paradigms are discussed in the following sections.

2.6.3 Neo-Taylorism

Neo-Taylorism has often been described as an alternative form of Taylorism that emerged out of the needs of the organisation to leverage efficiency, however, to attain flexibility as well (Pruijt, 1997). As such, neo-Taylorist approaches embraced Taylorist attributes relating to standardisation, the division of labour, control and surveillance. However, flexibility through job rotation, teamwork, and attaining reduced cost and higher quality through waste elimination were some of the distinctive features of neo-Taylorist approaches to management (Pruijt, 1997). Pruijt (1997) identified lean production that originated from Japan (Womack et al., 1990) and business process re-engineering (Hammer and Champy, 1993) as two prominent types of neo-Taylorist managerial approaches.

With reference to contact centres, several studies have highlighted contact centres as neo-Taylorist organisations. Neo-Tayloristic contact centres with a dual focus of leveraging both efficiency and quality, were often labelled as 'hybrid' or a 'mass-customised' (Batt and Moynihan, 2002) or, 'mass-customised bureaucracy' (Frenkel et al., 1998; 1999; Korczynski, 2001; Raz and Blank, 2007; Taylor et al., 2013). Hybrid because, contact centres are described as service organisations that are driven by the dual logic of efficiency and service quality (Bain and Taylor, 2000; Korczynski, 2001; Robinson and Morley, 2006). Mass-customised bureaucracy because these contact centres often exhibited a combination of both routine, repetitive, de-skilled service work as well as high-commitment/high performance work systems practices (e.g., D'Cruz and Noronha, 2012; Jenkins et al., 2010; Russell, 2008).

There were, however, cynical views about neo-Taylorism and neo-Tayloristic contact centres suggesting little difference to Taylorist counterparts. For example, Pruijt (1997) and later, Lomba (2005) and Morris (2016) highlighted that neo-Taylorism merely meant a superficial change to Taylorism. That is, Taylorist attributes still remained dominant in neo-Taylorism.

In contact centre literature, this superficiality can be exemplified in three ways. Firstly, there is substantial evidence to indicate how Taylorism and neo-

Taylorism were perceived synonymously in case of contact centres. For instance, Weinkopf (2002) highlighted the neo-Taylorist attributes of contact centres including the division of labour, standardisation of service activities, automation of workflow management and teams led by supervisors who have control and responsibility of managing these teams. In addition, she identifies stressful working conditions as a feature of a neo-Taylorist contact centre. Along similar lines, Hultgren and Cameron (2010) have also exemplified control and surveillance over service personnel as attributes of neo-Taylorist contact centres which are in fact attributes of classical Taylorism. Considering these narratives, it could be argued that there is not much difference between Taylorism and neo-Taylorism.

Secondly, several studies have exemplified lean adaptation in contact centres (e.g., see Sprigg and Jackson, 2006; Taylor and Bain, 2007; Scholarios and Taylor, 2010), which is alleged to be one of the facets of neo-Taylorism. For example, Spriggs and Jackson (2006) discuss scripting of conversations and monitoring of activities as evidence of lean implementation. Similarly, Taylor and Bain (2007) highlighted how lean implementation in contact centres facilitates efficiency maximisation through 'management by stress' and efficient call management thereby, achieving lean staffing. In other words, lean was perceived as just another technique of attaining efficiency through mass-production as it was in manufacturing (see Mulholland, 2002) which is why, for example, Seddon (2011), warns that lean is 'a waning fad'.

Thirdly, it could be argued that it is the pre-occupation of managers with efficiency maximisation and cost-reduction that inhibits differentiation of neo-Taylorism from Taylorism. As a consequence, not only do organisations struggle to achieve rigidity and flexibility simultaneously but also face challenges at operational level. For example, the dual focus of efficiency and quality has been generally perceived as fundamentally contradictory (cf. Batt and Moynihan, 2002; Raz and Blank, 2007). Such contradictory objectives not only induce dilemmatic managerial priorities in contact centres, that is, whether to achieve efficiency or quality, but also create confusion for service personnel as to whether focus on quantitative or qualitative goals of the service (Taylor and Bain, 1999; Wallace et al., 2000; Robinson and Morley, 2006; Bank and Roodt, 2011; Chicu et al., 2016).

Regardless of such criticisms, whether in its classic or alternative form, Taylorism still persists in organisations (Pruijt, 1997). In the last few decades, however, there has also been a countermovement, which Pruijt (1997) and others (e.g., Peaucelle, 2000; Lomba, 2005) describe as a break from Taylorism, which is commonly discussed as 'post-Taylorism' or 'anti-Taylorism'. This countermovement is discussed in the following section.

2.6.4 Post/Anti-Taylorism

Morris (2016) noted several approaches to the management of organisations that were developed to enable a fundamental shift in management thinking and practice, that is, breakage from 'mass-production' and hence, from Taylorism. These approaches were mainly aimed at tackling human agency and quality of the job and work life issues aiming to improve job design and performance-based pay systems, embedding teamwork, emphasising socio-technical skills when recruiting and training employees and encouraging self-management at an individual and team level. Whereas Lomba (2005) labelled this movement as 'post-Taylorism', others (e.g., de Montmollin, 1975; Pruijt, 1997; 2000) described this paradigm as revolutionary and hence, 'anti-Taylorist'.

Peaucelle (2000) described post-Taylorism in a very similar manner to neo-Taylorism. According to her, post-Taylorism entails new objectives including flexibility (or diversity), quality and timeliness of production be added to to the existing objectives of Taylorism namely, to increase efficiency, volume and hence, the growth of the contact centres. Further, Peaucelle (2000) also discussed how, for example, autonomous work teams, business process re-engineering, automation, quality attainment, and just-in-time production were practices that enabled attainment of both efficiency and flexibility.

Anti-Taylorism exhibits a rather positive portrayal of management thinking and practice. Pruijt (1997) suggested that anti-Taylorism could be observed in following five changes which indicate in moving away from Taylorism:

- alleviation of technical discipline or moving away from the assembly-line mode of production;
- job enlargement (or adding more tasks to the job rather than specialisation);
- job enrichment (addition of more complexity to the tasks);

- de-centralisation of responsibility (and hence, granting autonomy to the workers);
- participation (in design and quality enhancement projects).

Pruijt (1997) observed and elaborated on each by exemplifying them in his research of 62 case organisations. For example, he highlighted how alleviation of technical discipline was evident in the form of abandoning or modifying the assembly line concept in manufacturing by allowing workers some flexibility towards certain tasks where necessary. He also identified job enlargement in terms of combining low-skilled and high-skilled tasks together. Similarly, job enrichment was exemplified in terms of adding more complexity to the tasks by embedding personalised product/service provision to the customers or, incorporating planning and management tasks within existing job roles. De-centralisation referred to granting some level of autonomy, either in terms of troubleshooting and reduction of supervision density over workers. Finally, participation entailed involvement of workers to foster management plans in designing and improving the quality of products.

The evidence of anti-Taylorism within the context of contact centres is limited. However, it has been established that not all contact centres uphold the efficiency aims and that some may have focused on service quality or have an additional strategic purpose of delivering value to the customers. The multi-channel and multi-functional nature of contact centres has also been elicited highlighting job enlargement in contact centres. In addition, there are a few studies that have debated or have highlighted that contact centre services could be complex in nature, such as involving technical support and healthcare and hence require high-skilled service personnel who can deliver service in a flexible, autonomous and empowered environment (Batt and Moynihan, 2002; Bain et al., 2002; Shah and Bandi, 2003; Richardson and Howcroft, 2006; Weinkopf, 2006; D'Cruz and Noronha, 2007; Koskina and Keithley, 2010).

Similar to the case of anti-Taylorist contact centres, Pruijt (1997) found limited evidence of anti-Taylorism in his research. He found that anti-Taylorist attributes were either trivial or simply non-existent in some cases (for example, supermarket, fast-food, bank tellers) whereas Taylorism is still persistent.

Considering the above, neo-Taylorism, post-Taylorism and anti-Taylorism are not easily discernible (Sawchuk, 2010). Rather and even in the case of contact centres, these are mere extensions of Taylorism (p.107).

Pruijt (1997) noted that further attention has to be paid to factors, including management commitment, culture, communication, organisational learning, socio-technical design and so forth to leverage anti-Taylorism. Since the year 2000, newer opponents of Taylorism have emerged, which has extended the debate of dealing with these factors using a 'systems' thinking' approach.

2.6.5 Systems' thinking in contact centres

The origin of general systems' thinking dates back at least 50 years ago. For the purpose of this study, systems' thinking is reviewed with specific focus on its application in contact centres.

John Seddon's work on systems' thinking in regards to the design and management of service organisations has been gaining increased popularity in the last decade or so in academic literature (e.g., Jaaron and Backhouse, 2014; 2011a; Jackson, 2009). Systems thinking in management has been discussed in context of UK public services (Jaaron and Backhouse, 2011a; Zokaei et al., 2010) and contact centres (e.g., Jaaron and Backhouse, 2014; 2013; 2011b; McAdam et al., 2009; Piercy and Rich, 2009; Seddon and Caulkin, 2007; Seddon, 2003; 2000).

Mass production logic

In his earliest work, Seddon (2000) criticised contact centres for being designed in a 'top-down' manner. His critique, however, was from a managerial view point through which he elicited the operational challenges that have been highlighted in contact centres. For instance, he describes that contact centres are primarily designed and managed with mass-production thinking. This means that the design and management focus was to primarily ensure that demand flowing into the contact centre is met, with as little cost-to-serve as possible. Designers of the contact centres pre-occupied with mass-production logic are primarily concerned with meeting this demand, through functional specialisation or division of labour, and specifying the procedures for how the work is to be done in order to meet the required standards.

The decision making is top-down and separated from operations. In these terms, the primary responsibility of managers in contact centres is to ensure that the required number of service personnel along with the necessary skills and capabilities are available to perform the work to the standards which are in the form of performance indicators. However, the outcome of performance is then only what can be quantified than what is actually desired (quality). Seddon (2000) argues that the very value of doing the work is lost. The attitude towards customers is merely contractual than purposeful of what contact centres are meant to deliver.

Seddon's (2000) description of mass-production logic was broad yet incremental in the sense that in his later work, he elaborated further on mass-production thinking. For example, Seddon's (2003) explains mass-production attributes as features of a command and control approach, which according to him, is fundamentally borne out of Taylorism. In addition, he highlights that the relationship with suppliers - which could be interpreted as outsourcers in case of contact centres - under this paradigm is often contractual or transactional in nature. Furthermore, change in such organisations is often reactive to needs of the environment and isolated from the rest of the organisation, (see also Pruijt, 1997).

In service organisations such as contact centres, he summarised later that managers pre-occupied with mass-production logic are primarily concerned with three fundamental questions (Seddon and O'Donovan, 2010):

1. How much work is coming in?
2. How many people does the organisation have?
3. How long do people take to fulfil the work?

As such, managers are found to be in pursuit of meeting the demand by deploying Taylorist practices to increase efficiency, for example, through standardisation and functional specialisation, control using ICT or outsourcing the activities to lower-cost organisations/economies to achieve economies of scale and hence, to reduce costs.

In his work, Seddon (2003) appraised that Taylor's (1911) contributions were critical to the manufacturing environments given the needs of people, industry and economy in the twentieth century. For example, he noted (p.188):

> *"It worked, it provided jobs and wages and industrial output increased"*.

However, he also highlighted that the paradigm of command and control or mass-production thinking had weaknesses. He argued that mass-production logic may be *a way* to design and manage work but not the best way. Furthermore, he emphasised that an alternative method was needed for design and management of service organisations which has to stem from the very change in thinking from mass-production to what he described as 'systems' thinking'.

Systems' thinking logic

In contrast to mass-production logic, Seddon (2000) suggested that contact centre managers need to adopt systems' thinking logic. Under this, contact centres should be viewed as systems Seddon and Caulkin (2007) later, described systems broadly as a set of parts that are interconnected together towards achieving some purpose. Accordingly, systems' thinking is concerned with understanding the implications resulting from the interconnectedness of these parts on the outcome of the system.

Seddon's early conceptualisation of systems' thinking could be perceived as a combination of the management approaches that were criticised as extensions of Taylorism. For example, Seddon and Caulkin (2007) suggested that systems' thinking is closely linked with lean manufacturing principles. However, a few years later, Jaaron and Backhouse (2014:2029) highlighted that Seddon's (2000) view of systems' thinking concerned with two main questions - 'how the work works' and 'how to change it' to achieve the purpose of the system (Seddon and O'Donovan, 2010). Accordingly, Seddon's (2008) systems' thinking entails a three step process namely (Jaaron and Backhouse, 2014):

1) Check - Analysis of what, how and why of the current system and it's purpose;
2) Plan - What needs to be changed to achieve the purpose and;
3) Do - Re-design, experiment and implement changes alongside working with managers to adopt and adapt these changes.

Jaaron and Backhouse (2014) highlighted that as opposed to Taylorist mass-production thinking, systems' thinking is fundamentally based on viewing an organisation as a holistic system, the purpose of which is seen in terms of its customers. Accordingly, it is the customer demand that should be of the focus to managers rather than functional hierarchies/components and their respective purposes when defining the purpose and hence, designing the organisations (Jaaron and Backhouse, 2014; 2010).

In describing systems' thinking then, Seddon and O'Donovan (2010) placed immense importance on learning in organisations (Senge 1990; Argyris and Schon, 1974), that is, to understand 'how the work works'. They argued that when organisations are viewed holistically, organisations begin to discover and learn the actual causes of system failures resulting from the weaknesses of mass-production logic which on the contrary merely increases the cost.

Therefore, the first step of systems' thinking approach is to learn from such failures by categorising demand into two categories namely, value demand - the demand for which the service organisations are established to serve and; failure demand - demand that service organisation fails to serve at first instance (Marr and Neely, 2004; Seddon and Caulkin, 2007; Piercy and Rich, 2009; Jaaron and Backhouse, 2014). Seddon and O'Donovan (2010) highlighted that in service organisations such as contact centres, failure demand accounts for 80% of the actual demand that incurs a cost. As such, this failure demand is considered to be a 'waste' and hence, which needs eliminating to reduce cost and improve quality (Piercy and Rich, 2009; Seddon, 2003).

As such, system thinking includes consideration of fundamental structural aspects of an organisation and the re-design of processes that would enable organisations to achieve the simultaneity of cost-reduction and improved service quality (Piercy and Rich, 2009). Unlike the neo/post-Taylorist perspectives, however, systems' thinking emphasises a shift of thinking from the mass-production logic that is embedded in those perspectives. For example, Seddon and O'Donovan (2010) were also concerned with the demand variety that is evident, for example, in the case of contact centres.

They argue that when service organisations are designed using Taylorist principles, absorbing the variety is a challenge for these organisations. As such, it is necessary that service organisations are designed and managed in an 'organic manner' to absorb this variety (Jaaron and Backhouse, 2011a).

So according to Seddon (2003) systems' thinking organisations are where decision making should be integrated and devolved rather than functionally and hierarchically separated so that, according to Jaaron and Backhouse (2011a), organisations can quickly eliminate waste, absorb variety, change and adapt to the turbulent environment (Jackson, 2009; Jaaron and Backhouse, 2011a; 2011b). Rather than mass-production logic where in output is measured based on targets, standards and budget, a systems' thinking approach emphasises measuring the outcome of the service in terms of whether the purpose of the system is achieved and/or variety is absorbed (Jaaron and Backhouse, 2014; Seddon and Caulkin, 2007). Rather than having a contractual relationship with the customers and a focus on internal measures, employees are said to be empowered and also processes should be geared to what matters to the customers in terms of the value (Seddon, 2005). Seddon (2003) and Piercy and Rich (2009) also highlighted how having a co-operative network of suppliers rather than contractual relationships with them is beneficial in terms of creating the well-defined interconnected system.

System thinking also addresses the motivation of employees. In the case of mass-production logic, motivation is often driven by incentives based on targets and tasks, as evident in the case of contact centres (Seddon, 2000). In contrast, Seddon (2003) argues that a target based motivation only creates a false sense of achievement amongst employees and more importantly the de-valuation of the true purpose that is meant to be achieved. Rather, as Jaaron and Backhouse (2011b) highlighted if employees are empowered and driven to achieve the purpose rather than the targets, not only will this result in better working conditions for employees and reduce turnover and absenteeism, but also enables attainment of productivity and service quality. Table 2.4, therefore, summarises and distinguishes the mass-production thinking and systems' thinking, which has been cited by several advocates of systems' thinking or organic organisations (e.g., Jaaron and Backhouse, 2011b; Piercy and Rich, 2009) alongside Seddon (2003).

Table removed for copyright reasons

Table 2.4 Comparison of mass-production thinking and systems' thinking (Source: Seddon, 2003)

The next section discusses the emergence of yet another anti-Taylorist approach to manage service, service management, and its coincidence with systems' thinking the logic in services and especially, contact centre services.

2.6.6 Service management

Alongside the emergence of systems' thinking in management practice, elsewhere, there has also been an emergence of the concept of 'service management' (Normann, 1984; Gronroos, 1988; 1990) - a term that was used broadly to distinguish aspects and issues relating to service operations management separate from manufacturing operations management (see Johnston, 1994). As such, this section reviews the emergence of service management, its relevance in contact centres research and implications for this study.

Fundamentally, service management as a concept stems from the very realisation of services as an important sector in the economy in the 1970s - servitization of operations management in manufacturing environments and a deviation from mass production practices of organising and managing work in organisations (Johnston, 1994). Organisations recognised that in order to achieve competitive advantage, consideration of the price and range of goods is not enough and that quality of service and support systems to those goods are critical to gaining competitive advantage (Johnston, 1994). As such, a need was recognised by organisations to shift away from a mass-production approach that is focused on traditional internal efficiency to a service oriented approach that is customer oriented and quality focused.

In the 1990s, Gronroos (1990:7) made the first attempt to define service management as a distinctive philosophy of managing services:

> *"A service management perspective changes the general focus of management in service firms as well as manufacturing firms from product-based utility to total utility in the customer relationship"*.

Later in his paper, Gronroos (1994:7) elaborated on five key facets of service management:

1. It is an overall management perspective which should guide decision making in all areas of management and not just for a particular function;
2. It is customer driven and not driven by internal efficiency of organisation;
3. It is a holistic perspective which emphasises the importance of intra-organisational and cross-functional collaboration (not specialisation and the division of labour);
4. Focuses on quality as an integral part of service management; and
5. Internal development of personnel and reinforcement of its commitment to company goals and strategies are prerequisites for success (not only administrative tasks).

There are several similarities and convergence between the service management conceptualisation above and systems' thinking approach discussed earlier.

Both for instance, warrant the holistic approach to management that is driven by customer and quality focus than by internal efficiencies of the organisation. Both service management and systems' thinking approach emphasise on functionally integrated approach to achieving the actual purpose and quality of service perceived by the customer. Both also highlight the development of personnel through shared commitment, goals and vision of the organisation. Thus, it could be argued that in some ways, service management can be seen to have some embeddedness of systems' thinking, however, with specific reference to holistic approach to managing services. Nevertheless, not much has been written about such convergence except by Seddon et al. (2009).

Beyond the conceptualisation of service management by Gronroos (1994), it is difficult to describe what comprises of service management practice. Even Gronroos (1994) accepts that condensing service management into a single theory has been a difficult task. Service management practice has been rarely established holistically due to its silo treatment within marketing, information technology (business-to-business), human resources and operations management literature as discussed earlier. Even though Gronroos (1994) highlights the overall management focus and holistic approach to managing service in his description of service management, marketing still remains a dominant focus in his conceptualisation of service management. Similarly, Johnston (1994) and Fitzsimmons et al. (2008) focus has been mainly on operations management when describing service management. However, Johnston (1994) warranted the need of moving beyond the application of quantitative techniques of improving internal efficiency of organisations. Nonetheless, understanding and conceptualisation of service management only exist within discipline-specific silos.

Even with reference to contact centres, a thorough foundation and conceptualisation of service management practice are yet to be offered. Several papers used the term 'service management'. However, none of these papers has clearly elicited what service management is in relation to contact centres. Instead, there has been a varied focus on various aspects of organising and managing the labour process or specific elements of service management in contact centres.

For example, Betts et al. (2000) focused on capacity management in contact centres. Similarly, Gilmore (2001) used the term 'service management' however, focusing on service quality and synonymised managing the labour process with service management. Batt and Moynihan (2002) considered service management in the context of various types of contact centre production models discussed earlier in this section (see 2.5.3). Likewise, Holman (2003) explicitly referred to 'service management' models as call centre production models highlighted by Batt and Moynihan (2002). Such synonymous conceptualisation of service management as management of the labour process is exactly the issue that this study is concerned with. As previously stated, the very misconception of managing the labour process as 'management' has undermined the exploration and establishment of service management practice at least in the case of contact centre services. Since Seddon's (2003) publications on systems' thinking in contact centres, however, there has been some emergence of focus towards service management as a distinctive focus.

Despite such irregularities and inconsistencies in service systems and service management research, the last 15 years have been quite promising for service scholars. There has been an emergence of a cross-disciplinary initiative to address issues relating to service research and hence understanding of services. Established by IBM in late 2004, this initiative was called Service Science (Huo and Hong, 2013 ; Spohrer et al., 2007), the fundamentals of which along with and its relevance to this study is discussed in the following section.

2.7 Service science

Up to now service research has been somewhat reductionist in nature involving many disciplines including organisational theory, marketing, operations research, information systems, and so on, (Maglio and Spohrer, 2008) that have focused on obtaining specific knowledge about different aspects of the service system. In case of contact centres research, examples could include specific operational challenges resulting from labour process in contact centres (e.g., Robinson and Morley, 2006; Jack et al., 2006), examination of offshored services (e.g., Sharma et al., 2009; D'Cruz and Noronha, 2007) and service quality (e.g., van Dun et al., 2011; Langley et al., 2006). In addition, the purpose of examining the problems associated with contact centres services has mostly been to offer mathematical models or engineered solutions to these problems (e.g., Ibrahim et al., 2012; Shen and Huang, 2005; Koole and Mandelbaum, 2002).

With such reductionist or conventional thinking (Reynolds and Holwell, 2010), interconnections between entities of service or between contact centres and the rest of the organisation often get ignored. This undermines understanding of what these systems are and what constitutes their management. In contrast, the foundations of service science are fundamentally based on studying service systems using an integrated and holistic approach. The rationale and hence need of such approach is very similar to that of service management - the distinctive recognition of services as an economy due to its growth and development in both developed and developing nations and a realisation of service imperative by organisations (Spohrer and Maglio, 2008). Both service science and service management stem from concern that there is still an inclination towards a manufacturing rather than a service paradigm in research (Spohrer and Maglio, 2008; Ng and Maull, 2009) creating a lag between actual service research and understanding the demands of the service economy (Gronroos, 2001). In addition, Spohrer and Maglio (2008:244) raised the issue of disciplinary silos that inhibited understanding and growth of the service imperative and warranted:

> *"the need for an integrated approach that spans not only existing discipline-based silos within academic organizations (i.e., marketing, operations, and human resource management within a business school)but also across academic organizations (i.e.,business, engineering, and liberal arts)."*

In order to understand service science and holism within the context of service science further, firstly, it has to be understood how service systems are seen within service science. Maglio et al. (2009) assert that the service system is the basic abstraction of service science. Hence, for this study, in order to understand and study contact centres within the context of service science, it is important to firstly embrace contact centres and service systems as holistic entities. Maglio and Spohrer (2008:18) define service systems as

> *"value co-creation configurations of people, technology, value propositions connecting internal and external service systems, and shared information (e.g. language, laws, measures, and methods)."*

Secondly, service science also tackles the issue relating to under-development of understanding service management. For example, Huo and Hong (2013) highlight that service science also involves focusing on the management issues of service industries laying a theoretical basis for the discipline of service science. Thus, it is viable to describe service science as the study and development of service systems and service management. For contact centre service systems and even for services in general, however, service management practice is under-researched and hence, Huo and Hong (2013:45) suggest that service science "*undertakes this historical mission in a proper time*", to address the lack of development of service management practice.

Thirdly, approaches to studying service systems and management within the service science context are somewhat rooted in the philosophy of systems research and thinking (Ng and Maull, 2009), as was also identified in case of the conceptualisation of service management. Even in case of contact centre services, Seddon (2003) for example, argues that studying and managing contact centre services requires the adoption of systems' thinking. However, the term 'holism' and integration within the context of service science means that both scientific techniques deployed by operations management researchers and customer and service oriented approach to service systems and service management suggested by Seddon (2003) contribute to the understanding of service systems and hence, towards the emerging discipline of service science.

Although Spohrer and Maglio (2008) highlighted that service science is an inter-disciplinary initiative, there is still a debate about its true nature, that is, whether service science is multi-disciplinary (Stoshikj, 2016) or even trans-disciplinary (Ng and Maull, 2009). Regardless, the emergence of service science is promising yet concerning as far as this study is concerned. For instance, on the one hand, the literature on service science is growing. On the other hand, however, it is concerning that within the service sciences journal, the focus of service science scholars on contact centre service systems and the service management practice is insignificant despite the growth and development of contact centre services and their increasing centrality to organisations and customers. Further, these publications tend to be purely scientific in nature placing contact centre services within operations management research and hence, reductionist in nature. Therefore, the holistic understanding of contact centre service systems and management within the discipline of service science is rather limited - a rationale for this research.

2.8 Summary

The literature on services and especially contact centre services is overwhelming yet still growing and this reflects the development of contact centres. Despite the growth and development, the literature on contact centre services research is scattered across various disciplines. Nevertheless, this chapter has reviewed traditional and contemporary antecedents and narratives relevant to contact centre services. In doing so, several insights and implications have emerged that are summarised in this section.

Firstly, the terms 'call centres' and 'contact centres' are used ambiguously/interchangeably or even synonymously in the literature. However, the transition of call centres to contact centres cannot be assumed as linear. For example, Shah et al. (2006) illustrated three generations in their thesis, namely, first generation as call centres, second generation as contact centres and third generation as customer care centres. However, the definitions reviewed for this study indicates that there was barely ever a clear transition from call centres to contact centres. Nonetheless, as call centres can at least be considered as a sub-set of contact centres considering the channel difference between the two, this study refers to the service functions in question as 'contact centres'. To reiterate and for the purposes of this study and within the context of service science then, contact centres as service systems (Cleveland, 2012: 5), are defined as:

> *"multi-channelled co-ordinated system of people, processes and technologies internal or external to the organisation boundaries that deliver information, product support, administration, and sales services and manage relationship with customers over service channels such as* ***web based portals, e-mail, chat, fax and social media, in addition to telephone,*** *to create value for the customer and organisation."*

Secondly, multiple narratives about contact centres have emerged in the last two decades. These narratives have exemplified different definitions, types of service provision, strategic purpose, management practices and labour process characteristics evident in contact centres. Accordingly, a consensus has emerged in the last two decades, that contact centre work is not uniform or homogeneous (Weinkopf, 2006; Russell, 2008). Rather, contact centres work varies considerably in nature depending on the strategic purpose. Therefore, there is further scope for debate about the nature of the contact centre work.

What is homogeneous, however, in the literature is the similar theories that are used to analyse the design and management of contact centre work. Studies have mostly narrated the design and managerial practice in contact centres as an exemplar of scientific management and its sub-sets (Paton, 2012), and underpinned by LPT and perspectives from Foucault (1977) and Edwards (1979). Following these antecedents, the focus of the studies was predominantly on the characteristics and organisational features of service work and operational and human resource issues in contact centres, the response of employees to working conditions and managerial issues in contact centres (Lloyd, 2016; Deery and Kinnie, 2002).

Some of the most commonly researched strands discussed include the quantity-quality conflict in call centres (Piers William Ellway, 2014; Dean and Rainnie, 2009); human resource challenges such as coping with stress, burnout, emotional exhaustion and hence, high turnover of employees (Rod and Ashill, 2013; Deery et al., 2010); managing resistance and counter-productive behaviours of employees due to the nature of the labour process (Lloyd, 2016; Mullholland, 2004); trade-union dynamics in contact centres (Sarkar and Charlwood, 2014; Bain and Taylor, 2008; Bain et al., 2002), and measuring, managing and delivering customer satisfaction (Chicu, et al., 2016; Jaiswal, 2008); Jack et al. 2006; Gilmore and Moreland, 2000).

These issues have also been extended in the context of outsourced and offshored contact centres, especially those that are re-shaping the make-or-buy decisions. However, most of the studies within this strand have discussed strategic matters regarding outsourcing and offshoring of contact centres within a broader context of BPO, Information Technology, ITES and/or general domain of manufacturing and services offshoring and/or outsourcing. Contact centre services and their management have often been deemed simplistic undermining the importance and complexities of these services.

In the case of contact centres, studies reviewed for this study has revealed both dystopic and utopic interpretations in the literature. Studies have mostly reported failure to achieve the simultaneous objectives of efficiency and quality in contact centres. In contrast, there has been a parallel growth in studies that have argued that contact centres could be primarily driven by service quality or specific value based propositions. These studies have, however, only made sweeping references to how the strategic importance of contact centres have evolved from being cost-centres to value centres. Studies such as those that advocate systems' thinking or lean in contact centres highlight that these paradigms could well enable contact centres to achieve organisational resilience and achieve a dual-strategic objective of cost saving and quality. The limitation, however, remains that this strand is still under-researched.

Two questions emerge here. Firstly, given the dilemmatic perceptions and despite the pluralism in strategic propositions of contact centres, it is still not clear what the value propositions of contact centres are. One could argue that this depends on the actual purpose of contact centres however the dominant mass-production logic of contact centres inhibits clear elicitation and appraisal of the importance of contact centres to the business.

Secondly, there is a scarcity of holistic understanding in terms of what constitutes and explains customer service management in contact centres. While contemporary paradigms such as the application of high-commitment human relation practices, lean, systems' thinking, and organic approaches to managing contact centre services have emerged, there is a lack of a consistent perspective on these paradigms.

Closer yet distinctive from service management, the discipline of service science emerged that promised to undertake the task of spanning across disciplines to study service systems and management of service systems. Thus far, however, management of contact centre services is yet to be explored holistically and within service science context.
To conclude, research within service science context is developing however, understanding of contact centre service systems within this context is limited. As such, there is a need to investigate the nature and evolution of service systems, and the relationship between the system and associated entities. This entails an understanding of what constitutes service management practice in contact centres.

From this literature review, this study has developed initial foundations of this inquiry by shaping six dimensions of customer service work discussed earlier, namely: technology manifestation in standardisation; managerial control; the service structure and issues of discretion, skills and job complexity. These dimensions, their conformance and contradictions with attributes of Taylorism and other antecedents of services management and the contested logics of efficiency and efficacy warrant further inquiry.

The next chapter outlines the philosophical and methodological commitments set for this study to address these research questions and the overall aim of the study.

Chapter 3 : Research methodology

3.1 Introduction

This chapter outlines the research methodology including the philosophical commitments, research approach, data collection procedure and data analysis approach adopted for this study. It outlines the key considerations and in particular, the principles of systems' thinking in contextualising the research within the emerging discipline of service science. It also presents and discusses the key stages of data collection, data collection techniques and reflects on the implications of these choices on the objectives of this study. This is followed by a comprehensive discussion of data analysis procedure and development of service management framework. The chapter then concludes by providing a brief summary to the reader.

3.2 Philosophical commitments

Philosophical commitments inform the researcher's approach to addressing the research questions so that we know what we are doing and whether do we understand what we are doing. At a high level, the researcher could pursue his research objectively or subjectively (Burrell and Morgan, 1994). In other words, researchers could either perceive the phenomenon under inquiry as an object that exists independently of their mind or as a construction or co-construction of their individual or collective minds, respectively (Fitzgerald and Howcroft, 1998; Saunders et al., 2011). Accordingly, social science researchers adopt different paradigms, depending upon their ontological position (The status of reality) and epistemological endeavours how do we know what we want to know?) to address the research questions.

As highlighted in Chapter 1 and Chapter 2 however, this study is about the understanding of service management through the philosophy of systems' thinking (at least in service research) and hence to contribute to the emerging discipline of service science.

3.2.1 Ontological and Epistemological commitments

This section discusses my ontological and epistemological commitments or simply, what is my view of reality and how do I access knowledge. Through the comprehensive literature review and the research questions set out in Chapter 1, this study can be contextualised within service science.

Fundamentally, service science is about investigating the nature of a service system and its evolution, and the relationship between the system and the role of people, technology, value propositions and shared information (Smith et al., 2012; Spohrer et al., 2007). These are the very objectives of this study. A systems approach within service science context then entails viewing and studying contact centres as systems and their management as a whole. As such, adopting systems' thinking to conduct research warrants specific ontological and epistemological considerations.

Ontology is concerned with the nature of reality (Saunders et al., 2011) and understanding the nature of reality. Ontology is often viewed as a spectrum, where on one hand, realists view the world as concrete object that exists independent of their mind, and on the other hand, relativist view the world as a construction of their minds, or a phenomena co-constructed by members of the community sharing similar beliefs or values (Saunders et al., 2011).

Epistemology deals with the understanding of what can be regarded as knowledge- what can be known and what criteria such knowledge must satisfy in order to be called knowledge (Blaikie, 2007). In other words, it concerns, 'how and what is possible to know' along with 'knowing how you can know' (Hatch and Cunliffe, 2006) under some criteria that enables the researcher to be confident in what he or she knows. Epistemology can be discussed in terms of two extremes, namely *objective* epistemology and *subjective* epistemology. Objective epistemology considers that knowledge is independent and theory neutral and hence can be accessed independently whereas, subjective epistemology rejects the former view and suggests that knowledge cannot exist independently and hence depends on researcher's interpretation and his pre-understanding of the phenomena to be pursued (Blaikie, 2007).

For this study, I believe that contact centres as services systems are considered to be real and are objective in nature. However, these systems may be co-constructed or socially constructed (Katzan, 2008) by people who may be internal or external to these systems. Accordingly, service constructionists - for example, service designers, consultants, directors and so on - construct the service system (world) considering the entities, some of which may be already existing, for example, organisation, infrastructure, resources, people and processes, technology. Similarly, some idea or *meaning* about service models, templates, design, that are constructed by service constructionists in the past may still be used as objects to construct the same or different world. This is consistent with Crotty's (1998:44) suggestion that constructionists 'have something to work with'.

Nevertheless, it is important to also consider the current knowledge available for services. For example, Moussa and Touzani (2010) highlight in their review of service research of the past 18 years (1993-2010) that service research is predominantly based on speculations rather than facts. In addition, they argue that although inter/multi-disciplinary efforts to study services such as service science are appealing, there are challenges in attaining any consistency and coherency in service research. Rather, I believe that the existing body of knowledge has developed some foundation for the emerging discipline of service science. However, given the varying nature of contact centres discussed earlier, I also believe that the objectivity of contact centres is organisational, purpose and hence, context specific.

As such, according to Churchman (1968:231) as cited by Reynolds and Holwell (2010), "*A systems approach begins when you first see the world through the eyes of another*". The focus of this study is to obtain knowledge about contact centre service systems and management practice through my interactions and engagement with and between *relevant* groups/individuals that are engaged in creating and managing contact centres to deliver the strategic purpose of that service system. Thus, my epistemological position is subjectivist in this sense, to access the knowledge about service systems and service management. In Information Systems research, the term 'practice' is described as a holistic notion that not only consists of human actions and activities that are combined in a meaningful way, but also codifications of such actions in a common language (elements of service management) and artefacts (e.g. decision making templates, scorecards, etc) (Goldkuhl,2004). Accordingly, there are other sources of data that are internal or external to the service system under examination which contribute to the development of knowledge.

The pursuit of obtaining holistic knowledge about systems and practice with context specific reality can be well founded within pragmatic thinking (Goldkuhl, 2004). Such thinking allows me to take a dual position of being objective and subjective at once to study the systems and work practice respectively, using flexible methodological approach (Crotty, 1998) and data collection techniques.

3.3 Research approach

Given the pragmatic approach and exploratory nature of research inquiry, a qualitative approach was adopted, in order to allow the exploration of the areas that inform this research in depth (Gill et al., 2010). The qualitative approach entails addressing the research problems associated with the world by examining the interpretation of individuals practice associated with that world (Gill et al., 2010). It also enables exploration of unique characteristics of organizations (Behling, 1980). Although Cunliffe (2011) highlights that qualitative research is based on a constructionist philosophy, Morgan (2014) assures that qualitative research can also be undertaken pragmatically.

With specific reference to this study, qualitative approach enabled collection of in-depth information about the elements of service system, and the individuals' experience and reflection on practice in managing these elements. Primarily, this was achieved by interviewing those practitioners that are involved in designing the service system as well as those that are involved in managing the service system. In addition, qualitative approach for this study also entailed collection of data from additional sources and analysing it alongside interview data for the purpose of triangulation. These elements are detailed further in the following sections.

3.3.1Interview as a data collection method

Interviewing is most popular amongst qualitative researchers (Bryman and Bell, 2011; Morris, 2009; King, 2004). Interviews are an exploratory instrument for primary data, enabling the researcher to obtain insightful data (Yin, 2009). According to Legard et al. (2003) cited in Rose et al. (2014), interviewing creates opportunity for the researcher to generate new understanding of the subject matter "through a combination of structure and flexibility allowing both the coverage of desired topics and follow-up of emergent issues" during the interactions between the researcher and the participant.

Precisely, interviewing participants in this study enabled identification and deeper understanding of elements of service design (the 'what') and management of these elements (the 'how'). The focus was on exploration of attributes, both existing and new, of customer service work and its management with specific reference to telecom services so as to compare the findings with the existing narratives.

Given the aforementioned focus, this study focused on interviewing specific individuals that were involved in designing and managing the service and service organisations. Pragmatically, this means that the focus is on exploration of relevant and useful aspects of all stakeholders' experience and practice that is co-constructed by having a dialogue with these stakeholders (see Marshall, 2005). In this study however, although frontline workers were considered to be one of the important stakeholders at the research design stage, they were not considered suitable and practical for this study. Firstly and as evident in Chapter 2, there is far too much emphasis on the frontline issues in case of contact centre service research. As a result of this, managerial voice and hence, exploration of management practice and its appraisal is somewhat undermined. As such, the focus of this study was to explore this undermined area. Secondly, the views of frontline workers deserve a special attention due to practical reasons. During the initial scoping of the research, the scale and scope of telecom services organisation chosen for this research was determined by considering the number of frontline workers, their varied roles and shift timings within different functions, and the diverse nature of services delivered through different locations (discussed later in Chapter 5). The initial scoping suggested that it would be practically infeasible to accommodate and capture frontline workers' views within a single research and in a timely manner. For this study therefore, 'elites' were interviewed although as highlighted in Chapter 7 later, the views of frontline workers to compare and contrast with managerial voice certainly deserves attention for further research.

Elite Interviewing

Although there has been no clear definition, Marshall and Rossman (2006) describe elites as influential well-informed people in an organisation or community, who have expertise in areas relevant to the research (Rose et al., 2014). Fundamentally, therefore, the well-informed and expert attributes of such individuals was the foremost rationale towards their recruitment for this study.

For example, this study interviewed independent consultants, organisation-specific consultants, a director and senior managers of one of the major telecommunications service provider in the UK. Harvey (2010:199) describes such individuals as 'elites' as they are business people who are senior managers and hence influential decision makers in organisations or consultants to leading organisations. Accordingly, such individuals were purposely selected for this study as they held diverse experience and expertise of the strategic service creation and management that is relevant to the research. Secondly, interviewing elites offered both a broader view of the contact centres services as well as specific 'know-how' of service, tacit knowledge contributing to decision making in creating and managing service, and explanations towards specific issues relating to service management. Such benefits of elite interviewing were also highlighted by Rose et al. (2014) and were also found to be fruitful for this study.

Interviews can take many forms, ranging from highly structured questioning to casual conversations and from one-to-one to one-to-many interactions (Smith and Elger, 2014). I took semi-structured one-to-one interviewing approach, comprising of both open ended and close ended types of questions. Examples of such questions are illustrated in Appendix II (a). Specific considerations for interviews varied at each data collection stage, which are discussed in the data collection procedure later in this chapter.

3.3.2 Other sources of data

In addition to interviews, several service system specific artefacts such as scorecards, training manuals, decision making frameworks and performance scorecards were obtained during data collection. Further, newsletters, Internet forums and industrial whitepapers were also used and scrutinised in conjunction with the narratives of the participants. In addition, voice of customers was also captured in the form of customer feedback to the telecom service. These are the actual recipients of service and hence, important and relevant stakeholders.

Such data enabled analysis and triangulation of narratives holistically, which Cresswell (2003) highlights as one of the features of the qualitative approach.

Especially from a pragmatic view point as Goldkuhl (2004) emphasises, collecting narratives artefacts and documents allow researchers to avoid being confined to participant's experiences and interpretations *only*, thereby mitigating any potential participant's bias. Although the data was limited, it did help in critical evaluation of the elite views captured in this study.

3.3.3Data collection procedure

The data were collected in two stages. This section details each stage, including setting the boundaries in accordance with the research questions, selection criteria of the participants, the process of interviewing and the issues faced during each of the stages.

Stage one

The first stage of data collection comprised of developing understanding of service creation and the critical decisions that may be made towards designing the service system. For this, consultants were chosen to be the relevant participants so as to obtain an unbiased (neutral of any particular organisation's agenda) and broader understanding of the service design creation. The broader experience of contact centre consultants in designing services allowed the researcher to gain access to their diversified experience of designing and implementing services that they may have developed through various projects in a wide variety of industries. Rosemann et al. (2005) suggested that consultants offer insights and evidence from a wider perspective which may take a long time to gather if such evidence was to be obtained through accessing information for every implementation and industry individually.

In order to access these consultants, I used LinkedIn® - a professional networking web portal - to seek relevant practitioners involved in designing the contact centre services or managing change in existing contact centres.

Worrell et al. (2013) highlighted several benefits of using Linkedin® and other social networking technologies including identifying member's experience, access to professional references, other connections, and contact information, which were also fruitful to this study.

Accordingly, potential participants were mined on specific groups such as Contact Centre Executives, Call Centre Associates, Contact Centre Club and

Contact Centre Partners within Linkedin® for the purpose of this study. The research created posts on these groups seeking for those individuals who are able to contribute to this study. The post consisted of brief information about the study and the request for expression of interest. The researcher received 5 responses of which, 2 independent consultants were secured for interviewing. The researcher also secured 3 other consultants through snowballing, two from company W, and one from company II through his existing network, as he has worked with those organisations in the past (the names of the companies and the participants were given pseudonyms having signed non-disclosure agreement). Table 3.1 lists these participants.

Participant	Designation/Role	Organisation
Dave	Director	Independent Consultant
Charlie	Contact Centre Strategy Consultant	Independent Consultant
Vicky	Pre-Sales Account Management	Company W
Angad	Account Management	Company W
Sandeep	VP Operations (Technology)	Company II

Table 3.1 Details of consultants interviewed for this study (Source: Author)

The profile of participants illustrated in Table 3.1 was quite diverse. For example, Charlie worked with various automobile companies to design contact centres for their customers whereas Dave was more experienced in telecommunications and financial services contact centres. Similarly, Angad specifically looked after telecommunications clients of company W, whereas Vicky shared her expertise in logistics and distribution service delivery. Sandeep looked after the sales and marketing in company II, however, he contributed to the understanding of strategic technological considerations in contact centres with reference to telecommunication services contact centres.

Post the responses by the above practitioners, the participants were briefed about the research further by e-mail, to which they responded with a suitable date and time for an interview. The researcher made attempt to conduct this face-to-face, however, due to the location of certain participants, telephone interviews were conducted. As a result of this, notes had to be taken during the interview, as a phone-call recorder was not available.

The interviews were conducted in a semi-structured manner. At the beginning of the interview, the background and rationale of the research were shared to engage the participant's interest. The questions asked at this stage were broad and highly open ended, as the purpose was to develop a deeper understanding of service design of contact centres. For instance, the participants were asked, "Can you describe your journey of designing the service for the contact centre?" or "What are the areas you take into account to design the service?" Only where interviewees were not sharing elaborate answers were prompts used to clarify the questions (see Appendix II (a) for the examples of prompts used during the interviews). In response, the participants identified the service design elements and detailed the factors and decisions taken within each of those elements.

Throughout the interviews, the participants have been reflective about the practice and the issues they experienced in designing the service for their clients. For example, Dave expressed his viewpoints surrounding the strategic and operational challenges within the contact centre strongly. Charlie expanded on similar areas. While narrating their experiences, however, all of them touched on similar elements considered in designing the service - such as the strategic motives of clients/organisations, planning, operational and service delivery elements, and their influence on service design and overall service experience.

Such similarities led to the emergence of categories, that is, the elements that were deemed important by the participants as areas of decision making during the process of constructing a service system. These categories were then shared with the participants at both Stage 1 and Stage 2 to verify and refine the categories, and to confirm whether the categories accurately describe the elements of service design and associated factors. These categories were further used to interview participants in Stage two of data collection, the details of which are discussed in the following section.

Stage two

Stage two of data collection comprised of an in-depth exploration of service management practice in telecommunications contact centres, using service design elements identified during stage one as points of reference. For this purpose, one of the major UK based telecommunications service provider, Telecom X (name of the company is psuedonymised to protect firm's identity) was chosen. The rationale for choosing telecommunications services was twofold.

Firstly, several studies have investigated telecommunications contact centre services (e.g., see van der Aa et al., 2015; Piers William Ellway, 2014; van der Aa et al., 2012; Doellgast, 2010; Jack et al., 2006; van den Broek et al., 2004; Bain et al., 2002) yet, these studies are occupied with the re-iteration of the operational, performance measurement and human relations challenges in these centres. Evolving importance of service to the business and management practice in contact centres has been highlighted in case of financial services and public services contact centres (e.g., Jaaron and Backhouse, 2011a; Piercy and Rich, 2009; Seddon, 2003). However, the focus on these aspects within the context of telecommunications services is limited.

Secondly, the TMT sector is considered to be one of the fastest growing vertical sectors, following Consumer/Industrial Products and Financial services contact centres, due to the overall growth of product offerings by technology companies (Key Note, 2015). However, this is also adding further competitive pressures on service organisations as consumers demand both good quality of service and low-cost products. Furthermore, the business environment of TMT is highly turbulent in the UK due to recent mergers and acquisitions of some of the key players in the market (Johnston, 2015). As a result of such mergers and competitive pressures, contact centre services are also undergoing immense re-structuring and re-positioning in terms of the criticality of customer service provision (Thomas, 2015).

Such changes further warrant the need to explore the nature and contribution of customer service and management practice to managing competitiveness of TMT organisations.

For this purpose therefore, Telecom X, one of the biggest telecommunications service provider in the UK was chosen. I adopted a single case study approach as the purpose was to explore in-depth information relating to contact centre services and their management (Koskina and Keithley, 2010; Eisenhardt and Graebner, 2007). Service research is usually context specific (Ng et al., 2010) and as such, adopting single case study approach enabled deeper contextual insight (Jarvensivu and Tornroos, 2010; Dyer and Wilkins, 1991). Single case studies can serve as a powerful example of the phenomenon being observed (Siggelkow, 2007). However, the case should be suitable, and of theoretical and conceptual value to the study (Eisenhardt, 1989).

Telecom X was considered suitable firstly due to the recent report of media and news press on its poor customer satisfaction rates, despite claiming to be one of the best mobile network coverage providers to customers in the UK. Telecom X was also one of the companies highlighted in the news press for repatriating their contact centres back from the offshored locations as a result of poor service quality issues. Secondly, the independent consultants highlighted Telecom X's contact centres as one of the examples with regard to the issues relating to service management reviewed for the purpose of this study. As such, Telecom X was relevant to the research questions and suited to both theoretical and conceptual issues that this study intended to explore.

Single case approach also leveraged trust and confidence of managers of Telecom X in me. The Business Relationship Manager at Telecom X was made aware that I am not conducting research with any other telecommunication services provider. As a result of this, the access was provided easily and the information was discussed by senior managers more openly.

Although single case studies of this kind impose limitation in terms of generalisation of findings (Antony, 2015), examining multiple data points such as independent consultants, organisation-specific documentation, Internet forums, and news press articles helped me mitigate this limitation to a certain extent.

Single case study approach is common in both contact centre services research (e.g. Piers William Ellway, 2014; D'Cruz and Noronha, 2012) and within service science discipline (e.g., Ng et al., 2012; Barnett et al., 2012). As such, this also strengthened my motivations to adopt this approach.

Initial contact was made with the Business Relationship Manager at Telecom X who scheduled a telephone meeting with Neil, the Director of contact centre services. Thereafter, the first face-to-face meeting with Neil was arranged at one of their contact centres. In particular, the researcher obtained further details about the background of the organisation, the organisational structure, locations of their contact centres and corresponding activities of each of those centres, and discussed arrangements to interview other members of his team. It was agreed that post relevant interviews, a follow-up session would be arranged with the Director to discuss the findings and clarify areas as deemed necessary by the researcher.

Table 3.2 lists the participants interviewed at this stage and their association with different aspects of the services provided by Telecom X. The interviews with Neil usually lasted for approximately 70-120 minutes, whereas the duration of interviews with other team members varied between 50-70 minutes. Not all participants were based on the same site, and hence the researcher had to travel to different sites. Except for Amber, all the participants agreed that the conversation could be recorded.

The questions that were asked to the participants in second stage interviews were relatively more specific than in stage one interviews, relating to the area of service design which they were responsible for. For example, Giovanna was asked questions about outsourcing decisions, drivers and challenges, whereas Peter was asked questions specific to service process construction, decisions surrounding the technologies, and challenges associated with service processes.

Some of the questions were meant to capture factual information, such as the number of customers and their segmentation, the number of sites (including whether they are in-house, outsourced, or offshored), types of activity performed by the contact centre, type of contact channels offered to the customer, and so on (see Appendix II (a) for the examples of such questions).

Such information was imperative to build a narrative about the case. There were other questions that were related to the existing themes from the literature. These included questions about the 'standardisation of work practices', 'quantity/quality trade-off', 'performance management KPIs', 'complexity of processes and transactions', and 'drivers and challenges of sourcing'.

Participant	**Designation/Role**	**Association with Service Elements**
Neil	Director of Strategy	Strategic Goals and Objectives of Service
Giovanna	Head of Strategic Outsource Partners	Resource Planning; Sourcing;
Sam	Head of Design and Delivery	Processes; Contact Channels
Naomi	Head of Resource Management	Resource Planning; Customer Demand
Peter	Service Design Manager	Processes; Performance Measurement
Arya	Operations Manager	Performance Measurement; Service Availability; Customer Demand
Chuck	Training Manager	Performance Measurement; Resource Planning
Liam	Head of Business Technical and Incident Management	Performance Measurement; Service Availability; Customer Demand; Resource Planning
Pat	Content Specialist Manager	Processes; Activity Type
Raj	Account Manager for Principal (Outsource)	Strategic Goals and Objectives of Service

Table 3.2 Managers at Telecom X participated in this study (Source: Author)

The data collection ceased in September 2015 with 4 face-to-face and 3 telephone interviews with Neil, 13 interviews with other participants across stage 1 and stage 2, and one response through e-mail. In total 21 interviews were conducted in both the stages.

3.3.4 Limitations

Several challenges could haunt elite interviewers. Morris (2009) suggests that elite interviewing entails technique specific paradigmatic and methodological issues and therefore, to get the interviewing right, it is important to clarify these issues with specific reference to this study.

Firstly, the paradigmatic concerns relate to the quality of 'truth' in elite interviewing as narratives of elites may be, for example, biased or misleading (Berry, 2002; Richards, 1996), deflect from the objectives of the interview and overall research (Smith, 2006; Leech, 2002), be 'performed' rather than genuine (Morris, 2009), or partial or incorrect due to poor recollection of events during interviews (Rose et al., 2014; Morris, 2009; Lillekar, 2003; Davies, 2001).

In the case of this study similarly, informing the participants of the research and researcher's background prior to the interview could have induced 'performance' bias, as a result of which answers may have been rehearsed rather than genuine. I could feel the power differential between myself and for example, Sandeep who attempted to change the direction of the research. This situation has been highlighted by several authors in the context of elite interviewing (e.g., see Breen, 2007; Pitman, 2002; Smith, 2006). In other interviews, the interviewees found it difficult at times to recollect specific experiences or events. As a result of this, there were instances when I had to highlight certain examples relating to a particular question or, prompt further to help the interviewees recall certain events. This could be seen as 'interviewer bias', which has been raised as a concern by several authors in the past (e.g., Qu and Dumay, 2011; Johnson and Duberley, 2000; Darke et al., 1998; Miles and Huberman, 1994).

However, this is precisely why my positioning as both an insider and outsider throughout the data collection stages aided in minimising these issues. Harvey (2010) suggests that being an 'insider' is advantageous as he/she holds a shared sense of understanding with the interviewee.

In contrast, being perceived as an 'outsider' could enable more objectivity (Harvey, 2010) and criticality (Pugh et al., 2000) towards the data collection approach. In addition, Harvey (2010) also highlighted that 'outsiders' could receive a warmer welcome than 'insiders' in certain research settings.

Although difficult to achieve, I agree with Harvey (2010) and Mullings (1999) that it is possible to be an insider as well as an outsider. For example, my knowledge and past-experience in the contact centre industry make me an insider to this research. However, as I am not currently associated with any consultancy firm or contact centre services organisations, therefore, I am an 'outsider' too.

By being an insider and making the interviewee wary of my knowledge and experience in contact centre industry, I was able to manage the power difference between myself and some interviewers effectively (as was evident in case of Sandeep). During the interviews, I ensured where necessary that interviewees were gently reminded of the research focus if they were deflecting from the research goals. I also made arrangements to ensure that post the interviews, areas that were unclear or sounded incomplete were queried back to the interviewee either over telephone, e-mail or during the next interview. Also, observations were made in terms of whether the views of one elite manager had any similarities or differences in comparison to views of other managers, especially in the second stage of data collection. The data collected through interviews with senior managers were confirmed and compared with subsequent interviews with the Director of Telecom X.

In addition, the 'outsider' stance allowed me to gain access to the practitioners in the industry, which is usually difficult (e.g., see Mickez, 2012; Morris, 2009; Smith, 2006). This was especially challenging in the case of this research as contact centre services were found to be very protective of their brand reputation and commercially sensitive nature of data.

Such status of the researcher re-assured interviewees to narrate their experiences in a relaxed environment. Having an outsider stance made me felt comfortable in asking 'naïve' questions to the interviewees, which according to Bochaton and Lefebvre (2011) enables rich collection of data due to varying levels of 'insider-ness' and 'outsider-ness' in research. Thus, a pragmatic stance towards the positioning of insider and outsider helped in minimising paradigmatic challenges of elite interviewing.

The quality of certain interviews was inconsistent. For example, two of the interviews were cut short as the interviewees had to leave due to other scheduled meetings. This led me to rush the interview to respect the interviewee's time. In such cases, however, follow-up conversations were arranged over e-mails and telephone.

3.3.5 Ethics

Ethical issues were considered throughout the research. In accordance with the university procedures, approval was sought from the research ethics committee prior to data collection. In the proposal, a brief description of methodology, participants to be interviewed and measures are taken to protect both the organisation and participants were detailed. In addition, participant information sheet and consent form template used before the interviews were submitted along with the proposal to the research ethics committee for approval.

In order to build confidence and trust with the organisations and the participants, university e-mails and letter heads were used for communications during the study. During the interviews, participants were informed about the stages of the research and consent forms signed by participants. Consent was taken for conducting the interviews, using tape recorders and note-taking for the purpose of both ethical governance and establishing trust and the legitimacy of the research. For similar reasons, organisations, participants and other organisations discussed during the research were pseudo named to protect the identity and reputation. In addition, where asked, I signed and respected the non-disclosure agreements with the organisations prior to any interviews. Where artefacts were shared by the participants, permissions were obtained from the participants before analysing those artefacts. Lastly, it was agreed that transcripts and final thesis will be shared with the participants to avoid any misjudgements and scepticism.

3.4 Data analysis approach

This section describes the analyses of interview transcripts and other relevant data (e.g. shared documents, industry reports) gathered during the course of field work for this study. In particular, it highlights how thematic analysis has been adopted and adapted as a key approach for in-depth examination of data and development of themes. As a part of the thematic analysis, however, this study also uses some fundamental procedures of data analysis driven by the principles of general analytic induction in order to address the research questions set out for this study.

3.4.1 Thematic analysis

Thematic analysis can be described as a method to identify, analyse and report patterns or *themes* within data collected for the study through its interpretation in accordance with various aspects of the research topic (Braun and Clarke, 2006; Boyatzis, 1998). Thematic analysis was adopted for this study because of its very flexibility and its contextualist nature meaning, its compatibility with both objective ontology and subjective epistemology (Braun and Clarke, 2006), in accordance with the philosophical commitments of this study. Some have highlighted thematic analysis as 'pragmatic' especially in the context of qualitative studies (Braun and Clarke, 2006; Sandelowski, 2000). In addition, it allows researchers to choose methods that fit the research question(s) rather than being constrained by conventions of specific approaches such as grounded theory, discourse analysis or, ethnography (Simmons-Mackie and Lynch, 2013; Thomas, 2006).

From a design perspective, during the data collection stages, it was important for me to listen, read, analyse and interpret high-level themes from previous interviews before interviewing the next practitioner. Moreover, during the interviews, knowing about thematic analysis enabled me to ask context specific questions when practitioners had a tight schedule or were responding to interview questions briefly. Having a pragmatic approach allowed me to adopt and adapt other elements of qualitative approaches (e.g. framework building, descriptive accounts of management elements and practice) to generate relevant themes and address research questions.

Thematic analysis is poorly branded and rarely acknowledged, mainly due to lack of guided approach and clarity around process (Braun and Clark, 2006). As a result, this approach suffers from a popular critique of a qualitative research and especially pragmatic approaches to research - that 'anything goes' (Braun and Clarke, 2006; Antaki et al., 2003). As such, the credibility of thematic analysis as a method, in comparison to other qualitative methods, is often undermined although some have strongly defended against such stereotyping (e.g., Lorelli et al., 2017; Braun and Clarke, 2006; King, 2004). This study supports the view that thematic analysis is a method that adapts a structured but flexible approach to analysing data. In addition, I have also outlined my arguments for the trustworthiness of the analysed data and the approach itself, with specific reference to this study and for future studies of this nature.

3.4.2Data analysis procedure

This section outlines the procedure of analysing data including key stages of data analysis and detailing the activities under each stage. In addition, it also describes how the data was treated in accordance with the thematic analysis at each stage and other techniques that were deployed.

Figure 3.1 below illustrates the data analysis procedure. It illustrates the key steps for each of the data collection stages and their linkages with each other and to other stages of data collection. As evident, some steps are purposely repeated under both stage 1 and stage 2 of data collection (e.g. transcription, familiarisation and conceptualisation of data) however, some may be unique to a particular data collection stage (e.g. development of a conceptual framework for stage 2). In addition, some steps (mapping themes under research questions, synthesis of themes using theories and generation and evaluation of model) are followed during the writing stage. These steps, however, are perceived as integral to the rest of the data analysis procedure.

Given the exploratory nature of the inquiry, I did not distinguish between collection, analysis, interpretation (Easterby-Smith et al., 2008) and reporting of data. Therefore, the overall procedure has to be viewed in a non-linear manner meaning, I constantly moved back and forth between analysis, interpretation, engagement with literature and reporting the findings (Braun and Clarke, 2006).

Transcription of interviews occurred at both data collection stages. NVivo 10 was used for managing interview data. NVivo is qualitative data analysis software that enables the coding and analysis of data as text, audio, video or image (Wainwright and Russell, 2010). NVivo was used as a repository for storing audio files of interviews, interview transcripts and other data sources in one location.

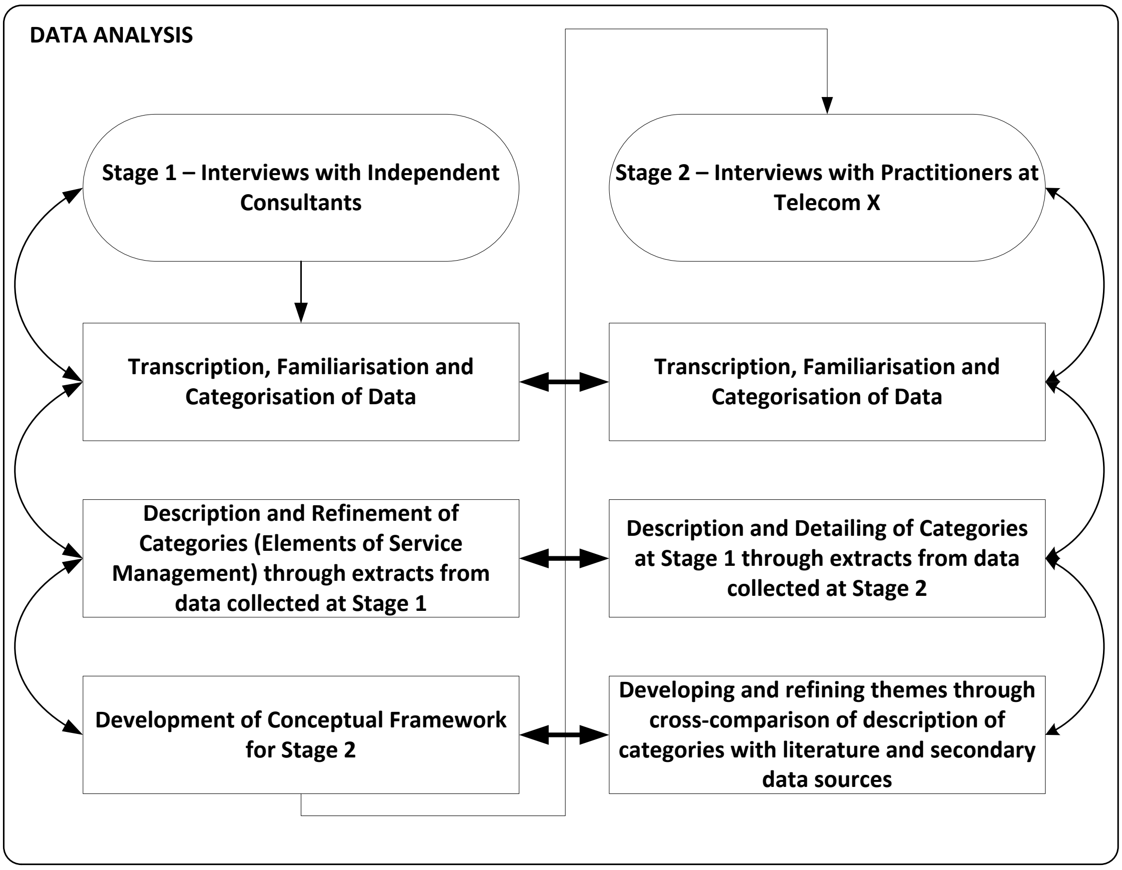

Figure 3.1 Data analysis approach (Source: Author)

The interviews were mostly transcribed word-to-word however, certain filler words such as 'hmm's' and 'uhhh's' were eradicated during transcription as I was not interested in the linguistic analysis of the interviews (Macksoud, 2010).

Overall, the process of transcribing was both time-consuming but valuable as not only this enabled me to be more aware of the contents of the data items (interviews) and be confident about my questions for the next interviews, but also enabled me to start the familiarisation process and to feel ownership of the data.

3.4.3 Initial analysis

The process of *familiarisation and categorisation* began during the transcription of interviews. Firstly, this stage involved establishing evaluation objectives. According to Thomas (2006), an inductive approach to analysing qualitative data is guided by specific evaluation objectives or research questions that help in identifying specific domains and topics to be investigated. However, these evaluation objectives could be inductive or 'bottom up' which means the data is coded without the use of any pre-existing coding frame and hence with no direct correlation to a research question. Rather, the research question may evolve through the coding process. In contrast, theoretical or 'top down' evaluation objectives mean that evaluation and coding are driven by theoretical underpinning and a specific research question (Braun and Clarke, 2006). In practice, however, as Thomas (2006) argues, evaluation is both inductive and deductive which is precisely the case in this study as discussed below.

The evaluation objective for data collection in the first stage involved identification of key elements or considerations towards the creation of a contact centre service system. Through constant listening, reading and engagement with transcripts, I began to make notes and define categories in a way that best describes the elements elicited by practitioners during the interviews. Initially, this process was fluid and open-ended. In other words, I created notes and illustrations of possible categories whilst listening to the interview files or reading the transcripts (see Appendix II (b) for examples of such illustration). Eventually, I developed several high level categories relating to service elements through this process (see figure 3.2 below). These categories were built of several low level concepts that were highlighted during the interviews. For example, with 'functional purpose of contact centres', concepts like *sales*, *technical help-desk*, *technical support* were linked. Similarly, with 'strategic purpose', concepts like *'re-enforce value of the brand', 'cost-centre', 'profit-centre', 'cross-sell', 'up-sell'* could be linked. With 'management approach', concepts such as 'sweatshop' and 'relaxed environment' were also linkable.

Further *refinement and description of categories* was a continual process alongside the categorisation and conceptualisation of data. This involved sharing the development of categories with the consultants, Dave, and Charlie to check their relevance, industrial terminology and their accurate conceptualisation. Through this co-creation activity, seven key categories relating to service creation along with their explanations were formulated.

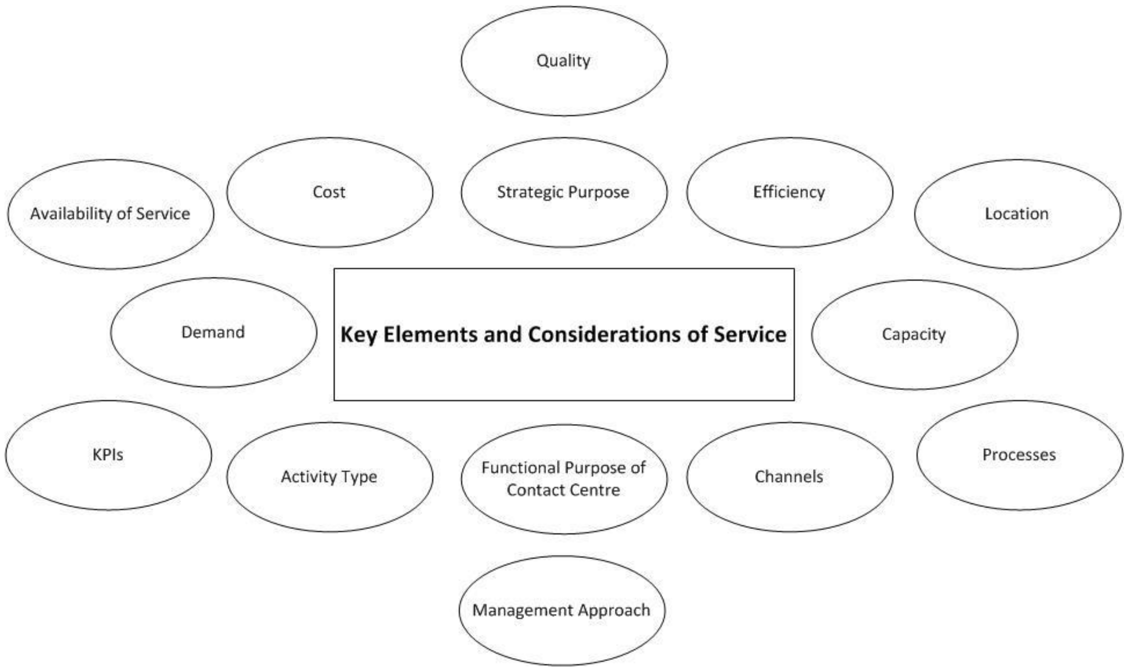

Figure 3.2 Initial categories relating to key elements and considerations of service (Source: Author)

As can be seen in Table 3.3, categories such as 'Demand' and 'Capacity' were merged together as both consultants and further review of relevant literature revealed that they are complementary to each other. Similarly, the 'functional', and 'strategic' purpose, and 'activity type' were all merged into the strategic purpose of service given their holistic consideration by participants of this study. In addition, categories such as 'cost', 'quality', 'value' and 'efficiency' were considered within the strategic purpose of service when describing services as 'low-cost', 'premium', and 'frills', to distinguish between cost-focused (efficiency as a route to cost), quality-focused, or 'value' focused services. Further consensus on the high-level categories illustrated in Table 3.3 below was obtained prior to the start of stage 2 data collection although, the refinement and description of categories continuously evolved.

Service categories	Examples of quotes from participants
Strategic Purpose of Service	*Charlie: At the top of the strategic hierarchy, what is it that you want to do? You have mission/vision statement…*
	Dave: Will there be cross-sell opportunity? Is it just going to be a technical help desk or is that going to generate new sales too? Can I turn my cost-centre into a profit centre?
	Charlie: There are multi-purpose or single-purpose centres. For example, you could decide [to operate] sales operation and/or service operations. You have different product ranges
	Dave: What is the level of service that you want to deliver? What is your strategic goal here? Are you willing to deliver a premium service or something that is low-cost, 'as cheap as possible' type service?
Technology	*Sandeep: I have to decide a contact centre technology for my business. You have to think about what technology can you bring that will allow you to solve your business problems. It's extremely important for the companies to look for technology through which services can be offered*
Demand and Capacity	*Naomi: my responsibility is to ensure we have the right number of people to meet customer demand in the right places at the right times*
Service Availability	*Dave: whether the service will be provided for a limited number of hours in a day, or it will be a round the clock service operations?*
Service Channels	*Dave: How are they going to contact you? Is it going to be phone, e-mail, web, or mobile application? What channels are they going to come in on?*
	Charlie: [With] channel strategy. You could maximise or minimise the opportunity for the customer to contact you. Do you restrict customers from human interaction? Do you make it dead easy for the customer to [access] your services?

Service Processes	*Peter: What are our customers going to call us about?*
	Charlie: How are you going to define the processes
	Peter: We work out what we need to put into the process flows to follow the knowledge base.
	Dave: We need to size the average handling time for each of those transactions.
Sourcing	*Naomi: Can we depending on the type of work - transactional or non-voice type activity, decide whether to pay a premium for an in-house site to source that.*
	Naomi: Let's just say this is technical work and if we want to give you [the customer] premium service, in-house would be our first support call.
Performance Measurement and Management	*Dave: How are we going to measure and manage the performance of this operation?KPI Reporting, Dashboard, etc...*
	Neil: We measure probably about 40-50 different metrics.
Management Approach	*Dave: How hard do you want to drive your agents? Do I want to create a sweatshop or a very relaxed positive creative environment?*

Table 3.3 Categories identified in Stage 1 with relevant interview quotes (Source: Author)

In addition, Thomas (2006) suggested that one of the key stages in the development of categories is to identify linkages and relationships between the categories. As exemplified in Figure 3.3 for example, most categories had direct or indirect linkages which were highlighted during data categorisation and refinement.

As such, the evaluation objectives of data collected in stage 2 were to explore the service elements in-depth as well as to explore the *'management approach'* of Telecom X.

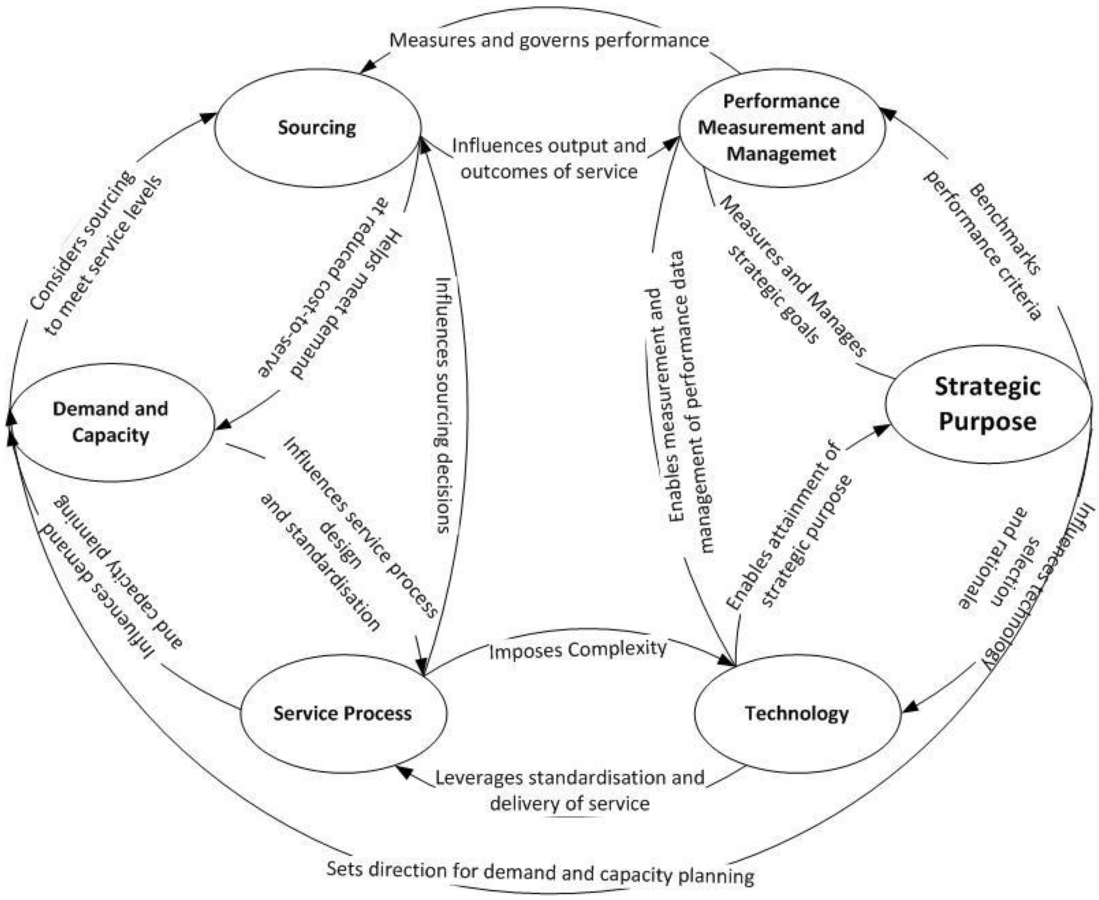

Figure 3.3 Example of links between different service categories (Source: Author)

3.4.4 Analysing the 'management approach'

During the interviews, participants were asked broad questions relating to their management activities within their job. As a result of this, further understanding of strategic purpose, technology, demand and capacity management, sourcing, service process, channels, sourcing and performance measurement and management were established As such, the intention here was to obtain thick descriptions of each of the areas (Braun and Clarke, 2006) in terms of what *management* within these elements entailed .

The categorisation then involved the identification of characteristics of customer service work and management approach through the transcripts and the following six dimensions of customer service work as an analytical frame:

- Structure of service work;
- Standardisation of service work;
- Complexity of service work;

- Skills entailed in customer service work;
- Discretion;
- Managerial Control over service work

In addition, concepts relating to managing the strategic purpose, demand and capacity, sourcing and performance were also explored within the interview transcripts and with reference to Telecom X's contact centres. The set of high level categories are illustrated in figure 3.4.

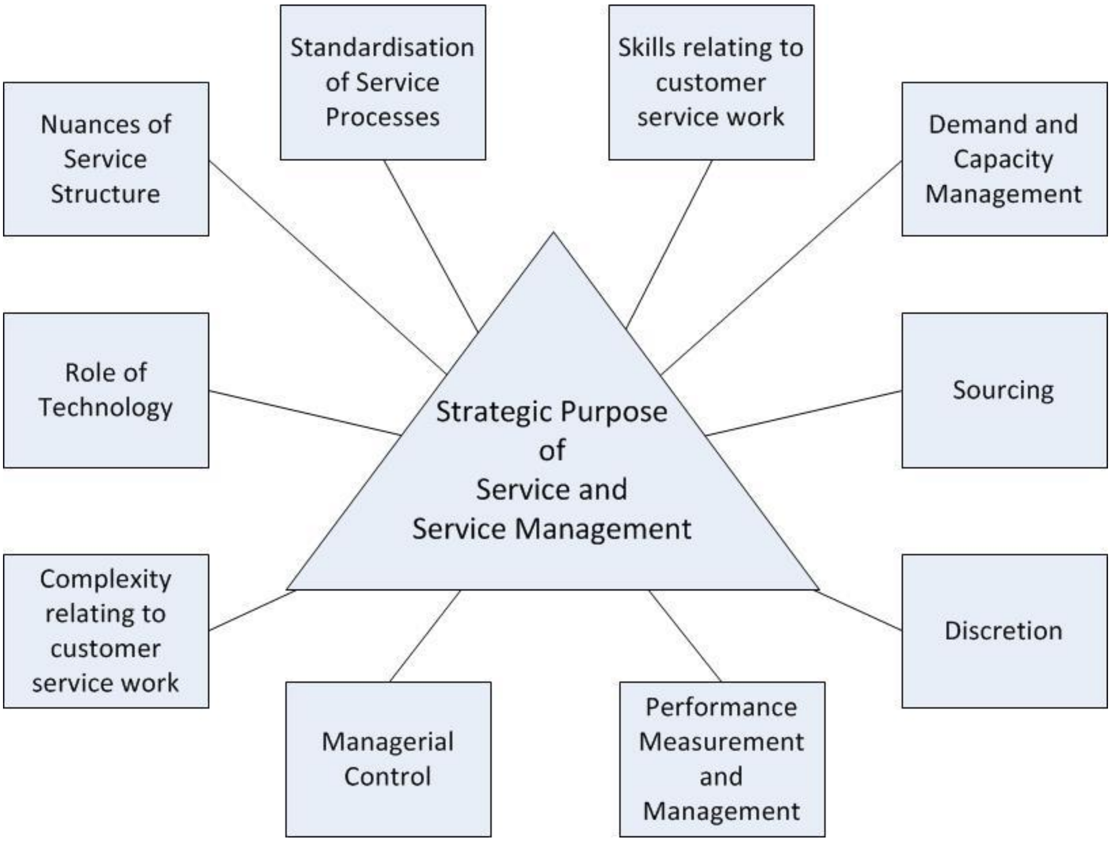

Figure 3.4 High level thematic categories (Source: Author)

Thereafter, the next evaluation objective was to explore, compare and contrast the attributes of customer service work and management approach in Telecom X's contact centres that relate to Taylorist and post/anti-Taylorist attributes discussed reviewed in Chapter 2. Dave, the independent consultant used two phrases, 'sweatshop' and 'relaxed', which reflect the characteristics of customer service work and hence the approach to management as either Taylorist or post/anti-Taylorist.

I took a flexible approach to thematic analysis by engaging with development and write-up of themes simultaneously, using the technique of 'free-writing' (see Wolcott, 2001; Schiellerup, 2008). The iterative development of narratives is illustrated in figure 3.5 below. The following questions were used to reflect on the data during the write-up:

- What did the interviewee describe in terms of the practice?
- Why did the interviewee adopt this approach?
- What were the challenges in adopting such an approach?
- How were these challenges managed?

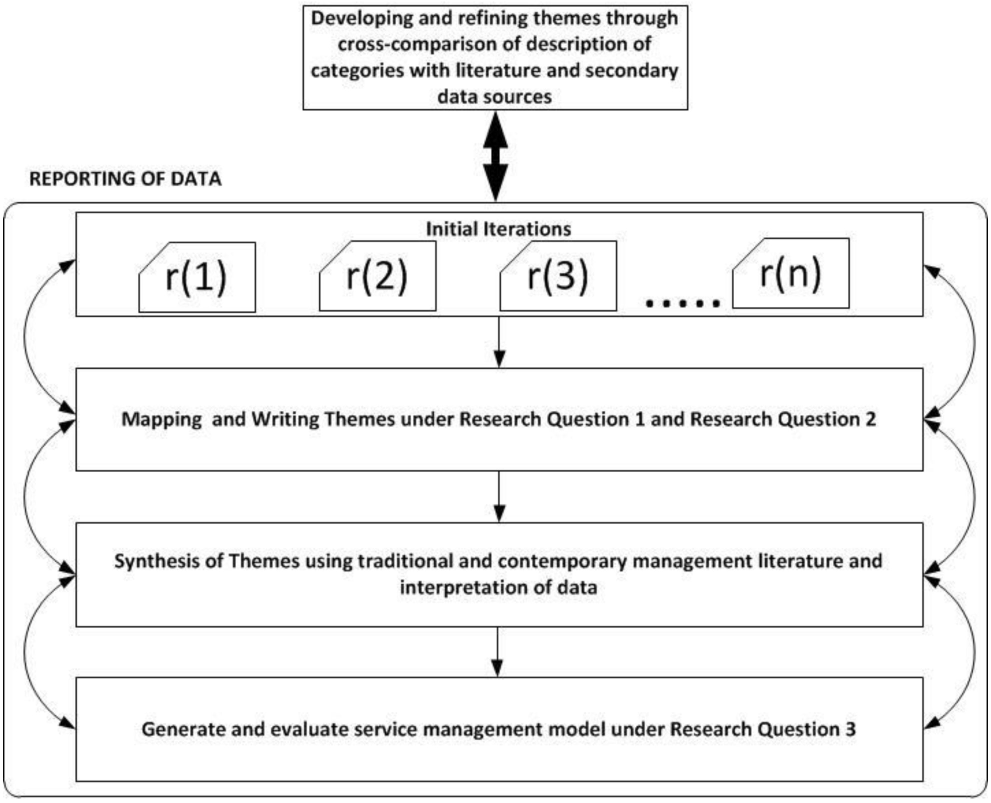

Figure 3.5 Development of themes using free-writing approach (Developed by the author)

Within the praxis of thematic analysis, Braun and Clarke (2006) suggest that development of themes means moving from *descriptive* to and *interpretive* level by combining the factual description and display of extracts with accompanying narrative so as to link the themes back to the research questions. In addition, the constant critical reflection was undertaken through cross engagement with data and the literature by asking following questions to self, adapted from Easterby-Smith et al. (2008):

- Does this data support existing knowledge?
- Does this data challenge existing knowledge?
- What are the differences?
- Does this data add new knowledge?

Secondary data sources helped in cross comparison and were challenge the aspirational nature of some narratives of elites. For example, during the data collection, one of the leading newspapers in the UK highlighted that Telecom X was one of the top 10 organisations in terms of poor customer satisfaction. This was raised with the senior manager at Telecom X during the next interview to understand the reasons for this and the implications of this.

Altogether, 2 meta-themes, 10 major themes and 17 sub themes were produced deductively and inductively, which were used to structure Chapter 4 and Chapter 5 of this thesis.

3.4.5 Development of service management framework

The purpose of research question 3 was to synthesise the findings and analysis towards the development of a service management framework that comprises of antecedents describing the attributes of customer service work and service management in contact centres. The rationale for this research question stemmed from a desire to create a holistic framework to underpin service management practice in contact centres within the context of a service dominant logic (Vargo and Lusch, 2004) and service science. In addition, Eisenhardt and Graebner (2007:26) suggested that theory building is justified if the existing research "does not answer the research question" or, *"does so in a way that is inadequate"*. Therefore, development of a service management framework was undertaken. Although the framework is discussed and illustrated in Chapter 6, the approach to developing this framework is discussed here.

As with the overall analytical approach adopted for this study, theory building in was also flexible in the sense that it entailed both an 'objective' and a 'subjective' approach in teasing the relevant themes and building the framework of service management. This means that not only it aimed at exploring the descriptive, factual elements associated with contact centre service system, but also the interpretation of underlying complexities and challenges to manage service systems, through systems' thinking lenses (Badinelli et al., 2012).

As such, the theory generation is holistic by embracing objective elements of the context and participants' actions, and underlying mechanisms that explain these actions and behaviour (Pawson and Tilley, 2004 in Ssengooba et al., 2012).

The objective elements and attributes of contact centre services and management found in this study, could be split into three distinctive paradigms namely, Taylor's (1911) scientific management and associated antecedents (as a result, referred to as the mass-production paradigm for the theory generation), Fayol's (1949) general principles (referred to as the administrative paradigm) and the Systems thinking paradigm proposed by Seddon (2003) and Jaaron and Backhouse (2011a; 2011b) in context of contact centre services. Closer examination of the findings within these paradigms revealed complementary attributes. Rather, these paradigms have been explained and discussed as well those that are in contradistinction with each other. Although studies have discussed similarities and differences between Taylor's (1911) and Fayol's (1949) approaches (see Parker and Ritson, 2005) in the context of general management, these have not been contextualised within contact centre services. Similarly, Fayol (1949) and the systems' thinking paradigm share antecedents and hence similarities and differences which have been discussed in mainstream management literature, however not within the context of contact centre services or even services in general. Such comparisons and differences are discussed in detail in Chapter 6.

A simple theoretical frame was developed that encompassed all three paradigms to provide a plausible explanation towards a service management practice of contact centre services, as illustrated in figure 3.6 on the following page. This framework is further developed and discussed in Chapter 7 to elaborate on the strategic objectives of service management and interplay of traditional and contemporary management approaches that explain the activities and requisites to achieve these objectives.

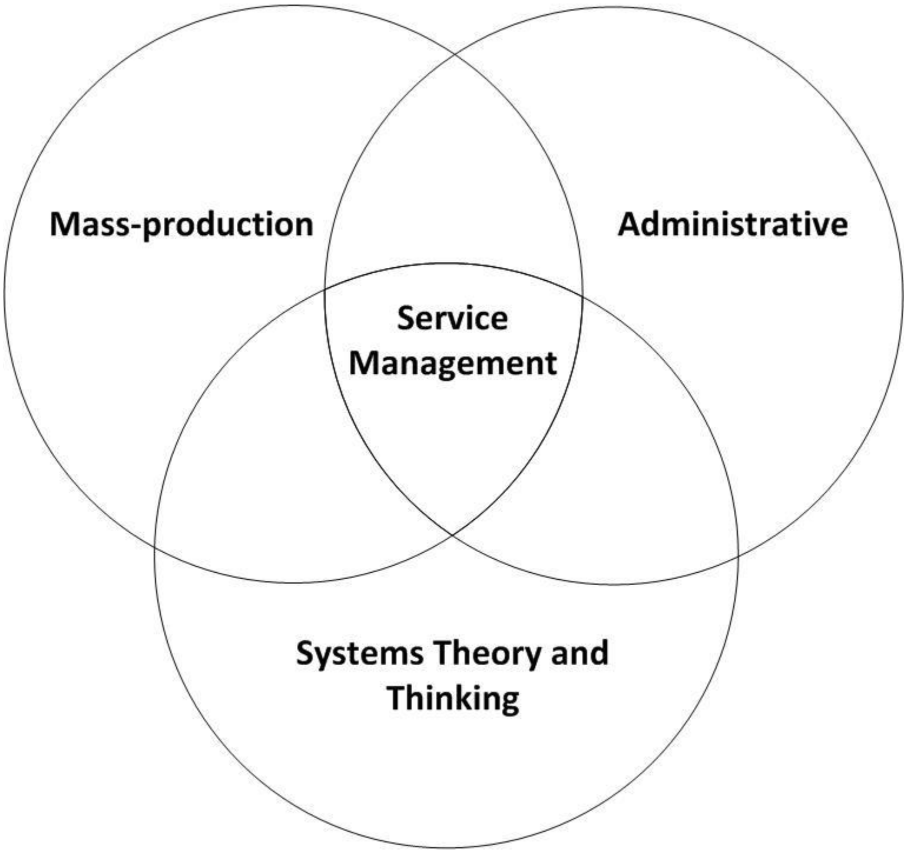

Figure 3.6 Second level service management model (Source: Author)

3.5 Summary

The purpose of this chapter was to elaborate on the philosophical, methodological and analytical commitments of this study. It provided a comprehensive overview of adopting flexible 'objective' and 'subjective' commitments and their alignment to systems' thinking approach in order to undertake research within the context of service science. The study was designed within the proximities of qualitative research. As such, the data collecting procedure was mainly comprised of interviewing elites, comprising of independent consultants and senior managers at Telecom X, one of the largest telecommunication services provider. To avoid pitfalls relating to trustworthiness of data, secondary sources of data, bespoke techniques to counteract the issues related to elite interviewing and insider-outsider reflexivity was deployed. Ethical considerations to protect the individuals and organisation associated with this study were also highlighted.

Thereafter, this chapter discussed the analysis of data that involved a flexible combination of general inductive approach and thematic analysis to suit the needs of the thesis.

Despite this flexibility, data analysis entailed specific evaluation objectives and involved following a systematic procedure. However, moving back and forth between steps, referring the analysed data to the participants and supervisors and iterative handling of analysis through free-writing were flexible components of the analysis procedure. Through such combination, relevant themes and accompanying narratives were produced which were then deployed towards the synthesis of service management framework. The following chapters discuss the findings and discussion in an integrated manner.

Chapter 4 : Strategic value of contact centres to Telecom services organisation

4.1 Introduction

The purpose of this chapter is to present and discuss the findings relevant to research question 1, that is, what is the strategic value of contact centres to the organisation? In particular, the chapter focuses on the appraisal of the functional and strategic purpose of contact centres, the perception of managers about the value of contact centre services and the objectives of contact centre service management. It also discusses the implications of this purpose and perception of managers on attaining the service management objectives.

4.2 Functional and strategic purpose of contact centres

The findings of this study have revealed nuanced views of the functional and strategic purpose of contact centre services. Contact centres may be used by organisations for providing various services (functional) as well as serving different strategic needs of the organisation (strategic) and hence, both the functional and strategic purposes of contact centre services are central to the design and management of these services. For example, when independent consultants were asked about their approach to designing a contact centre service the actual purpose of establishing the contact centres was a foremost area of concern:

> *"At the top of the strategic hierarchy, what is it that you want to do?"* (Charlie)
>
> *"Is it just going to be technical help desk or is that going to generate new sales too?"* (Dave)

This means that the foremost focus is on what the contact centre is going to deliver as a service. Thereafter, this consideration was found to be intertwined with the strategic purpose that the contact centre may serve. For example, as Dave suggests:

> *"Will there be cross-sell opportunity?... Can I turn my cost-centre into a profit centre?"*

Similarly, Charlie states that the strategic purpose of contact centres purpose is driven by a vision that the organisation may wish to achieve through its contact centre:

> *"You have mission/vision statement…[such as to]…re-enforce the value of the brand."*

This can be further supported by Neil from Telecom X who suggested that their contact centres are emerging to be a source of strategic differentiation in the market, in addition to providing product and customer service support to their customers.

> *"…we believe what we want to differentiate in is service. So that's where we[contact centres] come in. That's the kind of core business focus - how do we underpin having the best network with the best service proposition."*

Telecom X's contact centres were also found to be involved in generating revenues through up-sell/cross-sell of certain products or value added services,

> *"…we interlock with our sales organization and what they want us to sell and lock with our technological unit about how we need to do the support or we're interfacing to our marketing unit or finance unit for collections."*

As Charlie suggested with regard to vision statements:

> *"…a typical vision statement [of contact centres] could be to…re-enforce the value of the brand."*

So for both consultants, designing the services and the managers managing the services at Telecom X, contact centres serve different types of strategic purposes for the overall organisation in addition to functional and utilitarian roles such as performing, product support, sales and marketing, and customer administration activities suggested by Robinson and Kalakota (2004). Contact centres can perform various activities to leverage strategic competitiveness of the organisations in the market in addition to serving a functional purpose for the organisation thereby, adding some strategic value to the organisation. Such profiles for services have also been highlighted by Gaiardelli et al. (2008) in the context of after-sales services, which can now be seen to be applicable to contact centre services too. However, there are specific studies that have suggested the strategic role of contact centres as a source of differentiation (e.g. see van der Aa et al., 2015) or a source of revenue generation (Holman et al., 2005; Prabhakar et al. 1997) or fostering brand loyalty in customers (Curry and Lyon, 2008; Holman et al., 2005; Dean, 2002).

The findings of this study further strengthen the consensus on the evolving strategic purpose and importance of contact centres in line with earlier studies. However, this study also found some contrasting views in terms of the perception of contact centres in comparison to the existing literature. These views are discussed in the following section.

4.3 Perception of contact centres - Cost centre, Profit centre or, both?

Like any labour intensive service functions, Contact centres were once viewed as cost-centres in the past (Marx et al., 2015; Price and Jaffe, 2011; Willis and Bendixen, 2007; Gans et al., 2003). Increasingly, however, studies have reported that contact centres are shifting from being regarded as just cost centres to profit centres or value centres (e.g., see van der Aa et al. 2015; Cheong et al. 2008; Jack et al. (2006); Miciak and Desmarais, 2001), by undertaking revenue generation through cross-sell or upsell of products/services as a part of the service encounters with customers (Jack et al. 2006).

In case of Telecom X however, this study found that contact centre services have neither completely shifted from being cost centres nor are completely profit or brand fostering centres, although they do leverage cross or up sell of products and services. For example, when asked whether contact centres of X can be regarded as a cost-centre or a profit centre, Neil highlighted:

> *"[We are]…somewhere in the middle of [cost centre and profit centre]. We are definitely not a profit centre."*

In other words, whilst Telecom X' are engaged in sales through service, they are primarily concerned with leveraging quality of service than enforcing revenue generating opportunities.

Neil suggests that the trend of cross-selling and up-selling through contact centre service encounters has been quite recent:

> *"…the ability to kind of up-sell or cross-sell products has been relatively new, kind of 6-7 years. That for the first time is starting to give call centres a different level of maturity. [Now] the basic level of maturity is that companies do that and use the revenue that is generated to offset some of the cost-to-serve."*

Interestingly, however, some studies suggesting the transformation of contact centres from cost centres to profit centres are more than a decade old (e.g., Seeger, 2013; Buttle, 2002; Bagnara and Marti, 2001). Buttle (2002) suggested that cross-sell/up-sell opportunities could aid contact centres to offset a proportion of cost-to-serve by generating revenues and hence contribute in leveraging the competitiveness of the organisation as a whole. Similarly, Seeger (2013) suggested that cross-selling of products leads to greater revenue along with the reduction of cost-to-serve. Therefore, for contact centres to be able to provide a primary service alongside generating profit is not an uncommon or recent phenomenon as such.

When this contrast was cross-checked with a senior manager at Telecom X, it was found that there are certain services, telecom in this case, wherein products play an important role in customer purchase intentions and loyalty than the service itself. For example, as Neil states:

> *"…We can be delighting you through call centre every single time. But it still wouldn't have a massive swing on whether you are going to stay with us or not if, for example, the network experience wasn't great. It [service] makes no odds [customer wouldn't be happy whatsoever] however, it [product quality] might make you worse [lower customer satisfaction], and [nothing] will compensate for it [bad product quality]."*

This was also supported by some customer comments extracted from customer satisfaction data provided by Telecom X:

> *"The staff have been very helpful it's the coverage that lets Telecom X down"*

"Advisor really friendly and professional. Still looking to leave Telecom X but not due to the advisor today"

However, Neil does agree that for other services such as banking and retail, the ability and opportunity to leverage competitiveness through service channels is more than that in Telecom X, due to the very nature of the industry. In other words, whilst Telecom X is continually investing to improve their network infrastructure and product innovation, the overall profitability in the telecommunications industry is low compared to other industries, such as in banking, finance and the airline industry. This further restrains their ability to be able to use the service as a strategic lever for the rest of the organisation:

"You can decide that you want good service because you have got a good margin to be able to support it. What you find however is that when profit margins start to significantly reduce, you identify which organizations can use services as a strategic lever, versus those using it as a cost to control." (Neil)

So beyond product support, customer satisfaction and hence loyalty in the telecommunications industry, is primarily dependent on the cost and quality of the product - the network and mobile phone product in the case of Telecom X. The value provision can then be leveraged through the offering of other products and auxiliary services. Further, some comments from customers in the customer survey data of Telecom X associated loyalty with the cost of renewals of the mobile phone contracts. For example:

"Great that X offered me a package that made it an easy decision to remain loyal & Thanks and thank you to Carl your customer advisor."

"I'm happy that I've been offered a great new deal in recognition of my customer loyalty. Thank you."

"I have been a good customer of yours for many years but cannot get an iPhone 7 contract of £65.99 a month, when I look at what I currently spend with you per month think that there should be a loyalty discount on my contract when I pay full price for the rest of my family."

Therefore, although contact centres may be shifting from being cost-overheads to the organisation to a source of revenue generation and value through service provision, the cost and quality of product and service are of primary importance before any of these value adding opportunities for service provider and customers are pursued. Not all contact centre services can be considered viable for such strategic profiles as there are certain industry and product specific factors that play a vital role in such considerations. In addition, a survey by Contact Babel (2012) of 216 contact centre in UK - of which 25 were Telecommunications company's contact centres - suggests that 38% still view contact centres as cost-centres whereas 62% consider it as a strategic asset, that is, using contact centres for the purpose of generating profits or fostering brand. This study, therefore, suggests that there is a possibility that hybrid perceptions of contact centres - partly cost centres and partly profit centres - exists.

4.4 Focus of contact centres' service management and the 'Sweet Spot'

Numerous studies highlighted in the literature review indicate contact centre service designs that are driven by cost, quality, or both (For example, see Bain et al., 2002; Robinson and Morley, 2006; Batt and Moynihan, 2002). Similarly, studies have also highlighted that it is possible to achieve both a lower cost of operation and a higher service quality. For example, Piercy and Rich (2009) suggested through their investigation of financial services contact centres, that through the adoption of lean practices in contact centres, both cost and quality can be achieved. Similarly and recently, Piers William Ellway (2014), through his study in the telecommunications sector, suggests that the focus on cost and quality can be mutually enforcing than in contradiction as some studies have highlighted (e.g., Korcyznski, 2001; Raz and Blank, 2007).

With regards to this study, firstly, it was found that consultants discussed two extreme types of focus - one being a 'low cost' or 'low frill' service whereas others are a 'premium' or 'maximum frills' service. This was evident in questions put forth by Dave and Charlie when describing their experience of strategic considerations of service design:

> *"What is the level of service that you want to deliver? What is your strategic goal here? Are you willing to deliver a premium service? Are*

you wanting to deliver something that is low-cost, 'as cheap as possible' type service?" (Dave)

"one spectrum is in terms of whether low frills, do the minimum or maximum frills, do the maximum." (Charlie)

Van der Aa et al. (2015:188) have described elements of *attentiveness* towards the customer, customer satisfaction and feedback, as key dimensions of customer contact centre quality. Similarly, Charlie in this study highlighted various organisations and compared their respective service strategy with attributes of attentiveness towards the customer. For example, he exemplified how cost focused service designs and delivery are largely absent of certain factors relating to service quality:

"In the UK, E and R, or A and L, you answer the question as quickly as possible but you wouldn't do anything like…is there anything else I can help you with? Has that fully answered your question?"

In contrast, he suggested that certain organisations could focus more on assurance and satisfaction of customers:

"However, if you are J or RR, it wouldn't just be question and answer and done! It would be more like…have I understood you correctly? Have I answered the question in every way you need?"

There are therefore certain contact centre service designs that coincide with Batt and Moynihan's (2002) mass production service design, whereas others follow a professional service design along with the varying levels of attentiveness associated with such designs.

The work of Porter (1980) aided in the further appraisal of the value proposition of contact centres. The discussion of contact centres strategic profiles as cost centres, value centres or any other strategic profiles is driven by the mutual exclusivity logic of competitive strategies conceptualised by Porter (1980). That is, in order for organisations to gain superior performance and a competitive edge, organisations could follow either a cost-leadership strategy or 'differentiation', or broadly a 'value' based strategy. The literature on contact centre services has consistently reflected such value propositions which were also found in the narratives of the consultants interviewed for the purpose of this study.

Porter (1980) also suggested that the simultaneous pursuit of both cost and differentiation, may lead to organisations being 'stuck in the middle' (Wook Yoo, et al., 2006). In case of contact centre literature, the majority of studies have highlighted the cost/quality conflict as pandemic in the service operations of contact centres. This dilemma or trade-off, however, is the mutual exclusivity logic resulting from mass-production thinking that has been dominant over the past 30 years. Considering this, it could be interpreted that Telecom X's contact centres are like any other contact centres that is, bounded by the competing logic of cost-efficient and service quality wherein trade-off is inevitable.

However, studies have also highlighted that in order for organisations to respond to evolving market and consumer expectations, the hybrid strategic propositions need to be embraced than perceive as conflicting (cf. Salavou, 2015; Claver-Cortes et al., 2012; Kim et al. 2004). The UK telecommunications market has been highly competitive due to significant growth of mobile technology (e.g. smartphones and tablets) coupled with increasing consumer demand and expectations (KeyNote, 2015). For example, Of Com (2016: 48) stated:

> *"The ability to remain connected wherever we are is an increasingly important part of our daily lives, whether for contacting friends and family or for accessing online information and entertainment services on the move. For some it is about having the fastest connection, so that files can be downloaded or uploaded quickly. For others, it is about having coverage wherever they live or work."*

However, competitiveness stems from low profit margins in the telecommunications market against consumer expectations. In other words, on one hand, customers expect enhanced connectivity however on the other hand, customers are not willing to spend on telecommunication services (Ray, 2011). As such, telecommunications services face low growth and slow revenue recovery (Key Note, 2015).

Similarly, Telecom X is constantly struggling to control the cost-to-serve whilst satisfying and retaining customers through service. The simultaneous pursuit of cost control and customer service has always been the fundamental struggle of the telecommunications industry as a whole and not just of Telecom X.

As such, the findings of this study with reference to Telecom X have revealed that X's contact centres conform to a mass-customised logic, that is, managers strive to achieve service quality as well as control cost-to-serve, followed by value for organisation and customers. For example, Neil highlights that:

> *"…we need to be able to control the costs, but we need to be able to improve the quality while controlling the costs."*

Similarly, Giovanna highlights in reference to Telecom X's outsourced partners, that they continually seek to save costs, however, not at the cost of service quality:

> *"…I guess cost for us is very important and clearly, as a part of the selection criteria we are looking at the cost element, it isn't just about the cost, it is about the quality output that's gonna come off the back of it."*

Moreover, as Pat, one of the managers at Telecom X highlighted, there shouldn't be a trade-off between cost and quality focus and there's definitely a 'sweet spot':

> *"…I think you don't have to sacrifice it. You can get the right answer through efficiency and make sure that there are right processes."*

Although managers believe and aspire to pursue the simultaneous attainment of cost-to-serve, quality of service and value for organisation and customers through service, this attainment is elusive at Telecom X.

4.5 Summary

It can be inferred from the above that firstly, the strategic perception, purpose and role of contact centres are not monist and hence can vary depending upon the aims and objectives of the organisation. Accordingly, there are various strategic profiles that can be used to design the contact centre services, not all of which may be applicable to every contact centre.

Secondly and therefore, whilst studies in the past have firmly suggested that the role of contact centres has shifted from providing product support to being a strategic differentiator or brand fosterer, this study has found that the reputation of contact centres as cost-centres cannot be completely dismissed. Allway and Corbett (2002) suggest that organisations are constantly faced with increasing customer demands and expectations, competitive pressures and rising operational costs. Accordingly, it is important to underscore that the fundamentally, contact centres were borne out of the rationale of centralised service provision, in order to control the cost of service operation (Mack and Bateson, 2002).

Therefore, in case of telecommunication services examined for the purpose of this study, it can be seen that the reputation and strategic value of contact centres as a 'cost centre' are not completely extinct. Unlike some studies, however, which have suggested the shift of contact centres from being 'cost' centres to 'profit' or 'value' centres, this study found that Telecom X's contact centres cannot be completely labelled as 'profit' centres either. Rather, as one of the managers at X suggested, the strategic positioning of Telecom X's contact centre is somewhere in between 'cost centre' and 'profit' or 'value' centre'. To draw on the view of Porter (1980) therefore, the value proposition of Telecom X is somewhat 'stuck in the middle', that is, in simultaneous pursuit of controlling costs and quality as well as desiring to differentiate or add value to Telecom X's customers through cross-selling or up-selling opportunities.

Within the context of service science, service systems are based on a service-dominant logic and driven by value propositions (e.g. see Huo and Hong, 2013; Smith et al., 2012; Spohrer and Maglio, 2008); Spohrer et al., 2007) which in a broad sense, implies the reasons for which a service may exist in the first instance. Alternatively, these value propositions may as well be viewed as strategic objectives at a service management level, which fundamentally defines what service management is meant to achieve. As such, to study service systems and management through a service science lens, there has to be a fundamental shift from a goods-dominant logic (manufacturing paradigm) to a service-dominant logic (service paradigm) (e.g. see Vargo and Lusch, 2004; Ng et al., 2009).

This study found that these objectives should be to firstly, reduce the long term *cost-to-serve* of service provision to the organisation by reducing product and service failures. Secondly, service providers should leverage the *quality* of service provision by leveraging product and service improvements and thirdly, add *value* to the organisation by leveraging loyalty of customers and hence facilitate the growth of the organisation. This means for customers to fulfil their desired outcomes in terms of obtaining products at competitive prices along with a personalised service experience in return of their loyalty. Within these objectives however, the product remains influential to service management objectives. As such a service-dominant logic is not completely devoid of goods or products as service outcomes that are dependent on the cost and quality of the product.

In the case of equipment based services such as telecommunications, service propositions are therefore, not independent of the product being serviced. Accordingly, the focus of contact centres and hence service management should be to manage cost, quality and value, rather than a trade-off of any of these elements. In addition, the product associated with the service provided by contact centres has to be fundamental to the successful attainment of these objectives can be summarised in figure 4.1 below.

Figure 4.1 Strategic focus of service management (Source: Author)

Further, Gonzalez-Benito and Suarez-Gonzalez (2010) suggested that in order to achieve hybrid propositions of low-cost and differentiation and hence superior performance, organisations will require suitable resources and the organisational configuration favouring the plural nature of these propositions. As such, the next chapter discusses the nature of customer service work and management attributes in accordance with such pluralistic strategic value of businesses.

Chapter 5 : Attributes of customer service management in Telecom services' contact centres

5.1 Introduction

This chapter presents and discusses the nature of customer service work and the management attributes explored for the purpose of this study. In particular, this chapter is structured using the dimensions illustrated in Chapter 3 namely, the role of technology, nuances of service structure, standardisation, complexity, skills, discretion and managerial control entailed in customer service work. In addition, however, this chapter also presents additional management activities that were highlighted by participants of this study as integral to the service management practice in contact centres, which were illustrated in Chapter 3. Finally, the alignment of the attributes and activities with pluralistic strategic value and focus of contact centre services are explored.

5.2 Role of technology in customer service work

In Chapter 2, several technologies were highlighted which were critical to the organisation and management of customer service work in contact centres. As such, it was established that technology remains fundamental to contact centre operations. However, the review also highlighted gaps in knowledge regarding the recent development of these technologies and its impact on delivering service through contact centres. These developments are discussed below.

5.2.1 Emergence and strategic appraisal of Cloud infrastructure

Technology infrastructure relevant to contact centre services has significantly evolved in the last two decades. From having a physical hardware based network, computing, software and telephony infrastructure, contact centres had already started using Internet based voice and telephony infrastructure (see Harvey et al., 1991; Rijo et al., 2012). In the last decade, contact centres have been utilising cloud infrastructure which is still fundamentally Internet based, however without having to accrue costs associated with managing this infrastructure. As exemplified by Sandeep, one of the participants working with technology consultancy organisation:

> *"The most important aspect [with cloud] is cost. In companies, they don't have much capital investment as they did. A second problem resolved through the cloud was managing the solution. Experts started to manage it because someone else is hosting it which means you don't need your own data centre now. Third thing - get rid of those worries of upgrades and refresh of technology."*

The literature on cloud computing with specific reference to contact centre services is limited although highlighted as beneficial to contact centres in terms of managing the cost-to-serve dimension (e.g. see Aamir et al., 2016; Holtgrewe, 2014). The adoption of cloud infrastructure and the strategic implications on management and delivery of service has largely been neglected. Rather, there seems to be a utopian view of cloud infrastructure in both the academic and industrial literature, without much attention given to implications associated with migration to cloud infrastructure or with reference to the management of contact centre services. For example, Aamir et al. (2013) portrayed an optimistic sketch of cloud computing and the associated cost, flexibility and data security benefits. Similarly, some industry reports have almost established that cloud is the new vision for contact centres' success (e.g., see Minkara, 2013; Contact Babel, 2017).

Sandeep warned that it will be challenging for organisations to reduce cost-to-serve and achieve a competitive advantage if they do not "*adopt and change their business model*". However, he also suggests that migrating to cloud systems and infrastructure is not straightforward. Cloud solution providers have, however, warned about the automatic adoption of cloud computing as cloud infrastructure may not be useful to smaller organisations or organisations that are complex in operation (e.g., Payne, 2015). A report by Gensys (2012) highlighted that adopting cloud infrastructure requires organisation to have a collaborative, cross-organisational approach - an attribute which has also been highlighted by Seddon (2003) within the context of systems' thinking in contact centres. Sandeep concurs with these factors but also highlighted that there are certain sectors such as telecommunication services that are yet to adopt cloud infrastructure holistically due to the scale and speed of the rapidly changing market and technology environment within which these services operate:

"It's not easy for Telecoms to change because these are like big trains on high speed and if they want to change their direction, they will have to slow down. So they are still trying to figure out how to change and we are working with some of the Telecoms and some of them are aware but some of them are not yet there."

In the case of Telecom X, difficulties in migration to a new systems and infrastructure were clearly highlighted by Neil. He suggested that technology wise, *Telecoms are a complicated business* and as a result of X's merger with other telecommunication service organisations recently, the complexities to migrate to new technology were fundamentally challenging due to the inheritance of legacy systems. Although Neil agrees on the cost savings and the ease of migrations offered by the cloud infrastructure in the longer run, however, Neil is also wary that it may entail costs and loss of strategic flexibility in managing customer segments and future strategic decisions:

"…we have all of the consumer customers (B2C) on one CRM, and our corporate B2B on the old legacy CRM. If we want to launch some new business tariffs, we can launch those new business tariffs independently of work going on consumer (B2C) side. The benefit of separate solutions has always been of greater benefit than the cost of saving we would have on a single stack."

Therefore, this study offers context specific understanding and implication of cloud implementation on cost-to-service as well as strategic reasons for organisations not to adopt certain technological advancements such as cloud computing and avail cost savings through these advancements. Similarly, the strategic implications of multi-channelled technology adoption in contact centre services are discussed in the following section.

5.2.2 Appraisal of multi-channelled technology of contact centre services

Closely related to the emergence of voice over Internet and cloud based infrastructure in contact centre services, in the last decade, the number of Internet based service channels used by contact centres has significantly increased. According to a report by Contact Babel (2012), there are 9 different communication channels being used by contact centres currently.

These include telephone, self-service (including web and telephony), e-mail, fax, web-chat, short messaging service (SMS), social media (e.g., Facebook and Twitter), postal communications, and smartphone applications.

Sandeep highlighted most of these service channels as possible choices for his customers who were into designing their contact centres:

> *"Customers will choose chat or voice, depending on the time [of contact]. E-mail is good and you need to have an option but it's less popular. Faxes are old style however some might need it for compliance. Then social media is popular but only among young people."*

In highlighting these channels, Sandeep also prioritised these channels on the basis of their popularity. This means that although several channels are available, customers may have more preference towards some channels than others. Although in case of telecommunication services, this didn't mean that service providers have a choice not to deliver services over channels that are less preferred by the customers, as according to Sandeep:

> *"You don't want to end up going with technology that doesn't offer you all these possibilities because especially with a Telecom [service provider] whose customers are diversified… It's extremely important for the companies to look for technology through which services can be offered to any device or any channel at any time."*

However, this study found that Telecom X used only four channels of service delivery namely, phone, e-mail, chat and social media, as can be seen in Table 5.1 below.

This table illustrates that phone remains the most dominant service delivery channel in case of Telecom X, although there were other channels such as chat and social media that were also used. In addition, e-mail was also one of the service delivery channels, however, exclusive to B2B customers only. The emphasis was also placed on self-service through web based portals and Interactive Voice Response (IVR) technology. Customers have the option to access services through any channels they prefer. For example, customers can manage and renew their accounts, perform basic troubleshooting of products and services, and buy new products and services through self-service channels such as online portals and smartphone applications. Alternatively, they can contact the customer service to perform all of the above and/or if they require further assistance with products and services offered by Telecom X.

Location	Inhouse/ Outsourced	Type of Service	Activity	Channels
1	Inhouse	Inbound	Sales, Customer Service	Phone
2	Inhouse	Inbound	Sales, Customer Service	Phone
3	Inhouse	Inbound	Sales, Complaints	Phone
4	Inhouse	Inbound	Sales, Customer Service, Complaints	Phone, E-mail (B2B)
5	Inhouse	Inbound	Sales, Customer Service	Phone, E-mail (B2B)
6	Inhouse	Inbound	Sales, Customer Service	Phone
7	Inhouse	Inbound	Sales, Customer Service	Chat
8	Outsourced	Inbound	Sales	Chat, Social Media
9	Outsourced	Inbound	Sales	Phone
10	Outsourced	Inbound	Customer Service	Phone
11	Offshore-outsourced	Inbound	Sales, Customer Service	Phone
12	Offshore-outsourced	Inbound	PAYG, Customer Service	Phone
13	Offshore-outsourced	Inbound	PAYG, Customer Service	Phone
14	Offshore-outsourced	Inbound	PAYG, Customer Service	Phone
15	Offshore-outsourced	Inbound	Customer Service	Phone
16	Offshore-outsourced	Outbound	Collections	Phone

Table 5.1 Service delivery channels used by Telecom X (Source: Interview with Neil)

This finding was somewhat consistent with the industrial trend reported by Contact Babel (2017) in the sense that the telephone channel accounted for 65% of all inbound interactions and hence, the most dominant channel in comparison to other service delivery channels. This was also highlighted by van der Veen and van Ossenbruggen (2015), Rijo et al. (2012), and Howard and Worboys (2003) that telephone is still the most dominant service delivery channel. Thus, although there is an emergence of various channels of service delivery in the last two decades, these channels are not fully adopted in reality.

In addition, unlike Sandeep's 'any how' and 'any time' perception of contact centres, not all services and/or service channels of Telecom X are accessible seamlessly. In other words, whereas some services are available via a self-service web portal and over the telephone, other services are only available for a restricted period of time and through service channels. This also contradicts the 24/7 accessibility of contact centre services evident in the literature (e.g., Alcock and Millard, 2007; Wallace, 2009; Ferguson, 2007).

So, have call centres really become contact centres? When this question was raised to Neil at Telecom X, he highlighted that fundamentally, call centres always had multiple channels of service delivery such as faxes, e-mail, post, and telephone, however, the use of the term 'contact centre' has only been popularised by marketeers and technological solution companies. Although Neil appreciates this shift as evolutionary in the industry, he suggested that the term 'contact' centres are more of a marketing *'buzz'* and contact centres are synonymous with 'call' centres.

> *"When call centres started, they did e-mails and letters and web chat... [However], if you go back 20 years and had an office, you didn't call it anything different because it had faxes, letters and telephone calls - that was also a contact centre. It's a play on words…"*

In some ways, therefore, the logic of the shift from the call centre to contact centre - purely on the basis of the number of service delivery channels - is challenged.

On the contrary, with the adoption of emerging technology adoption, concerns were raised about the utilisation and effectiveness of certain channels for certain types of services. For example, it was widely agreed that the emergence of the self-assisted channel such as self-serve and less labour intensive channels such as chat and social media has enabled Telecom X to manage simplistic transactions efficiently from a cost-to-serve perspective. As exemplified by Peter, one of the service design managers:

> *"The best process is self-service from a company perspective anyway [as] customers can just fix the problems for themselves, or find the answers for themselves, without having to cost us money."*

> *"I think we are also looking at 'click to chat' strategy and things like that and social media too. What we can answer in those channels easily. A lot of that is transactional stuff…"*

However, restrictions imposed by certain web based channels in providing certain types of services were also highlighted. For instance, technical support may not be always provided through Twitter due to the restriction of chat strings at a time:

> *"in order to put a customer through a huge long diagnostic, doing it over 140 characters per exchange on twitter isn't suitable."* (Peter)

Rather, this means that because a lot of simple transactions could be managed via self-serve, chat or social media, it can be implied that complex transactions are now being channelled through the phone thereby increasing the importance of the telephone service channel and complexity of service provided over telephone channels to a certain extent. For example, Neil suggests that:

> *"Because self-care is dealing with transactional type requirements, the expectations are growing, because the [customers] feel that simple stuff can be done by them so they're only coming to you with more complex stuff."*

This was also highlighted by Hughes (2006), although in the context of financial services, that for complex products, certain channels may not be suitable due to the complex nature of the queries. Similarly, Coelho et al. (2003) suggested that complexity of certain products and service provision may force organisations to adopt high contact channels, despite the cost-to-serve benefits associated with less labour intensive channels.

The question however, is whether multi-channel service delivery is enhancing service quality or adding any value to the customer. The answer to this is not straightforward.

Ultimately, the onus regarding the choice of channels is on the customer, to determine the nature and purpose of the communication (Howard and Worboys, 2003). Depending on the customer's preference, he/she may choose to select a particular channel over another and hence value for the customer could be perceived in the choice of additional channels. However, the expectation of the customer regarding the quality of service is no different, that is, to have a consistent service experience. This has been considered as one of the major challenges of multi-channel environments by several studies (e.g., Awasthi et al., 2014; Gabisch and Gwebu, 2011; Stone et al., 2002). Neil also raised this as a general concern towards multi-channel strategy:

> *"If you are not careful, you could have launched into something more costly [multi-channel strategy] and [if] the level of service you give is worse, by following customer choice, you have ended up providing a bad level of service."*

Therefore, as Dave, one of the independent consultants highlighted, that in deciding channel strategy an organisation must consider:

> *"How are they [customers] going to contact you? Is it going to be phone, e-mail, web, or mobile application? What channels are they going to come in on?"*

Sandeep suggested in the context of customer preferences:

> *"If you end up designing a contact centre where your end customer is of a certain age, may be they hate calling, maybe they like SMS, chat, apps, [they] may not know how to use an iPad then you have chosen a wrong technology."*

Therefore there has to be an appropriate identification of contact centre channels specific to customer needs and preferences. One of the key considerations towards deciding channels is to do with customer demographics and profiling:

> *"…technology for the end customer should always [be based] looking at your customer profile and that requires looking at age, location, hobbies.*

Once you can profile them then you can profile your own technology requirements." (Sandeep)

This finding therefore, supports earlier studies who have identified socio-demographic characteristics (e.g. age, education, income, technology proficiency) as key attributes in channel design strategy (Venkatesan et al., 2007; Inman et al., 2004).

In addition, Neil highlighted the cost impact of these channels and the effectiveness of these channels against core channels such as, for example, phone:

"..Is it going to be more or less costly channels of service?...if you are going to provide service through another channel, is that going to be as effective as your core channels, less effective, or no change?"

Therefore, cost-to-serve is another factor considered for selecting channels of service delivery (Gulati and Soni, 2015; Hobe and Alas, 2015).

Accordingly, the dimensions of service channel selection are illustrated in figure 5.1. Firstly, *customer preference* entails an understanding of which channel the customer prefers to use to contact the service organisation. In analysing this, the service organisation will have to consider a variety of socio-demographic factors (e.g. age, education, income, technology proficiency) (Inman et al., 2004 in Venkatesan et al., 2007) to ascertain whether the channel under consideration is suitable for the customer segment that the organisation is serving.

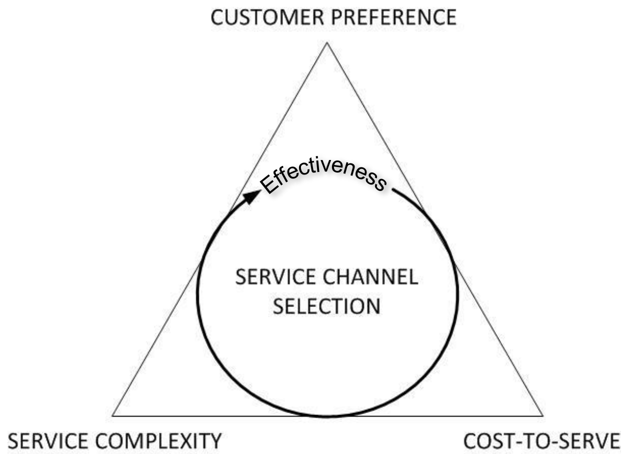

Figure 5.1 Service channel selection (Source: Author)

Secondly, certain services may be complex to deliver via certain channels and the technical restrictions imposed by those channels. Hence, *service complexity* has to be taken into account when deciding on the channel for that service. Dalla Pozza (2014) suggested in her study that customers favoured the use of Twitter and Facebook for technical support due to quicker response time on such channels and due to dissatisfaction with service delivered through other channels in the past. However, her study's participants also highlighted that they would want a telephone channel as well in the case of complex issues. This means that the availability of other channels does not necessarily undermine attributes of the efficiency of the telephone as a service channel.

Thirdly service delivery choices are not solely driven by customer preferences. As suggested by the participants of this study, channel selection strategy is also driven by *cost-to-serve* incurred in delivering service through certain channels. In this case, cost-to-serve may be dependent on the cost of the technology itself and whether the channel is not managed by service personnel (e.g. self-service portals, smartphone application) or assisted by service personnel (e.g. telephone, e-mail, web-chat, social media). The question then is whether non-assisted channels are effective in providing consistent satisfaction and experience to customers as assisted channels.

Finally, the *effectiveness* of service channel entails an understanding of whether the service delivery channel under consideration can deliver the service, with consistent satisfaction and experience as alternative channels without impacting the cost-to-serve. Customer expectations are independent of the ability of service providers to deliver services on certain channels as effectively as other channels. However, failure to deliver customer satisfaction and a consistent experience, may increase the overall cost-to-serve than offset cost-to-serve, as well as deter satisfaction and loyalty, if customers have to re-route themselves to alternative channels for service delivery. Thus, central to these considerations have to be the effectiveness or service experience delivered through that channel, so that customer expectations from the service are fulfilled.

This study has therefore, established that there has been a shift in contact centres, from being single channelled to multi-channelled; Secondly, however, the emergence of new channels has not undermined the importance of service provision via the telephone; Thirdly, the emergence of new channels could impose complexity on existing channels however, may offset overall cost-to-serve of service delivery to a certain extent and; Fourthly, the strategic choice of channels and service design is primarily driven by customer preference and expectations towards the service, followed by factors such as service complexity and its impact on service experience, and cost-to-serve associated with these channels. Service providers, therefore, need to manage these channels accordingly.

5.3 Nuances of service structure and division of labour

The service structure of Telecom X was found to be split into five different functions namely, sales, customer services, technical support, upgrades and retentions, and collections. This indicates functional specialisation and division of labour such as highlighted by other studies (e.g., Ellway and Walshman, 2015; Noronha and D'Cruz, 2006; Miozzo and Ramirez, 2003; Taylor and Bain, 1999).

This division though was not completely clear. Further exploration showed service personnel performing multiple activities, ranging from sales, customer account administration and level 1 technical support. Neil exemplified this range of activities:

> *"..customer services [is]…account management and support…that could be anything from understanding the bills, payments, usage, tariff queries, updating payment details, and all of that kind of stuff within customer services…general customer services [comprises of] billing related, tech support, and sales activities."*

In addition, although technical support is considered as a separate functional area, it spans across level 1 customer services function, level 2 technical support, and external support groups based in product-specific and infrastructure specific organisations outside Telecom X. As highlighted by Peter, one of the service design managers at X:

"If they [service personnel] can't fix [issues] at level 1…then the call is transferred to our level 2 area… Outside of that, we have other resolution teams…and/or third party vendors who own those services."

Jaaron and Backhouse (2011a), Curry and Lyon (2008), and Weinkopf (2006) highlighted that contact centres were usually seen as a detached service operation from the rest of the business thereby, creating functional division or silos between contact centres and the business. In case of Telecom X however, contact centres are integrated with the rest of the business both strategically and operationally, as Neil highlighted:

"In our level, my boss and chief of customer service sits on the board… if we are going to launch something or not launch something, CEO will look to her and ask her whether she [her team] is ready or not ready and she has the power to make those decisions."

At an operational level, attributes of a systems' thinking management paradigm (Seddon, 2003; Seddon and Brand, 2008) are reflected in Neil's narrative. He suggested that contact centres are horizontally and vertically integrated with the rest of the business to leverage communication between business processes as opposed to 'silo' view of contact centres.

Although a few studies have *suggested* such integration (e.g., Sharabi and Davidow, 2010; Fenwick et al., 2009; Varney, 2006) to inculcate an organisation-wide service culture and service improvement initiatives (Seddon, 2003), there is little evidence to suggest how such wide spanning integration and communication is achieved in reality. In this study, cross-functional integration was achieved through performance based pay and a reward system, however, across all the departments of the business than just specifically in contact centres:

"The success of CS [Customer Service] now is written in the bonus of every single employee within the organization, not just frontline employees. So basically, if you work in marketing or finance or wherever, part of your bonus is linked directly to how successfully we are on the frontline." (Neil)

This allowed efficient communication and hence, channelling of issues to relevant departments so that service failures could be reduced. As Neil suggests:

> *"What we found is by operating in a transparent way to the rest of the organization we were able to say whose problem it is within the organization. That made the interaction of the contact centres and the rest of the organization much healthier because suddenly nobody felt like the problems were somebody else's."*

This was further supported by Pat, one of the service design managers:

> *"…managers in CS, Marketing, Networks, Finance, Fraud…there are lots and lots of different elements of the service and these days, we are a lot better at working together as an organization [whereas] I think historically one of the challenges we had is being such a large organization was working together across the business."*

Therefore, there seems to be a blend of both specialised division of labour as well as horizontal integration within and between departments of Telecom X. In other words, the service design of Telecom X was found to have attributes of both scientific management and systems' thinking (as defined by Jaaron and Backhouse, 2013; 2014).

Having a specialised division of labour and a flat organic service structure in Telecom X suggests that there is not one single approach towards the organisation and management of service structure. For example, from Neil's narrative, it could be inferred that specialised service structure may not always lead to efficiency gains due to uncertain nature of the demand flow in contact centres:

> *"If [that call is] one in 15 of everything you do, you wouldn't be as experienced to deal with that. [In such cases] we want to specialize it to a team of people who do this type of activity more frequently and therefore, they will execute better. But the trade-off is that you have lost your economies of scale."*

Therefore, in some cases, a flatter structure is more favourable which was also supported by Bose and Chatterjee (2015) who suggested that having multi-skilled teams as opposed to specialised functional divisions could help in absorbing demand uncertainty and hence, leverage efficiency. In case of Telecom X however, the overall service structure is still functionally divided suggesting that the division of activities is neither completely rigid nor completely flat.

Such a nuanced service structure raises further implications surrounding the characterisation of customer service work in terms of standardisation, complexity, skills, discretion and control entailed in customer service work, which is discussed in the following section.

5.4 Characterisation of customer service work

The purpose of this section is to outline the practice and issues associated with standardisation of customer service work, understanding the associated complexities and the nature of discretion and managerial control over customer service work in contact centres.

5.4.1 Standardisation of customer service work

Standardisation was highlighted by consultants as a process of understanding and documenting service processes and steps to be performed within those service processes that form a part of the transaction with a customer during a service encounter. For example, Vicky noted:

> *"It's a process where in we go and sit with the client, usually [called] knowledge acquisition or knowledge transfer process…to understand their business…We document all the processes and come up with SOP [Standard Operating Procedures] for each and every process."*

In the case of Telecom X similarly, standardisation was exemplified as a practice of documenting service process steps or SOPs physically as well as electronically on a web-based portal called KM2. Pat said:

> *"We always look at the process and look at it as for example, [how do you] set up a direct debit… it was pretty much like let's get all together, print the template and bring all of it together to one place."*

In this sense, standardisation of customer service work could be seen as the codification of technical and process specific knowledge including the steps required to deliver this service using KM2.

These documented steps have commonly been referred to as scripts including verbatim to have standardised conversations with customers (e.g., Taylor and Bain, 1999; Bain et al., 2002; Townsend, 2007; Lloyd and Payne, 2009; Bodine, 2011; Miller, 2014). Various purposes of verbatim were discussed in-depth with Neil. Firstly, verbatim could be used to either have a complete control over the conversation so that variations by service personnel could be managed. Secondly, verbatim have to be enforced and used in the case of certain transactions and service encounters in order to convey contractual conditions that customer needs to know before subscribing to the service. Thirdly, verbatim could be used to enhance consistency of customer service experience:

> *"Some people chose to use it [scripts] because they believe that completely controls the conversation. Secondly, you do need to use it in certain cases for regulatory purposes. For example, when we sell a product, we have 3-7 minutes of the script that we actually have to go through because of regulation, depending on the product you are selling. Thirdly, it could be for best practice."* (Neil)

Managers at Telecom X highlighted that service personnel use verbatim, however, only for regulatory and contractual purposes. Besides these usages, managers at Telecom X believe that scripting divorces service personnel from their persona. In fact, Neil differentiated between process scripts and verbatim:

> *"What we are scripting is the process that we want people to follow. What we are not scripting is the words in which they execute that process. You don't want your agents to be robotic. But what you do want is a consistent execution and performance..."*

Similarly, Pat suggested how scripted service processes are different from verbatim. He noted:

> *"We have steered well away from 'scripting' because it isn't a script. We don't want to take interaction away from the agent. We still want them to build rapport…[through their] personality if they work in the sales*

environment…there are some questions that the agent could specifically use ***if they want to*** *(my emphasis) but we have tried not to do it in a way that doesn't take their personality away from the call."*

From a best practice point of view, Neil highlighted that some of their outsourced partners may enforce scripts usage if that enhances the performance of service personnel:

"If that allows them to achieve better levels of performance, and we are not seeing any unintentional consequences, then that is perfectly acceptable to use."

As such, however, he argued that enforcing conversation scripts could have a detrimental impact on both service personnel and customer experience of the service being delivered:

"…most of the time, [scripts are] not generally helpful. It's very difficult to do it. If you are going to do intensive scripting, it's very difficult to do that without having an impact."

Differences in standardisation of customer service work were evident between level 1 and level 2 technical support. At level 2 support, for example, standardisation of service processes and knowledge was not as enforced as at level 1, according to Peter's description of the nature of customer service work handled at that level:

"if you put step by step process [to] somebody who is technically minded within the first 30 seconds of speaking to a customer, say, [service personnel] may know what the problem and symptoms [are]. They will know that it's one of those two things which might not take very long to resolve that for the customer. But if [service personnel] have to go through [the diagnostics] step by step on every single call, then it's going to be frustrating for the agents [service personnel]."

Ultimately, such variance in standardisation once again highlights the mechanistic as well as a flexible approach to customer service management within contact centres.

5.4.2 Complexity of customer service work

This study found various facets of complexity in customer service work performed in Telecom X's contact centres. In particular, complexity varied on the basis of the product being serviced, variability and analysability of the tasks performed, technology being used to perform the tasks and the skills entailed in providing the service. These attributes are discussed below.

Product complexity

Advancements in mobile technology in the last two decades have led to increasing diversity of the products such as smartphones and tablets that are being offered and serviced in the telecom sector. In a recent report, smartphone ownership in the UK has risen significantly, from 26% if households in 2010, to 61% in 2014 (KeyNote, 2015). General use of mobile phones in the UK has also risen, from 93% in 2011 to 95% in 2014 (KeyNote, 2015). In addition, Golovatchev and Budde (2013) highlighted that the diversity in offerings is fuelled by Telecommunication service providers (e.g. BT, Virgin Media), Hi-tech content delivery suppliers (e.g. Google, Apple), as well as manufacturers of end-user devices (e.g. Nokia, Apple, Samsung, etc). This was also highlighted by Neil in his narrative:

> *"…if you think back [about] mobile phones five years ago, [although] there were various makes and models, they were very similar. [As such], It [the environment for service] was of quite transactional nature and the propositions [product] that were available were quite straightforward. What we are using the devices now, is [like] PCs…"*

Now, customers use smartphones not just for making calls or sending texts but also for various web related purposes. Accordingly, the types of queries service personnel face from customers are significantly different than what they used to be. Neil highlighted such difference:

> *"It's less about what my balance, can I top up, can I pay my bill [and] much more about how do I[,] I am using this, this has stopped working, this is starting to work, I can't access it, My speed isn't quick enough, I am getting buffering… "*

In addition, the subscription plans are more complex, with the inclusion of mobile Internet data plans, as exemplified by Neil:

> *"the product plans and tariffs that customer are using are really varied because suddenly it's no longer [just] about minutes and texts. It's about data usage."*

Therefore, there are interdependencies between the product, subscription plans and the associated diversity between the queries emerging from customers. Furthermore, these issues warrant specific technical skills from service personnel to manage interactions with customers. Although, a lot of product based information and knowledge required to troubleshoot product specific issues have been codified in KM2, the knowledge base of Telecom X, Neil argued for the need for skilled resources:

> *"…types of functions that customers are going to use are going to get more and more complicated. We believe that you need skilled resources to be able to deal with that."*

Accordingly, the level of skills that are required by the service personnel to support such products are high skilled rather than low-skilled or semi-skilled (cf. Lloyd and Payne, 2009; Russell and Thite, 2008; Ellis and Taylor, 2006; Taylor and Bain, 1999). This is because various elements relating to the product come into play during the service provision. Although KM2 aids service personnel about the product knowledge, it is the skill of the service personnel that matches the product to customer's needs (Smith and Teicher, 2017). In addition, service personnel have to understand the product first so that they can then, for example, gauge the customer's knowledge about the product and where necessary, simplify the jargon for the customers (Shah and Bandi, 2003). In other words, service personnel should be able to articulate customers' issues and deliver solutions. According to Neil, this can be only achieved when service personnel belong to the same product environment as customers - that is, both service personnel and customers are using the same or similar products and the associated functionalities. In this context, therefore, being skilled means to be able to manage the product and service delivery according to customer's needs, through one's knowledge of the product and the problem solving ability.

Work complexity

Chapter 2 established that work complexity in customer service work can be defined through three elements, namely, task variability (variety or uncertainty), task analysability, and technical complexity (Sharda and Chatterjee, 2011); Niranjan et al. (2007). In addition to these elements, this study found that complexity was also evident in terms of the number of information systems and CRMs used by service personnel at Telecom X. These elements are discussed in detail below.

With regards to task variability, customer service work performed by Telecom X entailed transactions of varying complexity within level 1 itself. Whilst all the transactions were not listed by any participants during the study, the approximate number of contact types and processes related to those transactions were elicited by Pat:

> *"There are probably 190 different reasons as to why our customers call us [ranging from] very high level from CS [Customer Service] and billing perspective and about 200 processes or reasons customer calling us from device or network related piece."*

Certain examples of these call types were highlighted by Pat:

> *"…why our customers call - Setting up a direct debit, add roaming, talk about the device and what's not working, discuss the bill… change address or details - anything as high level as gender change or marriage certificates for changing their surname all the way through the complex disputes around billing queries, escalation processes… something as simple as account balance or direct debit to complex like network issues."*

Neil suggested that there are approximately 250,000 transactions, built of various contact types mentioned above, that are handled by Telecom X's contact centres, as a whole.

Whereas some transactions could be highly repetitive and routinised, other transactions are complex and require service personnel's discretion to manage transactions.

Although such a high degree of task variety has been appreciated by some authors (Shah and Bandi, 2003; Batt and Moynihan, 2002) in reference to contact centre work design, studies have generally portrayed contact centre work as that of low task variety and hence low skilled (e.g., Deery et al., 2013; Mustosmaki et al., 2013; Wegge et al., 2006; Taylor et al., 2003).

This study found that multi-tasking and multi-skilling have induced task variety in contact centre work both in terms of the type of queries faced by the service personnel as well as a customer induced variability which was also highlighted by Piers William Ellway (2016) in his study:

> *"They [contact centres] have the variation in human dealing with it, and human with the question (customer)..in call centres, you got variation with variation. You've got customers which inherently hold variation with different behaviours and you got an agent, who are humans, and therefore, there will be variations there, so twice the variation in the system."* (Neil)

The second dimension, *task analysability* refers to the degree to which search activity is needed while performing the task (Niranjan et al., 2007), and has rarely been discussed with specific reference to contact centres.

This study found that in Telecom X, task analysability of transactions is higher for certain transactions than others. For example, one of the complex issues customers have with telecommunication services is network and signal issues, which are very difficult to manage and resolve. This is because such issues are borne out of various external factors relating to customer's device, location, network infrastructure and technology, as exemplified by Neil:

> *"We need to be able to know whether [it's] your device [or] the route that you are taking [travelling route]. Probably, when you are going through a particular way, you are going through some coverage areas that aren't as great…"*

At level 2 technical support similarly, service personnel have to explore certain issues in-depth to be able to fix those issues. Peter described this complexity further:

"[Level 2] look at the complex set of data and call records information to churn out [and] for understanding and identifying [the] problem. It's really around the amount of data and also the rawness of data that they[level 2] have to interpret… its complex because it's not obvious what it means."

The third dimension, *technical complexity*, is described by Woodard (1958) as the extent to which the process could be programmed to be more predictable and controllable. Technical complexity is often seen in conjunction with task analysability and task variability (Niranjan et al., 2007). Certain tasks such as managing customer accounts, activating services, and collecting payments are straightforward with more predictable outputs and hence, entail low task variability, low task analysability, and high technical complexity. As Neil highlighted:

"The transactional based volume is now generally self-served. There's still more to do but generally self-served, either via IVRs or the apps or the web, for example…pay bills, getting their balance…"

This means that such tasks are easily programmable or could be automated and performed via self-service channels. As a result of this, the technical complexity is higher for such tasks. Such tasks could also be easily codified using KM2 and hence, predictability, control and consistency in execution of tasks could be achieved if performed over the phone. As Peter suggested:

"KM2 [is] all about standardization…it takes out any inconsistencies… [it] gives agents instructions to follow step by step so that every single customer gets same experience each time with the right outcome."

In the case of complex queries relating to technical support of products, however, the predictability and output of the process may not be always achievable. The root-cause of the issue may or may not be different in each scenario. In such cases, therefore, the technical complexity may not always be high. As Neil exemplifies:

"In our world, the potential solution might be predictable and process controlled...But even though the response should be controlled, you still haven't got completely predictable process on the other element, which is the customer. So you [are] not getting the same event coming on time

and time again. Everything is different and therefore, where I think call centres have the problem is in order to find the right solution to right problem…"

Although predictability could be achieved and hence technical complexity could be managed for some tasks, for other tasks, achieving these elements may be difficult. Practices such as scripting (Lloyd and Payne, 2009; Bodine, 2011; Miller, 2014), automation of processes and customer interaction technologies (Budhwar et al., 2009; van den Broek, 2003; Mullholand, 2002), use of CRM systems (Abdullateef et al., 2011) and knowledge management systems (Langley et al., 2006; Koh et al., 2005) have generally been found to leverage technical complexity leading to de-skilling of contact centre work.

In the case of Telecom X however, the knowledge base is not just an information dispenser for service personnel or a de-skilling machine for managers. Rather, the knowledge base was found to be sophisticated and built on a philosophy of interactive guided help to resolve customer's issues. It also enables links to related issues to the one that customer has contacted about in order to reduce customers having the need to contact again. The hope is that there is a reduction in failure demand and leverage of the quality of service and ultimately a reduction in the cost-to-serve for Telecom X.

Guided help can also be used to suggest various products or services that may be useful to the customer given their tenure with the subscription and anything that may be related to their query. This helps service personnel to address value and profit by providing other information about the products. As Pat explained,

> "*…So rather than say, let's set the direct debit up, we will also talk them through how would they self-serve, and any additional products and services based on their account history… for example, if they have just joined us, we might offer them to help through their first bill or using the phone abroad. Just go through the new joiner process so we can link processes using the guided help.*"

This study then adds the fourth dimension of complexity namely, *technological complexity* entailed in customer service work.

Complexity could also be imposed by the number of information systems being used by service personnel to resolve a problem (information systems complexity) (e,g., see Rijo et al., 2012; Benner and Mane, 2011) and the context of the complexity it imposes on the overall service delivery. As Dave, one of the consultants highlighted:

> *"In many of the environments, agents have to toggle between a minimum of 3 or 4 different systems….anything from web browsers looking up for information, two to three customer databases, knowledge management system, etc. The agent is sat with multiple screens having to continuously flick between them to gather information."*

At any time, service personnel use at least 5-6 systems to fulfil the transactions:

> *"…if you are working as an agent working in this organization, you have EXC (customer database 1) and MER (customer database 2), COM (product specific databases), and KM2...you have got things like your e-mail, your internal Internet pages, and there are a probably few other bits and pieces out there that they may be using but not as much."* (Pat)

At level 2 technical support additional diagnostic tools and technologies are used, due to the complex nature of the work performed at that level, and the degree of task analysability imposed by certain issues, as suggested by Peter:

> *"If I were to present to you a view of the tools that they use…It's all around the amount of data that they got to look at and also, its complex because it's not obvious what it means."*

Similarly, Sam, one of the senior design managers highlighted:

> *"Complexity is an interesting one…It depends on systems they use… based on the knowledge they need and how often they do."*

Telecom X is a large scale telecommunications organisation borne out of a merger between two organisations and hence the information systems used by parent organisations were inherited by Telecom X. As a result, service personnel use different systems inherited from parent organisations, such as EXC and MER, to find out information of and for the customer, and to identify relevant processes and procedures for each query. In addition, service personnel are currently using KM2, the knowledge base of Telecom X to handle the transactions.

Through the above findings, firstly, it is established that the number of information systems that service personnel use in Telecom X are significant and this adds to the overall complexity of the service delivery and management (see also Rijo et al., 2012). Secondly, the overall scale of Telecom X that has been built through the merger and the diversity and complexity that results out of the disintegrated approach to managing the technology, adds further challenges to the service personnel's ability to manage transactions in real time. The integration of existing systems and the introduction of adaptive user interfaces such as KM2 could aid in managing the complexity imposed by information systems, (see also Jason and Calitz, 2009 and Rijo et al., 2012). This could also help Telecom X in achieving the overall consistency in execution of tasks in the contact centre.

However, the level of skills entailed in performing customer service work is not purely confined to technical know-how, process specific knowledge and the ability to manage multiple information systems and information dispensed by those systems - customer service work involves more than that.

5.4.3 Skills complexity

This section discusses customer service skills that have been informed by the participants of this study.

According to Angad, one of the consultants, complexity could be borne out of a niche skill required to perform a particular task and hence could be related to technical 'know-how' aspect of skill:

> *"Fewer people know how to do it. That could be because it's a legacy system [legacy technology used in the process] and hence, only few pople know how to work on [operate] it."*

However, Neil from Telecom X argued with specific reference to the challenge that telecommunications services is faced with - a challenge of managing customer expectations from service which are coupled with a demand for competitive prices of the products:

"the real challenge in the service industry because customer expectations are growing all the time, and becoming divorced from value… with consumer products, like these[ours], generally the prices are going down, but that doesn't necessarily mean their expectations are any less than they were before."

As such, participants of this study highlighted several attributes of customer service work in contact centres that exemplified the expectations. In particular, they highlighted that customer service work not only entails managing account administration, troubleshooting products and operating and managing information systems but more importantly, communicating with customers and articulating their needs. For example, one of the independent consultants suggested:

"…apart from dealing with the transaction, they also got to talk to the customer…Talk to the customer, listen to the customer, identify what the customer is telling them, and engage with them." (Dave)

Further, a responsibility of service personnel is to also deliver 'customer experience' or added value:

"On top of that, what everybody is demanding is an exceptional experience. We want them to sell something as well. We want them to represent the brand. The amount of expectations is huge." (Dave)

Peter highlighted as the expectations to support and deliver customer experience have to be fulfilled within the boundaries relating to internal efficiency:

"…they got to do all of those things and within the right AHT [Average Handling Time] and they got to be able to get the right customer experience because that's still talking to the customer at this point and still ask them questions."

Such communication skills were given further importance by managers of Telecom X in the context of offshored services, wherein cultural and language elements are linked with the emotional labour and articulation skills. For example, as Neil noted:

"It was really difficult for people[agents based abroad] to empathize in something that was very foreign, in terms of understanding where the problem was…[and] the minute we don't resolve [issues] offshore, the language and culture elements are what customers automatically assume [as] the problem…"

This was also exemplified by Sam:

"…the other one is sensitivity. So for example, deceased customer process is relatively straightforward in what we do. However, is it best to offshore? Possibly not. That's not because its outsourcing but probably we need better agent and better level of empathy and rapport [and not just a good process]."

Thus, the job of service personnel is not just confined to 'hard technical abilities' and 'know-how' (Lloyd and Payne, 2009) of the organisational processes. Rather, it also entails interaction with the customer which is formed of cultural, linguistic and communicative abilities (Benner and Mane, 2011) and work articulation skills (Hampson and Junor, 2005).

The challenge with most of the accounts however has been that these 'hidden skills' (Lloyd and Payne, 2009) are often ignored or taken for granted thereby undermining what skills are required in customer service work (e.g. see Callaghan and Thompson, 2002; Korczynski, 2005). It is assumed that beyond operating information systems (such as KM2 in this case), churning information out and performing routinised tasks as dictated by the information system, there is nothing substantial in customer service work (Callaghan and Thompson, 2001). However, this was more than a decade ago when products and customer service work were simplistic and emerging. It has already been suggested that customers expect personalised service experience than just product support centres and as such, service personnel have to manage these expectations. However, only a few studies have appraised the emotional and articulation skills in customer service work (e.g., Bolton and Houlihan, 2007; Hampson and Junor, 2005; Bolton, 2005).

This study argues that the skills required to perform customer service work in Telecom X may not be easily deemed as 'low' skilled, 'high' skilled or 'semi' skilled (see Lloyd and Payne, 2009; Russell and Thite, 2008) on the basis of technical abilities and process specific 'know-how'. One has to consider 'emotional labour' and 'articulation skills' too, when appraising skills relating to customer service work. In addition, the performance of emotional labour and deployment of articulation skills also entails consideration and appraisal of discretion over their work (Lloyd and Payne (2009) and hence, is considered next.

5.4.4 Discretion in customer service work

Closely related to the differences in standardisation and complexity of service work was the variation in discretion and control over customer service work found in Telecom X's contact centre and in particular, between level 1 and level 2 customer service work. Discretion can be characterised in two ways. One, using the skills concept and second, by considering the managerial control imposed on service and service personnel (discussed in the following section). For example, Peter noted that service personnel at level 2 are provided with a higher degree of discretion over their transactions so that they are able to deliver the solution to customers' queries efficiently:

> *"level 2 has got a lot of autonomy [and] bit more free thinking at level 2 [than level 1] …they have been brought here to do a particular job because they have got that technical skills,…we would want to give them freedom in order to get the right answer and find the best solution for the customer."*

Peter has thus indicated some level of relationship between the 'skills' of individuals and the degree of discretion over the tasks performed. This concurs with Bolton (2004), and Lloyd and Payne's (2009) views on discretion as one of the attributes of skilled work. However, Angad highlighted the difference solely on the basis of standardisation of service work at level 1 and level 2:

> *"Either you can allow, you can bind the agents to a tool, which drives standardization. In that case, the predictable outcome is what they want. But you know, higher level technical support, and I am talking about level 2 or level 3, in those areas you can give more free flowing support [empowerment and flexibility]. There it is not constrained."*

Considering this, level 2 customer work is considered relatively more skilled and empowered than level 1. However, discretion at level 1 then could be described in terms of freedom of service personnel to have a verbatim-free conversation with the customer as discussed earlier. Further, if we consider Bolton's (2004) definition of emotional labour as skilled work and the dimensions of work complexity discussed earlier, then both level 1 and level 2 demands technical expertise, managing context specific conversations and emotional labour and hence, could be deemed as skilled in their own right. Therefore, discretion could be evident in different forms at different levels of support in contact centres.

In addition, discretion could also be determined on the basis of managerial control imposed on service work and service personnel. As such, the next section discusses the managerial control found in X's customer service work.

5.4.5 Managerial control over customer service work

Managerial control (Callaghan and Thompson, 2001; Lloyd and Payne, 2009) in service work was found at both level 1 and level 2 customer service support at Telecom X.

The use of technology to manage the pace and direction of work, measurement of service personnel performance, monitoring of the activities of service personnel and reward and restraint mechanisms were all control attributes revealed through the practice narratives of managers at Telecom X. In this sense, discretion over customer service work may seem limited. However, the application and extent of the managerial control and hence the discretion were also found to be varied between level 1 and level 2 customer support functions. These variations are discussed below.

In terms of the pacing and direction of work firstly, according to Neil, level 1 work is paced and controlled through the use of routing technology that enables the centre to *"get the customer when they come through the IVR and want to talk to us"*. However, most of the level 2 customer service work at Telecom X was borne out of the transfers from level 1. As Peter noted, only if level 1 service personnel *"can't fix it at level 1, whether they don't have right tools and/or technical knowledge, the call is transferred to our level 2 area".*

In this sense, therefore, the pace and direction of level 2 customer service work is dependent on level 1 customer service provision rather than merely controlled through the use of automatic call distribution, as may be the case at level 1.

Secondly, as Neil noted, *"probably about 40-50 different metrics"* were being used by Telecom X at both levels, thereby, exemplifying the intensity of measurement of service personnel and hence, control over service work. To date, various studies have categorised these Key Performance Indicators (KPIs) into hard and soft metrics. 'Hard' metrics that are easily quantifiable and are about efficiency of the service provision (for example, average speed to answer, abandonment rate, transfer rate, service levels, and so on) and; 'Soft' metrics that are difficult to quantify as they relate to the effectiveness of the service, or service quality - usually in the form of customer satisfaction and experience of the service (e.g. see Manzoor and Shahabudeen, 2014; Gilmore and Moreland, 2001).

In addition to these, Telecom X also uses the Net Promoter Score (NPS) as an indicator for measuring customer loyalty which ultimately aids Telecom X in gauging the value created by them, for the customer. Originally conceptualised by Reichheld (2003), the purpose of NPS is to fundamentally evaluate whether the customer is loyal to the organisation or not, by asking one single question: “How likely is it that you would recommend [company X] to a friend or colleague?” (Reichheld, 2003: 1). Customer loyalty is considered to be the strongest determinant of the repeat purchase and growth of the organisation - this view was also supported by Neil:

> *"The largest predictor of customer staying loyal to your brand is [NPS] whether the customer would recommend the x brand to a friend that question is the best predictor of future loyalty."*

As Tomek and Vavrova (2001) suggested, this value is measured in terms of customer equity that can be considered as an addition to the value of the company through customer's continuous relationship to the business and hence, as a loyalty to the business (Dvorakova and Faltejskova, 2017). As such, NPS is a measurement of customer loyalty and hence a measure of value.

Since its conception, NPS is increasingly used as a performance metric in industries including retail, banking and telecommunications, and for measuring customer experience through various channels of the business, including contact centres (e.g., Eger and Micik, 2017; Shaw and Hamilton, 2016; Shaikh and Karjaluoto, 2016). However, the use of NPS in contact centres is sparsely reported in the literature. There is not much discussion surrounding its implementation and linkage with the overall performance measurement.

The use of these metrics fundamentally strengthens the strategic focus of contact centre service and service management on cost-to-serve, quality of service and leveraging value for and loyalty of customers and hence, growth for Telecom X (measured by NPS).

Again, the metrics used to monitor and measure level 1 service personnel may be different to a certain extent to level 2 service personnel. As Liam, for example, highlighted, level 2 service personnel differ from level 1

> *"…in terms of ticket management. In the first line [level 1], you [service personnel] have got quality from a call perspective, in the second line [level 2], you [service personnel] have a quality measure from a ticket management perspective"*.

This means that in addition to being measured on their conversations with the customer NPS, level 2 service personnel are measured on the number of tickets (issues assigned by level 1 service personnel to level 2) resolved by them. Neil noted that Telecom X had a tight compliance monitoring towards the use of KM2 at level 1 and there is a penalty for not being compliant:

> *"…we've been heavily driving people to use [KM2]…If you don't follow it, ultimately, that can lead to dismissal and we have dismissed plenty of people."*

Every week, a report is pulled from KM2 to identify whether service personnel have used KM2 during the transaction with the customer. The report details the issue customer had, the steps followed by the service personnel and whether the steps were followed in their entirety.

These reports also help managers in assessing the performance of the agent against their First Contact Resolution (FCR) and NPS score there by feeding the data into driving the service process improvements across the estate, as noted by Pat:

> *"You can use the conformance report to understand the coaching need…Our reporting configures a question, and then out of 5000 calls, we can break those 5000 calls to, for example, cancel the direct debit, change direct debit, set up a direct debit. All of the really hard hitting information and we correlate that against FCR and NPS data for that customers' mobile number. We can then say, right, we get 1200 calls for setting up a direct debit, but our NPS score is a negative score. And then we can start looking to see why is that the case? What can we do to improve that process?"*

However, such compliance was not enforced on level 2 service personnel as managers preferred level 2 support to be more autonomous in troubleshooting customer issues. Therefore, the control varied even in terms of the level of support provided to the customer. Nevertheless, the number of KPIs used by Telecom X generally was not significantly different to what has been elicited by studies in the past 20 years (e.g., see Anton, 1997; Feinberg et al., 2000, Willis and Bendixen, 2007 and Chicu et al., 2016).

There were, however, differences in the measurement and management of these metrics and hence, the level of bureaucratic control exerted in Telecom X's contact centres. The KPIs were found to be split between 'Primary' KPIs - those that were actively driven and closely monitored by the service management team of Telecom X and; 'Secondary' KPIs - those that are monitored and managed by exception. Whilst a complete categorisation of Primary or Secondary KPIs was not achieved, it was inferred that service personnel were closely monitored and were encouraged to achieve a high FCR and NPS.

> *"…Primary KPIs are the things we physically drive. We would drive NPS, FCR, etc."*

Whereas, secondary KPIs such as Average Handling Time (AHT), Schedule Adherence, and Absence rate are monitored, but not enforced:

> *"We don't drive [secondary KPIs such as] AHT, but we want to make sure it's controlled and similarly, we don't drive conformance, but make sure it's controlled… there is a whole host of these secondary KPIs that we monitor behind the scenes and you only act upon it if there is the variation outside the norm."*

Therefore, another difference found in this study in comparison to earlier studies was whether the control is exerted as a 'target' and control as 'ranging performance' for certain metrics. For example, studies thus far have overly asserted the strict adherence to targets in contact centres (e.g. see Tanim, 2016; Miller and Hendrickse, 2016; Bain et al., 2002). Even in case of Telecom X, service personnel both at level 1 and level 2, are expected to achieve targets for certain metrics set by managers. For example, as Neil highlights:

> *"Adherence is the target. We have a minimum standard that we are expected to meet…they will have to be above 96%..."*

The control on service personnel in terms of monitoring their shift timings, and breaks, existed as a fixed 'target' in Telecom X's contact centres. Besides this, for other metrics namely, AHT, FCR and NPS, a certain level of flexibility and discretion was found in measuring and managing these metrics. Accordingly, Liam, for example, exemplified difference in some team's AHT targets:

> *"Depending upon segment, that[AHT] differs quite a lot. So if I look at first line small business technical teams in North Tyneside, their AHT is 60 seconds less than a second line technical agent in the consumer."*

However, for AHT, FCR, and NPS at level 1 and level 2, Telecom X used a 'ranging performance' technique to measure service personnel's performance, within a particular range of arbitrary targets set for these metrics. The 'norms' of control were found to vary if, for example, certain service personnel are deviating too far compared the rest of service personnel on a particular metric. As Neil noted, it is to ensure whether the performance is "*in control or not in control"* or whether service personnel attain a *similar level of performance".*

These 'norms' were considered using a tool called "BOND", through which ranging performance for each metric was calculated.

Differences between control by number and control by exception have been limitedly reported (e.g., Langley et al., 2006 and Jansen, 2015). These studies have also indicated that contact centre managers are placing greater emphasis on service quality KPIs and only measuring efficiency metrics by exception. Therefore, managerial control could vary according to the strategic focus of contact centres. It seems, however, that consistency in managerial control is not always achieved. As Neil noted, the traditional leadership approach of *"managing by numbers without really helping people understand how to achieve them"* only leads to unintended consequences and hence, loss of control:

> *"There's no good me coming to you saying that you are taking too long and you need to work quicker. I will ultimately be driving you to cheat and if I drive you to cheat, and that could be an unintentional cheat by the way, that's when you start to see behaviours in call centres, like putting the phone down on customers or trying to speed through the process or transfer the calls to somebody else which reduces the AHT."*

Several studies have highlighted the over-occupancy of managers in measuring and managing efficiency metrics than service quality metrics of the service (Banks and Roodt, 2011; Robinson and Morley, 2006; Staples et al., 2002; Gilmore, 2001). However, fewer studies such as that by Jack et al. (2006) and Russell and Townsend (2003) have also warned that setting certain targets such as achieving AHT may lead to unintended consequences, such as service personnel rushing the customer off the phone, which may adversely affect customer satisfaction and hence service quality. Following these studies and Neil's narrative, it could be could be implied that Telecom X is aware of such implications and hence have moved away from managing service personnel by numbers:

> *"…it's a real challenge to make sure that we keep that constant rigour between not trying to overload the agents, and trying to keep things under control. What we don't want to do is t*ie all our people up looking at all 40 metrics every single day*."*

However, there is a contradiction with the above when the reward structure of Telecom X was studied. For example, while Neil himself suggested that primarily the focus is on qualitative metrics, that is, FCR and NPS, service personnel are actually monitored and rewarded on the basis of four metrics, that is, FCR and NPS, which are qualitative metrics, as well as AHT and Schedule Adherence which are quantitative metrics:

> *"From an effectiveness perspective, it's Net Promoter Score and First Contact Resolution. From an efficiency perspective, it's usually Average Handling Time…and schedule adherence/conformance type measure."* (Neil)

Raz and Blank (2007) also suggested the imbalance between the rewards of attaining efficiency and service quality metrics. Raz and Blank's study suggested that the contact centre examined by them rewarded a higher proportion of bonus for achieving service quality metrics than for achieving efficiency metrics. In the case of Telecom X, whilst the proportions could not be established, service personnel were expected to qualify on achieving minimum criteria for service quality to be able to achieve the bonus for efficiency or sales related metrics and hence, to avoid opportunistic behaviours.

Interestingly, it was found that even if the primary job of the service personnel may be to generate sales, they may be evaluated and rewarded on the basis of NPS. This means that the actual role of service personnel is somewhat detached from the assessment of their performance. Neil highlights this exemplifying another telecom organisation:

> *"if you take a lot of organizations like C, even though they are a sales environment, they now no longer pay their people based on sales, but on net promoter, because they were finding that the unintended consequences of commission driving them on sales targets was actually doing the business more damage, and by the way, we see some of that in our own world."*

The bureaucratic practice of incentivising service personnel for achieving more is derivative of the scientific management practice applied in the manufacturing sector, wherein workers were rewarded a higher wage for producing more output. However, the challenge with services is to ensure that this practice does not lead to unintentional consequences that may affect the overall performance of contact centres adversely. For example, it is a common practice that service personnel are rewarded for cross-selling or up-selling certain products and services in addition to the bonus that they earn for providing a 'good customer experience'. However, service personnel often trade-off customer experience bonus that is harder to achieve over sales. This is a new form of 'work soldiering' (reference to Taylorism's soldiering except that instead of workers deliberately working slower as was the case in manufacturing, service personnel are acting on the basis of self-interest and sacrificing what is hard to achieve) that exists in contact centres. Raz and Blank (2007) have also highlighted the imbalance between metrics of measurement and the reward structures.

Nonetheless, control in single service work varies within and between different levels of customer service support. It is important to highlight these variations in order to ascertain the accurate portrayal of managerial control in contact centres. Previous studies have tended to discuss whether the control is present or absent in contact centres (e.g., Callaghan and Thompson, 2001; Taylor and Bain, 2006; Lloyd and Payne, 2009; Koskina and Keithley, 2010). However, the application and extent of control and its varying application have rarely been discussed in detail.

5.5 Demand and Capacity management in contact centres

In addition to the above attributes of customer service work, this study found specific managerial activities that were fundamental to the contact centre service management at Telecom X. The following sections discuss these activities.

To date, demand and capacity management in contact centres has not been discussed in detail as fundamental management activities. Rather, these elements have been mostly treated as scientific operations management activities in the service operations research area. However, interviews with consultants and managers revealed that demand and capacity management is fundamental to service management in contact centres such as that of Telecom X.

5.5.1 Scientific management of Demand and Capacity in contact centres

This study found that considerations made by consultants and managers relating to demand and capacity planning in contact centres are very similar to what has been elicited in the literature thus far (For example, see Rijo et al., 2012; Jacks et al., 2006; Betts et al., 2000) . In particular, managing demand in contact centres was found to be primarily about forecasting the contact volumes that the centre may expect on the basis of availability of service agreed by the organisation. As Charlie, one of the independent consultants suggests, the primary question to address is:

> *"What are the contact volumes and the forecast of those contact volumes? What's the demand?How big is that demand?"*

Forecasting of this volume was found to be one of the most crucial activities in case of Telecom X as well. Naomi, one of the resource planning managers at Telecom X elicits:

> *"[The] Forecasting model [is] pretty critical [and] used to predict expected customer demand or call volumes."*

The critical nature of forecasting in demand management usually emphasises mathematical models and methods of forecasting of contact volumes, call arrivals and capacity management (e.g., Ibrahim et al., 2012; Shen and Huang, 2005; Kolesar and Green, 1998). Whilst the discussion of these mathematical models and methods is beyond the scope of this study, it is to be noted that on the basis of these forecasts, the appropriate level of staffing and scheduling of service personnel is determined to meet the demand and hence, to meet the service levels. As Naomi highlights:

> *"The outcome of that forecast drives all of the resource decisions that we make across the 6-12 months to meet service levels."*

As evident from earlier studies (Rijo et al., 2012; Cleveland and Mayben, 1997), by factoring the forecast volume and duration of contacts, appropriate shift patterns, scheduled training, breaks, holidays and absences of service personnel are planned. Naomi would agree:

> *"We start to apply all the productivity and shrinkage assumptions on top of that to calculate the number of FTE…Call demands, AHT all of the holiday activity, agents' holidays, breaks, lunches, coaching, team meetings, reviews. To meet our customer demand levels, this is the number we would need to resource to."*

There are consequences for over resourcing as well as having too little capacity. Whereas over resourcing impacts cost-to-serve, having less capacity may lead to sweatshop conditions in service environments, long waiting times for the customers and ultimately, customer dissatisfaction:

> *"nobody wants to be sitting on service levels where we are under resourced like 60%, [which leads to] long wait times, the staff's impacted, quality, NPS scores, but on the flip side, it's not great to sit on 95-99% because you are burning money by having too many resources. There are big consequences to get that wrong. It impacts service levels and then customer and quality [of] experience."* (Naomi)

As previously highlighted, ultimately, service management practice in this context is primarily about answering three questions:

- How much work is coming in?
- How long do they take to do things?
- How many people have I got?

Primarily suggested by Henri Fayol (e.g., Parker and Ritson, 2005), forecasting and planning is fundamentally about answering the above questions. However, Fayol's (1949) work has been largely neglected when compared to Taylorism's popularity in discussing scientific organisation and management of contact centre services. If contact centres are occupied in maximising the throughput in contact centres (Bolton, 2013; Smith et al., 2010; Burns and Light, 2007; Hannif, 2006), then maximum throughput is only attainable through accurate volume articulation, forecasting, and planning (e.g., Ibrahim et al., 2012; Shen and Huang, 2005; Aldor-Noiman et al., 2009). Hence, Taylorism is incomplete without Fayolism in case of contact centre service management.

Where enough attention has been paid in articulating and studying demand in the contact centre, analysing demand uncertainty in terms of the type of demand, especially in the case of multi-skilled contact centres, has been neglected. In other words, a scientific approach to demand only allows forecasting and planning of demand. Such an approach fulfils the operational objectives in manufacturing environments or contact centre services where demand is of a consistent nature (for example, ticket booking or inquiry services). In the case of level 1 customer service at Telecom X where the nature of work is blended, however, to be able to forecast contact volumes over different times of the day, month and/or year is fundamentally challenging. Such challenges have also been discussed in the literature (e.g., Betts et al., 2000 and Jack et al., 2006), and were found to be apparent in Telecom X's contact centres. As Naomi suggested:

> *"…it's very difficult to manage capacity perfectly to expected demand levels week in week out, day in day out. So yeah, that's probably the biggest challenge."*

Therefore, it seems that even a combination of scientific and administrative approach in contact centres only allows limited planning, simplification and control over contact centre work. Despite this, it could be argued that the prevalence of scientific and planning practices in contact centre services cannot be completely ignored, but requires complementing with other schools of thought in management.

5.5.2 Systems approach to Demand and Capacity management

In addition to the scientific forecast of contact volumes and managing capacity in accordance with the forecast, this study found that managers at Telecom X were also involved in managing service against demand (Seddon, 2003), evaluated using *Propensity to Call(PTC)*. This is calculated by:

- the number of customers subscribed to Telecom X's products/services in a given week or month;
- the historical data that is gathered using IVR system that allows managers to have a look at which options did the customer select, and the notes logged by the service personnel;

These figures are used as input to a forecasting method called the *PTC:*

> *"We track customer PTC at a weekly level…[and then]…we will annualize that.. your PTC can be anything up to two calls annualized per year and then the general trend is that it comes down as you become in-life customer."* (Naomi).

The PTC Tenure model allows managers at Telecom X to further breakdown demand and to be able to identify both the volume and type of demand expected. Whilst these factors may be commonly used factors in forecasting, neither the PTC based tenure model nor the detailed breakdown of historical demand has been discussed in the Demand and Capacity Planning literature. Studies thus far have focused on identifying the volume and capacity accurately, so that demand could be somehow met (e.g., Klassen and Rohleder, 2001; Jack et al. 2006; Sasser et al., 1997).

Identifying and understanding contact centre demand in detail has been suggested by advocates of a systems' thinking approach towards service management (e.g., Jaaron and Backhouse, 2011a; Seddon and O'Donovan, 2010; Piercy and Rich, 2009; Seddon and Brand, 2008). However, little evidence exists in terms of how this demand is identified and understood and there is sparse evidence of such practice in telecommunications contact centres.

In Telecom X, the flow of demand and identifying and understanding the volume of contacts in terms of value and failure demand are appraised:

> *"Contact centres are getting to a stage where they are looking their world in terms of value demand, and failure demand. Demand management is then about [eradicating] failure demand and maximizing, of course, the value demand."* (Neil)

The analysis of demand in terms of value demand and failure demand is increasingly being discussed in the context of service organisations (e.g., Seddon and O'Donovan, 2010; Piercy and Rich, 2009). Contact centres encounter a high proportion of failure demand, that is, demand that is a result of service process or delivery failures at first instance.

More precisely, one of the fundamental challenges for service organisations, including contact centres, is that 80% of their work is handling failure demand, which is normally a result of service not delivered accurately first time (Seddon and Brand, 2008).

Most contact centres merely institutionalise this failure demand, without questioning its nature. This further inhibits the nurture of value demand - the demand for which contact centres are established to serve (Jaaron and Backhouse, 2011a) and incurs cost-to-serve yet fails to achieve customer satisfaction.

At Telecom X, the task of identifying failure demand was closely linked with the identification of PTC. Neil and his team highlighted that failure demand resulted because service personnel may not have been able to resolve customer's query in the first instance:

> *"We may think we have resolved the issue but we don't resolve the issue and therefore, they need to call us back. And that's the sizeable chunk of work."*

Failure demand formed a high proportion of incoming contacts at Telecom X. However, as opposed to merely accepting that failure demand, managers at Telecom X were found to be concerned about using the contact data to be able to identify the source of failure demand. As Neil commented:

> *"the reason that they are ringing us up is because somebody will have done something somewhere. Something has stopped working. That is a great indication to us as to what's going on in the rest of the organization. Is the network working well/IT working well, Marketing working well, supply chain working well etc?"*

This supports Deming (1982) and recent advocates of systems' thinking approach in service organisations, who have suggested that fundamentally failure demand results from the specialised and divided service structure that service organisations have embraced thus far. In the case of Piercy and Rich's (2009) investigation for example, it was evident that failure demand was originating from failure of service processes within contact centres.

In addition, however, this study found that the source of failure demand could also be borne from other areas of the business which then gets ultimately absorbed by contact centres. As a consequence, contact centres rather than the organisation are criticised for poor delivery of service. Therefore, a systems approach in contact centres warrants an organisation-wide integration as opposed to silo or functional specialisation to manage service process failures. Jaaron and Backhouse (2011a) suggest that cross functional coordination and communication can be achieved through flexible management practices to achieve a better customer service.

In addition, capacity planning entailed various decisions and consideration. In fact, it was found that like demand management, capacity management was mostly pre-occupied with the accurate forecasting of capacity. Previous research has only focused on seeking efficient models of capacity (e.g., see Saccani, 2012; Koole and Mandelbaum, 2002).

As a resourcing manager, Naomi highlighted that capacity management also entailed contributing to the strategic decisions that may influence capacity planning and management at Telecom X. For example, these decisions include:

- recruiting new service personnel at Telecom X;
- whether capacity can be sourced from their outsourced partners, to meet the capacity;
- accommodating process-related changes into the resource plans and the impact it may have on capacity;
- working closely with specialist teams to understand where demand can be alternatively managed using different channels.

Therefore, beyond accurate forecasting of capacity against demand, there are other areas which influence capacity planning and management. This requires some level of integrated decision making between the contact centre and other areas of business. As such, Naomi's remit spans across other areas of management so that decision-making is holistic in Telecom X rather than area specific. In other words, capacity planning entails collaboration with other areas of the business thereby reflecting existence of a systems' thinking attribute in Telecom X. However, such interconnectedness has rarely been discussed with regard to contact centre service management.

In addition, although cost-to-serve is of as equal concern as service quality to Telecom X, there is an evidence of flexibility in resourcing Telecom X's contact centres when it comes to balancing cost-to-serve and service quality. For example, Naomi suggests that Telecom X's contact centres consider buffer strategies where contact centre managers are offered some flexibility in leveraging resourcing. Whereas in the past, the decision making was primarily within the context of a constrained budget, senior management have now begun to realise that whilst cost-to-serve has to be managed, it could also impact on both service levels and service quality. Hence, a certain buffer of funds is offered to Naomi to manage capacity planning more flexibly:

> *"…they understand now that we can't just get [planning] that precise. So the only way to protect service level and customer experience is to build in that a level of the buffer if you like, to try and best protect us to those [surges in demand]."*

Studies in past have warranted the need for buffer strategy in contact centres (Patel et al. 2011; Michael and Mariappan, 2012) however, the evidence of the adoption of such a strategy in contact centres is limited.

As evident from above, complex relationships exist between demand, capacity, and associated elements which were found to be fundamentally influential to cost-to-serve, service quality and hence the loyalty of customers. As such, a scientific approach to demand and capacity management equips managers with basic planning tools that are fundamentally important to identify and plan the workflow and resourcing of contact centres. Beyond this however, the nature of contact centre work is uncertain and hence too complex to be managed through the scientific means.

Conversations have revealed that managers are increasingly becoming wary of uncertainty relating to demand that influences capacity planning in contact centres. This uncertainty is too difficult to be taken into account in arithmetic forecasting and planning of demand and supply. Accordingly, it was found that demand and capacity have to be managed using both scientific, systems' approach and alternative strategies such as capacity buffering and demand optimisation and using other service channels to leverage internal efficiency without impacting the quality of service.

Only then, contact centres can optimise demand and capacity. Further, optimising demand and capacity can enable organisations to reduce cost-to-serve, leverage service quality and utilise interactions in contact centres for value adding activities. Only then, service management goals can be met.

Closely associated with the goals of demand and capacity management, and service management is the sourcing of contact centre services, which is discussed in the following section.

5.6 Sourcing of contact centres

Similar to studies (e.g., see Patel, 2010; Taylor, 2010; Taylor and Bain, 2005; Kinnie et al., 2008; Holman et al., 2007), this study found that organisations are relying on the sourcing of contact centre services both through domestic and international service providers.

In the case of Telecom X, there are currently 16 contact centres that are in-house, outsourced, or off-shore outsourced. Although there are some centres that are only performing specific activities such as Sales or Collections, most of them are performing a combination of activities. Except for one centre, all of them are mainly inbound contact handling operations, although these inbound centres may perform some level of call backs if needed. Also, except for a few in-house and one outsourced centre, most of the centres are delivering the services through a single channel, that is, the telephone.

Considering the service structure of Telecom X and its reliance on outsourced and offshored service providers, the benefits and challenges resulting from such reliance were further explored.

5.6.1 Benefits and Challenges of Sourcing and Shoring

Benefits

Telecom X's contact centres favour outsourcing primarily because it enables a reduction in operational costs, through offshore-outsourcing rather than onshore-outsourcing. This is purely due to the labour arbitrage that offshore locations offer to organisations such as Telecom X, which has been discussed in the literature (For example, see Vagadia, 2012; Kakabadse and Kakabadse, 2006; Dossani and Kenney, 2007), and supported by Neil in this study:

"If you go to some of the offshore locations, say Eastern Europe, you can get kind of like 10-15% [cheaper], or if you go to the further extreme location, you can get 30% off your labour arbitrage."

In case of domestic onshore-outsourcing, reporting of cost-benefits is quite sparse in the literature (cf., Doellgast, 2008; Taylor and Bain, 2006; Fish and Seydel, 2006). However, some studies have argued that having contact centres in some regions within the UK may enable cost-savings due to geographically differentiated pay. For example, Bristow et al. (2000) and Richardson et al. (2000) have highlighted the prevalence of contact centres in Scotland and North East regions of the UK due to the availability of low-cost labour. Similarly, Neil does highlight that certain regions in the UK may offer some cost savings. However, this was mentioned in the context of in-house establishments:

"…If you were running an in-house centre and you decided to open up a centre in a cheaper location within the UK, you can maybe shave about 5% of your labour cost. Say if you were running a centre in Newcastle and you decided to go somewhere in Rotherham for example, where labour is cheaper, you can get 5 or may be 8% cheaper workforce."

Also, Neil suggested that in contact centres, labour constitutes a major proportion of operating costs:

"…if you think about a call centre in total 92% of our costs are labour. 8% of our costs are non-labour related. So that's IT, buildings."

Therefore, although not as cost-effective, onshore outsourcing could benefit even labour intensive service such as contact centres. Naturally, these savings were found to be further compounded in context of offshore-outsourcing. As Neil suggests:

"If I need 10 people to carry out a particular process [and] I put those 10 people in the UK…it will be 10 times £20,000 salary fully loaded in. Whereas if I put those 10 people in India, I could be paying 10 times £14000."

However, beyond cost-savings, it was found that generally, outsourcing (regardless of onshore or offshore) offers a degree of contingency or Business Continuity Planning (BCP) to Telecom X. As Giovanna highlights:

> *"Clearly, we look at BCP and contingency. What we don't want to do is put the same brand or line of business in one location."*

As Neil suggests, such a scale of outsourcing allows his team to mitigate risks that may be borne out of any incidents or events in a specific region and aid continuity in service provision:

> *"If we lose, for example, a contact centre site [due to an incident], we have to have a plan about how we would operate our centres with our customers not being able to notice [anything different in service levels]. And that means, for example, if you did only a particular function out of one location and [for example] we've got snow in that location, we can't afford to shut the world because of that."*

In addition, outsourcing offers flexibility in terms of resourcing, to manage shortages in capacity. As Naomi suggests:

> *"if we got to a situation whereby, of that 300 FTE (Full Time Equivalent) we needed, from a recruitment and lead time perspective, and from a site capacity perspective, we could only fill 100 of that in-house, then we start to look at our outsourced options…."*

This flexibility is also beneficial in case of certain activities which were performed for a short period of time such as product-launches or marketing campaigns, as suggested by Neil:

> *"…So there are certain types of work we have, which fluctuates…something that we might need at the beginning of a product launch but we might not need it in the future etc etc.…it doesn't make sense for us an organization to hire a load of permanent employees and then potentially further down the line work out that we don't need them anymore. We will always look [if] it's possible for us that a particular activity will be wholly outsourced."*

With specific reference to offshoring, it was found that Telecom X also reaps benefits from longer service operational hours including evenings and weekends. As Neil highlights:

> *"…What you also generally get is a significantly greater level of macro level of resource flexibility, because labour is cheap and because they could work extra hours and longer shifts, due to time zone differences… You might have weekend patterns and different weekend days as well, depending on where you are. There are some real advantages that you get when you are offshore."*

In summary, sourcing activities for attaining cost savings, business continuity, resource needs for both short term and long term, which have been widely discussed in the literature were also found to be relevant in the case of Telecom X (e.g., see Contractor et al., 2010; Walsh and Deery, 2006; Lewin and Peeters, 2006; Kakabadse and Kakabadse, 2002; Bain et al., 2002). Also, these benefits are extended in case of offshored centres (Lacity et al., 2008; Lewin and Peeters, 2006). Some studies have also discussed these benefits in specific reference to customer service work or contact centres (e.g., Owens, 2014; McIvor, 2010; Taylor and Bain, 2005).

In summary, the benefits of outsourcing and offshoring extend beyond the cost-savings, such as flexibility in resourcing, business continuity planning, and extended service hours. These are the key drivers of outsourcing and offshoring for Telecom X. However, the study also identified several challenges resulting from Telecom X's current sourcing structure.

Challenges

Despite above benefits, Telecom X was found to be facing a number of challenges with the outsourcing of its contact centres. Firstly, it is to be noted that Telecom X does not own any of the offshore contact centres. All of the offshore centres are run by third party service providers. Several reasons were cited for such a strategy. Neil highlights that owning offshore centre means owning risks associated with those centres too. He was conscious that it would be difficult for Telecom X to operate in offshore locations without much expertise and being able to achieve economies of scale which the outsourced partners could readily offer:

"…We had to be confident that we could run a better centre than our outsourcees could do for us. We wouldn't be able to leverage that economies of scale that our outsourcees could leverage… when it comes to recruiting, training, transportation, logistics, IT, infrastructure, building, etc. So we would have found it incredibly difficult to have got anywhere close to being able to operate as cost effectively and as efficiently as their contact centres"

In addition, when this question was asked to Giovanna, she also suggested that the reason not to own any offshore centres is also to sustain the brand reputation:

" It's a UK Brand… if we were to decide that we were going to close one of our in-house centres to then move it offshore, that would [result in] a public outcry… there are a number of our customers who indicate they want to talk to somebody onshore."

Studies have consistently highlighted benefits and risks associated with offshoring. For example, Lampel and Bhalla (2011) highlight risks such as initial setup costs and location specific risks although identify cost control in terms of managing the service levels. Similarly, Hatonen (2009) highlights the benefits of offshore outsourcing over captive offshoring by transferring the issues associated with recruitment and government legislations to third party vendors. Issues relating to sustaining corporate image and brand erosion have been discussed, however only in general reference to offshoring and outsourcing (Bharadwaj, 2010; Stringfellow et al., 2008) and not in specific reference to captive offshoring. Also, studies have reported the preference of customers to speak to someone onshore rather than offshore (Penter et al., 2013; Sharma et al., 2009).

This study also found that X is facing service quality issues with their offshore-outsourced contact centres. As Neil exemplifies:

"…if you think of our customer base which is significantly using iPhones…are talking to a demographic of users in India where less than 2% using iPhones. It's really difficult to empathise because the use

cases of what your staff are doing versus what your customers are doing are here.

In the UK, the use cases are identical. So the types of things customer are doing [with their phones] are the same type of things that the staff is doing [with their phones]. It's really difficult to bridge that gap. Because it's difficult for the guys offshore to comprehend what's really going on."

In such scenarios, customers tend to assume that these issues are primarily due to the language and cultural inefficiencies, therefore, leading to the negative perception of offshore-outsourced centres:

"…the minute we don't resolve [customer queries] offshore, the language and culture elements…what customers automatically assume, is the problem, regardless of whether we are able to do better or not onshore… customer's expectation is perhaps that he has been sent to low value destination and his problem hasn't been solved." (Neil)

This also results in the erosion of customer loyalty towards a brand, which in case of offshore services is significantly higher than such issues onshore:

*"..if you ***k something up offshore, the customer loyalty detriment is two to three times greater than what happens if [the same happens] in the UK. That massively impacts."* (Neil).

With specific reference to service quality, consumer reactions to offshoring in terms of service quality and volatility towards home companies using offshored service providers are also being increasingly discussed in the literature. Previous studies highlighted cultural differences (Metters, 2008; Lewin and Peeters, 2006), communication inefficiencies (Sharma et al., 2009), lack of expertise (Sharma et al. 2009; Cornell, 2004), leading to high customer complaints (Kennedy, 2002) and impact on overall service quality (Metters, 2008). Although there is an expectation that there should not be any difference in service quality levels between offshore and onshore centres, this was not found to be the case:

> *"What we found with certain Geos [Geographical locations] is that our customers don't believe they are getting the same level of service by an agent handling calls in one of these geos versus what they would get being onshore."* (Giovanna)

Also, despite the capacity related benefits elicited earlier, it seems that Neil and his team are facing challenges in terms of managing capacity with certain outsourced partners. As exemplified by Giovanna below, certain service providers are not able to fulfil the demand by failing to offer micro-level staffing and scheduling of service personnel:

> *"I think probably our biggest challenge with them [is] delivering the number of hours in the times we need them to deliver the hours. That means answering the calls when we know the calls are going to come in."*

Neil also highlighted micro-level staffing and scheduling constraints. In particular, she emphasised the difficulties relating to having service personnel offshore on part-time shifts during weekdays and weekends. In certain geographies, service personnel are only willing to work full time and hence, flexible models as available in the UK are not always possible:

> *"If you look at offshore partners, for example, they rarely deal with part time agents. It's just because there isn't a market place for them in Philippines, India or South Africa to an extent. That means it's very difficult for them to follow that curve [of peak demand]. You need a percentage of part timers so you can meet those peaks but not have people sitting there when you don't need them."*

Although there are certain partners based in certain offshore locations where labour attrition is high, they are able to manage capacity by having additional buffer resources, to avoid being penalised by Telecom X, versus those partners who are unable to meet the resource needs as per the contract. Naomi exemplifies that:

> *"Some partners recognize that you do have to over resource the campaign to be able to hit those peaks. However, not all partners choose*

> *to do that, and it's those partners who we have challenges. They won't don't get paid for it."*

In addition, loss of control over service operations and delivery was also highlighted as a key concern by Giovanna:

> *"…because I think you are interesting your business with somebody else, right? And do they always do it the way that we would do it? Not necessarily…"*

The loss of control was also elicited by Neil:

> *"…you outsourced basically the responsibility of your customers to somebody else and therefore if it doesn't go well, it's still your issue even though now you haven't got control over it pretty much."*

Therefore, managerial challenges such as a supplier's lack of absorptive capacity (Lacity and Willcocks, 2012; Dibbern et al., 2008), loss of control (Raiborn et al., 2009; Burns, 2008) were not uncommon in the case of Telecom X. Neil suggests that such inefficiencies could even lead to loss of cost savings that were initially perceived through such engagements:

> *"…if you added all of those pockets of inefficiency, it more than off-sets the labour arbitrage."*

Generally, many studies have reported that outsourcing and more importantly, offshoring engagements have failed to accrue financial benefits as expected (e.g., Aron and Singh, 2005; Raiborn et al., 2009). Even in case of Telecom X, whilst there is an acceptance of cost benefits gained through labour arbitrage and acceptable service provision through offshoring, there is also a concern that the challenges outweigh the cost benefits achieved through these engagements. Accordingly, Telecom X are increasingly considering their sourcing strategy and was found to be backshoring many of their contact centres.

5.6.2 Backshoring

Although Telecom X's current praxis of sourcing dictates a combination of in-house, outsourced and offshore-outsourced centres, Giovanna highlighted that their team is continually seeking opportunities to repatriate their contact centres back to the UK:

> *"We are bringing work back on shore for the very reason[s] I mentioned earlier [and] about our USP - we are number 1 for network and we want to be number 1 for service and to support us in becoming number 1 for service, we are going to bring a thousand jobs back onshore because there are number of our customers who indicate they want to talk to somebody onshore."*

This was also supported by Neil:

> *"so we are and have been now for the last 18 months extensively repatriating (as we call it), so creating new jobs and new game… Our key focus is, if we can, get all our voice contacts in the UK… if you look at last 9 months, we have repatriated a 1000 people."*

The motives of backshoring were found to be primarily driven by consumer reactions to offshoring that are highlighted in the literature (e.g., see Robinson et al, 2005; Sharma et al., 2009; van Klaveren et al., 2013). Backshoring has also been exemplified in the context of offshore service providers who are moving the principal's contact centres onshore or nearshore (Holtgrewe, 2014; Howcroft and Richardson, 2008).

However, this study also found that it's not always accurate that offshore outsourced contact centres suffer from service quality issues or consumer backlash. For example, according to Giovanna, there are certain offshore operations that often out perform their in-house location in terms of providing the service quality:

> *"India has been our top performing site from NPS perspective. Who would have expected that from India? Everybody thought that would be on-shore. But actually, India has performed… We have had sites we do still have sites that perform better than in-house."*

Although limited, there have been some studies reporting that offshore centres tend to perform better than their onshore counterparts (e.g., see Taylor and Bain, 2008). Downey (2005) also reported that at times, UK customers found offshore agents friendlier to talk to, than their UK equivalents. As Knights (2010) suggests, the difference of perception between an onshore and offshore service could be largely influenced by the negative publicity of offshoring in general, through specific cases reported in media (cf. Jenkins and Kavanagh, 2011; Winterman, 2007).

Often, however, it goes unreported that the UK's population is quite diverse and accordingly, there may be non-UK born service personnel working in onshore contact centres engaged in serving UK customers. Considering this, it would be irrational for customers to delineate the onshore and offshore service quality of contact centres on the basis of a one-off interaction by service personnel. This can be further exemplified through the public forum of O2 (2014), one of the major telecommunications providers in the UK[1] that claims all of its contact centres are based in the UK. Customers were confused when encountering a non-UK advisor over the phone, not realising that in the UK, there are service personnel from various ethnic groups working in contact centres. Moreover, onshore contact centres may recruit foreign students or expats (Jena and Reilly, 2013; Richardson and Marshall, 1999).

Therefore, although backshoring may be a consequence of consumer reactions and instances of service dissatisfaction neither is there an assurance that customers may be able to speak to native British service personnel nor a guarantee of better service quality compared to offshored service centres. Therefore, the benefits from backshoring are not always straightforward.

Telecom X has repatriated 1000 jobs on-shore in the last 9 months. However, whilst they have made a 'hard-exit' from some of their offshored locations, they would like to maintain a relationship with certain outsourcing partners, even if they have to manage services through offshore operations for a certain period. Given their challenges with some of their offshore-outsourced operations, they are increasingly looking for on-shore outsourced engagements than offshore,

[1] O2. (2014). *UK Call Centres?* Retrieved January 25, 2018, from: https://community.o2.co.uk/t5/Other-Products-Services/Uk-Call-Centre-s/td-p/659585

with their existing service providers. The backshoring strategy of Telecom X was, therefore, to invest with those service providers who are able to offer them onshore service provision:

> *"we needed a method by which we could repatriate work into the UK. Again, this was a straightforward conversation where we give two choices: they lose the work, or keep the work but deliver it through the UK. So they agreed to keep the work and bring it into the UK."*

Whereas offshore outsourcing offers macro-level capacity leverages such as cheaper labour and longer operational hours due to time zone differences, onshore outsourcing offers micro level flexibility. Certain geographies restrict flexible work models such as part-time shifts thereby leading to loss of efficiency whereas onshore outsourcing could surge cost-to-serve.

Misra (2004) suggested in context of IT outsourcing that onshore outsourcing enables attainment of strategic goals rather than operational goals such as cost savings. Similarly, Größler et al. (2013) suggest in context of manufacturing that domestic outsourcing is focused on achieving capacity flexibility whereas offshore outsourcing is primarily driven by cost motives. Considering the findings of this study, what Größler et al. (2013) suggested in the context of manufacturing, applies to contact centre services too. For Telecom X to therefore, rely on offshore as well as onshore sourcing is both beneficial as well as challenging.

5.6.3 Make-Or-Buy decision making

It is clear that the sourcing model of Telecom X's sourcing structure comprises of a mixture of in-house, outsourced and offshore-outsourced through multiple vendors and at multiple locations. Such models have been commonly referred to as 'multi-sourcing' (e.g., see Iqbal and Dad, 2013; Sharma and Loh, 2009; Cullen et al., 2009), 'global service delivery' (Coyle, 2010; Taylor and Bain, 2008), or multi-vendor model (Taylor, 2010; Holtgrewe et al., 2009). Studies have focused on both location and vendor aspects of sourcing. Telecom X also followed multiple sites, multiple locations, and multiple vendor strategies, as suggested by Neil:

> *"We use a number of different partners which we try and keep control where we can. But most of our partners we utilize will have multiple locations."*

Telecom X's 'make or buy' decision making is highly scientific, comprising of five key factors that drive this decision making. It allows Telecom X to assess whether the service under examination:

- requires *specialist skills* to perform that service;
- is *new* to the organisation or to the customer;
- is *sensitive, complex or of high value* to the organisation or customer;
- requires *flexibility* in terms of resourcing and business continuity;
- requires some form of performance leverage through inter-site *diversity/challenge*.

In addition, the decisions are also checked against four checks, that is, whether:

- in-house sites have requisite capacity for service under consideration;
- partners under consideration have the requisite capacity;
- partners under consideration pose any risks to service under consideration;
- the cost to serve is affordable.

The appropriate sourcing model for service under consideration can therefore be identified using the above criteria. For example, as Neil narrated, they seek specialist skills for certain services or economies of scale, for which, they may outsource certain services:

> *"We balance our outsourcing mix across those two areas - specialists, people who we really want to be particularly good in particular areas and generalist - bigger organizations much more financially secure, huge scale and we are a big part of what they do."*

However, they also look for factors such as whether the service under examination is complex or critical to the business, when considering sourcing and shoring decisions:

"[The decision tree] takes these factors into consideration and looks at the type of query that's coming in. It says whether it's a complex based query or is it simple. It could be simple but very sensitive... we will not allow any function that has a critical business need to be in one location only."

Similarly, they consider whether service under consideration requires some level of flexibility or resilience in terms of business continuity:

"We would still have an element of business outsourced for flexibility. Something that we are doing for a time now, something that we might need at the beginning of a product launch but we might not need it in the future..." (Neil)

or purely for benchmarking performance for certain services:

"If nothing else, then to be able to provide benchmarking activities across the board,...driving performance…we have activities that are done in numerous locations so that we can champion challenge - We are gonna look at that say, why is it that site A is better at tech support than site B and ultimately what that controls going forward is what resources we put where." (Neil)

Accordingly, it was found that the decision tree also allows Neil and his team to identify the division of service between in-house and partners. For example, the outcome of the decision could be to source the service under consideration through single or multiple in-house sites, single or multiple outsourcing partners, single or multiple offshoring partners, or shared between in-house and partner sites:

"[the] same matrix [is used to] decide on location [and] the partners… some of our activities [may cut] across two outsourced locations [but] with one partner…some of our activities [may cut] across two [different partners], and a lot of our activities [may be] between in-house and outsourced locations." (Giovanna)

The current mix of sourcing provided Telecom X with benefits such as economies of scale, BCP, and flexibility. However, it also offered some level of internal competition between the sites and differential service performance between sites, as exemplified by Neil:

> *"…we always try to make sure not only for business continuity but also for kind of performance, driving performance, we have activities done in numerous locations so that we can champion challenge - We are gonna look at that say, why is it that site A is better at tech support than site B and ultimately what that controls going forward is what resources we put where."*

Having multi-vendor, multi-sourcing and global service delivery models enable organisations to minimise risk, attain contingency, and pursue inter-supplier competitions (Taylor, 2010; Holtgrewe et al., 2009). Such sourcing models benefit organisations like Telecom X, by having an access to a variety of suppliers in terms of, for example accessing a skilled labour pool and capitalising resources and capabilities, as also highlighted by Taylor and Bain (2008). Accordingly, the decision making also entails that these benefits are attained through the chosen sourcing arrangement. This was also highlighted by Neil:

> *"…it's generally hard if you are recruiting just for a particular flavour[service] for [particular] location… we generally make sure that our centres are split across at least two or three disciplines[service activities]…look at the types of resources that we will need to have…[to make] the decision that whether we should be in-housing it, offshoring, onshoring."*

To a great extent, it could be implied that the sourcing structure of Telecom X is highly dispersed and for good reasons stated above. Studies, however, have reported that such globally dispersed organisations are increasingly facing difficulties in managing and coordinating the network thereby, incurring additional costs (Larsen, Manning and Pedersen, 2013; Dibbern et al., 2008; Stringfellow et al., 2008). For this and other offshoring related issues, Telecom X are consolidating their sourcing footprint and are being selective about their sourcing strategy.

Giovanna exemplifies this further:

> *"We are consolidating and we are exiting a number of locations and number of sites. We will be very much consolidating outsourced footprint."*

In addition to the factors contributing to the make-buy decision making, commercial models of outsourcing were found to be playing an important role in formulating the agreements between Telecom X and their outsourced partners.

Telecom X has blended various commercial models, that is, input, output and outcome driven commercial models highlighted by Fitzgerald and Willcocks (1994). This mixture considers both the governance and pricing of the outsourcing that seems to be deeply rooted in scientific management principles. For example, Neil highlights:

> *"For some partners, we give them a piece of work and we are almost paying them… in fully managed, you give the responsibility to the partner to do everything[fixed fee]… you have hours[time/material based]… and then minutes/calls model [Transaction based], [or] cost plus model [cost plus management fee].."*

Fundamentally, these models are based on quantitative input and output of resources to achieve internal efficiency relating to service and hence are reflective of mass-production principles.

The primary challenge associated with input and output models is that of vendor opportunism which has also been highlighted in this study as well as in previous studies (e.g., see McIvor, 2013; Nicholson and Aman, 2008). Similarly, Neil suggested that the disadvantage of transaction based models is that the outcome in terms of service satisfaction may be eroded. In other words, suppliers could end up under-resourcing service personnel and yet, fulfil the number of transactions expected by the principal, to protect supplier margin. This may result in either loss of efficiency or loss of service quality. As a result, outcome based model such as risk and reward is overlaid on top of transaction based model to ensure that opportunism is controlled by the principal the agent.

As Neil suggested:

> *"You have risk/reward on top of [the pricing model]. Depending upon what the conversion rates are (in case of sales), or NPS/FCR, [penalize or reward them]… the better [the] quality, or [sales conversion], or NPS, the more money you will earn. when they never hit the target, which means they might not handle 160 calls, [it will result in fine]…when they are trying to run a sweatshop, they are not going to be very well on risk and reward. So they might get hit again… because quality will be poor."*

Therefore, vendor opportunism was found to be addressed by having appropriate risk and reward contract or performance/outcome based contracting in place. Ng et al. (2009) suggest that having outcome based contracting and systems view enforces parent organisations and suppliers to view service as one single system than two separate firms and customer systems. In other words, rather than the supplier working for self-interest, both the parent organisation and supplier would work towards common goals of achieving, for example, efficiency and service quality. However, the evidence of such contracting in the case of contact centres is largely absent in the current literature.

However, a systems' view is not merely confined to performance or outcome based contracting being in place, but also is about aligning the parent organisation's ethos and expectations towards service provision with that of supplier's (Ng et al., 2009). It is important to highlight here, that in the case of Telecom X, managers are also considering whether the agent under examination qualify in terms of sharing socio-technical aspects of the service - combination of both tangible (e.g. technology, infrastructure) and intangible (e.g. knowledge, skills) components of the service. As highlighted by Giovanna:

> *"…it's important that no matter who we partner with, they are [buy] into our goals objectives, ethics and everything that we believe in is a brand that they actually buy in and the people buy into that...Is this environment which is actually going to create a nice environment for agent population, management population."*

These are the expressions of an integrated view of service as a system built of several complex interdependencies between the firm(s), service personnel, and customers. These attributes have also been highlighted by Ng and Briscoe (2012) however, within the context of outcome based contracting in manufacturing. Nonetheless, such thinking goes beyond the traditional scientific and economical choices and rationalisation of commercial pricing models described and discussed in the literature in abundance (e.g., see Dintrans et al., 2014; Fitzgerald and Willcocks, 1994).

This study suggests that sourcing decisions are therefore not always bounded by economic factors, such as labour cost savings, but there are various other motives of sourcing. It has already been argued by Huws, Flecker and Dahlmann (2004), that sourcing decisions, whether domestic or offshore, are compounded with many non-cost related factors in addition to cost, which have been further exemplified in this study. These include the ability to have flexible capacity, business continuity, performance specific needs, and skills required to perform the service. In addition, this study identified that sourcing decisions need to take into account the complex interdependencies between the principal, agent and the customer in order to achieve the relevant gains. This requires a systems' thinking approach than merely applying a scientific logic.

5.7 Measuring and managing the 'Sweet Spot'

Throughout the interviews with managers of Telecom X, it was revealed that fundamentally the strategic focus of contact centre and its management is to achieve the 'sweet spot' of cost, quality and value. More importantly, the quality of service delivered and value add through service by Telecom X's contact centres were discussed in-depth during the interviews.

Although Telecom X is heavily involved in attaining this sweet spot through the PTC programme and reconsideration of sourcing strategy, it is not devoid of what Raz and Blank (2007:87) highlighted as 'organisational ambivalence' in their study - a conflict between what senior management verbally declare about their focus, the realities of service operation, and what is actually being measured and managed. In the case of Telecom X however this conflict fundamentally stems from the detachment or at least, a weak link between the customer satisfaction and customer loyalty.

For example, several studies have reported that positive relation between customer satisfaction and customer loyalty in context of services, or in context of specific industry (e.g., Yuen & Chan, 2010; Kumar et al., 2009; Lovelock and Wirtz, 2004; Malhotra and Mukherjee, 2003; Gerpott et al., 2001). For example, Yuen and Chan (2010) suggested in the context of retail services that physical aesthetics, reliability and problem solving capacity are some of the key factors that are positively related to customer satisfaction and hence, customer loyalty. Similarly, in case of telecom mobile operators, Gerpott et al. (2001) suggested that customer satisfaction drives customer loyalty

However, this study finds that customer satisfaction may not always guarantee customer loyalty. Recall from Chapter 4, that those customers satisfied with the positive service encounter with service personnel may not necessarily be loyal as the product seems to be influential to service objectives. To re-iterate, comments of some of the customers extracted from customer satisfaction data of Telecom X, rated their interaction 10/10 on NPS however, did not express loyalty with Telecom X due to the product or other issues:

> *"Advisor really friendly and professional. Still looking to leave X but not due to the advisor today"*

> *"The staff have been very helpful its the coverage that lets X down"*

In contrast, some of the customers who have rated their last service encounter 10/10, express their loyalty in conjunction, however, with the monetary value they benefited from rather than their interaction with service personnel:

> *"Great that X offered me a package that made it an easy decision to remain loyal & Thanks and thank you to Carl your customer advisor."*

> *"No, other than I'm happy that I've been offered a great new deal in recognition of my customer loyalty. Thank you."*

Therefore, the purpose and relevance of NPS as a measure seem dubious as the relationship between the price, product quality, customer loyalty, customer satisfaction, and attributes of service personnel in managing service encounters, is not always symmetrical.

As a result of this asymmetrical relationship, it is difficult to establish whether the 'sweet spot' is being measured accurately, let alone being achieved.

From service management view point therefore, if cost-to-serve, service quality and customer value are key objectives of service management and if these three tenets are mediated by the core product, then there has to be a clear alignment between objectives of service management, the performance measures that managers must use to assess the performance of the service and be aware of factors that might influence the attainment of 'sweet spot'.

5.8 Summary

To date, studies have portrayed both dichotomous as well as hybrid images of customer service work. For example, Taylor and Bain (1999) offered two contrasting images of customer service work firstly one that exemplifies the production-line - the Taylorist approach to organising and managing customer service work. Proponents of this image have consistently described customer service work as low-skilled, simple, routinized, highly divisionalised and tightly controlled customer service activities. The second image is that customer service work is skilled and complex. The service structure of this service work is flat with multi-functional and multi-skilled teams managed through an approach that is described as 'empowered and flexible' although whether the workforce feels empowered is beyond the scope of this thesis.

This study found both supporting and contrasting attributes of customer service work. In particular, the attributes of customer service work as evident in Telecom X exemplify both mechanistic and organic forms of customer service work. Whilst such hybrid images of customer service work have also been considered elsewhere (e.g., see Frenkel et al., 1998; Korczynski, 2001; Batt and Moynihan, 2002; Raz and Blank, 2007), the argument here is that such organisation of customer service work is not necessarily competing or contradictory in nature.

As seen in the case of Telecom X, functional divisions of labour were apparent within the contact centres. Despite this, there are also multi-skilled teams, horizontal communication and integration within and across departments. Such a combination has also perceived positively in the literature, although not with specific reference to contact centres (Adler et al., 1999; Jansen et al., 2005;

Sheremata, 2000). In addition, service personnel have a degree of autonomy and control over interactions with the customer especially, 'out of the box' thinking (in the case of technical support activities). Service personnel were encouraged to feedback process improvements and were made to listen to their own calls for self-improvement. However, forms of de-skilling, standardisation of work and monitoring in the form of prescriptive processes, use of solutions on the knowledge base, routine workflows, and monitoring of service personnel's activities on the knowledge base as well as through use of KPI’s, also prevailed in Telecom X. These characteristics imply that mechanistic and organic attributes of the organisation may co-exist within a single service organisation. Managers believed that there is definitely a 'sweet spot' between cost-to-serve, service quality and value, however, organisations such as Telecom X have to have a correct alignment between achieving this sweet spot, through management practice, and the metrics used to measure the service.

Several studies have highlighted that ambidextrous strategies and different organisational forms create paradoxical challenges and hence are often seen as contradictory and conflicting (cf. Smith and Lewis, 2011; Jansen et al. 2009; 2005; Benner and Tushman, 2003; Adler et al., 1999; Teece et al., 1997). Rigid organisational structures are often seen as incompatible with flexible organisation strategies and their objectives to be able to respond to environmental complexity and uncertainty (Christensen et al., 2008; Schultz and Schultz, 2003; Burns and Stalker, 2005). In the case of contact centres the service structure, organisation and management of services have been found to follow one or the other strategic proposition that is, either efficiency focused or quality focused.

There is substantial evidence in management literature that organisations ought to recognise and embrace the complementary features of ambidextrous strategies and management approaches (e.g., see Raish and Birkinshaw, 2008; Graetz and Smith, 2008; Benner & Tushman, 2003). Furthermore, several authors have also suggested that strategic and managerial Ambidexterity may lead to a superior performance (e.g., Kouropalatis et al. 2012; Gibson and Birkinshaw 2004, He and Wong, 2004; Tushman and O'Reily, 1996).

In the context of contact centres however, the empirical evidence is growing although not yet conclusive (e.g., Piers Ellway (2014); Jasmand et al. (2012); Piercy and Rich (2009)).

Nonetheless, this study suggests that if contact centres are to follow hybrid strategic propositions, then the service management approach should be contingent to hybrid strategic propositions. Strategic leadership and the service structure, the organisation of service work, labour process, performance measures and managerial thinking need aligning to the demands of a hybrid strategy.

As Clegg et al. (2002) suggested, *"paradox and contradiction are part of the fabric of organisational life and need to be recognised and managed accordingly"* (cited in Graetz and Smith, 2008:13). However, the literature on contact centres is critical of the paradox of customer service work and management. Service management is considered in the next chapter.

Chapter 6 : Service management in Telecom services' contact centres

6.1 Introduction

Chapter 4 and Chapter 5 discussed the strategic value of contact centres to telecommunication services organisations and customer service work and management attributes in Telecom X. The purpose of this chapter is to synthesise these findings towards addressing research question three that is, how relevant are the existing narratives of contact centre service management to customer service attributes and the management practice of the contact centre under examination and more widely? The chapter discusses traditional and contemporary antecedents including scientific management, Fayolism and a systems' thinking approach within the strategic objectives of service management. The chapter then concludes with a proposal of a theoretical model of service management.

6.2 Taylorism in Telecom X

To date, narratives of contact centres service management practice are deeply rooted in Taylorism. Authors have long highlighted and debated the prevalence of Taylorism and its nuances in contact centres service design and the impact of these attributes on labour process and service delivery (Lloyd, 2016; Mirchandani, 2012; Robinson and Morley, 2007; Korczynski, 2001; Taylor et al., 2002; Callaghan and Thompson, 2001; Taylor and Bain, 1999; Fernie and Metcalf, 1998). Although there are certain studies that have discussed anti-Taylorist designs of contact centre services (Taylor et al., 2013; Koskina and Keithley, 2010; Weinkopf, 2006; Batt and Moynihan, 2002; Korczynski, 2001; Frenkel et al., 1998), Taylorism remains a central antecedent in explaining the nature of customer service work and management practice in contact centres.

From the findings presented in Chapter 5, the following attributes of Telecom X could be compared to Taylorist or mass-production attributes of managing contact centre services:

- Budget and target driven strategies to measure output;
- Standardisation of service processes;
- Functional specialisation and hierarchical decision making;

- Managing and controlling people against budget and targets;
- Transaction bound and piece-based contracts with suppliers (outsourcing);

To begin with, it was found that Telecom X held a dual-strategic proposition when it comes to contact centres services. In other words, the management focus was on controlling the cost-to-serve through efficient service delivery as well as differentiating on quality of service provided to its customers. This implies that Telecom X's contact centre services may fall into what Batt and Moynihan (2002) described as 'hybrid' contact centres, as far as their strategic proposition is concerned.

However, what Korczynski (2001) described as *'mass-customised bureaucracy'* may be more appropriate to describe the service management practice in Telecom X's contact centres. For example, the de-skilling of service work through standardisation of service processes, enforcement of prescribed steps to perform service using a knowledge base, functional, cross-organisational and cross-border division of labour and managerial control through real-time monitoring and through performance measures are all attributes of Taylorist design and management practice evident in Telecom X's contact centres. In addition, monitoring service personnel's schedule, shift-timings, breaks and their activities whilst on the job are also exemplars of the scientific management of customer service work in Telecom X. In the context of outsourcing and offshoring, attributes of Taylor's (1911) practice of piece-based activity allocation and reward mechanisms were also evident in commercial pricing models utilised by Telecom X. Considering these attributes, there is little doubt that Taylorism is alive in Telecom X's contact centres.

However, Taylorism has been never fully appraised in context of management activities of contact centre services. Firstly, Taylorism as a management practice was often criticised for ignoring human agency issues that were highlighted by studies to date in the context of contact centres. These issues stemmed from the assumption that Taylorism was designed to meet the efficiency and prosperity goals of employers. This is indeed a correct assumption and yet is an incomplete one.

In his thesis, Taylor (1911) himself clarified that his principles of scientific management aimed at the efficiency, growth and prosperity of both - employer and employees. Taylor (1911) always promoted the training of employees not only so that they can learn the job and stay with the company (Taneja, 2011) but also in interests of their welfare and prosperity. He was wary of the tedious and monotonous nature of work performed in the pig iron factory where he conducted his experiments. As a result, he carefully examined fatigue and efficiency to incorporate rest and work schedules (Taneja, 2011) so that workers could perform to the best of their abilities and well-being. In addition, Taylor (1911) also suggested that further studies should be conducted to identify the motivations of employees towards work. Thus, it would be safe to assert that the criticisms towards Taylorism especially that of neglecting the human agency needs further scrutiny.

Secondly, Taylorist practices in contact centres were often seen as causal to the quantity and quality trade-offs. These trade-offs have often been of concern amongst service personnel delivering the service and managers managing the performance of service personnel and hence the overall service. This also raised ambiguities for service personnel in terms of quantity and quality performance based rewards and penalties thereby causing performance management challenges for managers.

The overarching assumption made here was that the objective of Taylorism as a management practice is to attain efficiency *only* (Pruijt, 1997; Robinson and Morley, 2007; Saari and Pyoria, 2015; Dharamdass and Fernando, 2017). However, it is to be noted that Taylor (1911) was not oblivious to the sacrificial tendency of quality against the goals of quantity. Taylor (1911:90) himself warned in narrating his work at the bicycle ball factory that:

> *"One of the dangers to be guarded against, when the pay of the man or woman is made in any way to depend on the quantity of the work done, is that in an effort to increase the quantity, the quality is apt to deteriorate".*

Taylor (1911) suggested that management should be ready to offer extra wages to employees for performing better, however, pay-reward and pay-penalty should be carefully balanced on the basis of both the quantity and quality of the work. He also proposed that a separate quality department should be in place to check the quality of the work produced. Therefore, quality was of concern to Taylor (1911). However, his concerns have been largely ignored within contact centres research thereby highlighting an incomplete analysis of Taylor's contributions.

Thirdly, however, the fundamental problem with Taylorism is that although *"Taylor's management principles are general principles…"* (Brunsson, 2008:38), in the case of contact centres, these general principles have been mostly used to analyse attributes of customer service work at an operational level or in other words, the 'bottom' level of organisational work. However, management of services as exemplified by consultants and managers of Telecom X's contact centres entailed various other activities as well as operational work that could not be explained within the proximities of Taylor's principles of management. For example, the top-down nature of command and decision making within Telecom X's contact centres, co-ordination within various functions across and within organisations, demand and capacity forecasting, planning and management, unity of direction, teamwork and delegating lines of authority and responsibility to team leaders were all fundamental managerial elements at Telecom X's contact centres. These elements were not comparable to Taylor's (1911) principles of scientific management. Therefore, the question that emerged during analysing the data collected for this study was - what describes the managerial practice in Telecom X? When investigated further, Henri Fayol's (1949) principles of management offered a contribution.

6.3 Fayolism in contact centres

As reviewed in Chapter 2, Fayol (1949) contributed to understanding management activities of planning, organising, co-ordinating, and controlling not only workers and their tasks but the organisation as a whole. This aspect fundamentally contrasts and enhances the understanding of contact centres service management in Telecom X. As such, the elements of Fayol's principle of management warranted further comparison with the findings of this study.

Firstly, it is important to note the overarching approach of management practice. For instance, Parker and Ritson (2005) noted that Fayol (1949) emphasised a 'top-down' approach to management whereas Taylor's (1911) approach was 'bottom-up'. In case of Telecom X, the former could be exemplified by its very structure. Neil noted in his narrative that:

> *"[In other organisations]… customer service tears off into the financial department or marketing department or into sales or support. Sometimes, it could be two or three levels down from the board table. That's one big change [difference between this and other organization]."*

So customer service is often seen as a support function and hence the decision making for this organisation is not as much linked to the leadership team. In contrast, Telecom X's contact centres are governed by Neil whose manager is the Chief Executive Officer (CEO), holding power and influence:

> *"In our level, my boss and chief of customer service sits on the board… Ultimately, she has a veto.[and] has the power to make those decisions."*

Secondly, for Fayol (1949), the authority element is diverse in the sense that *management activity is undertaken by numerous individuals spread throughout the organization* (Parker and Ritson, 2005:182). In the case of Telecom X for example, Neil noted that there are four key operational areas:

> *"we have four operational areas which are again further split into [other areas/functions] ..[we have an] individual who operationally looks after all of the people who work in out B2B world… we have an an individual who looks after all of our consumer services. We then have a lady who looks after all of our consumer sales activity… we have a chap who kind of sits across two of those divisions who is responsible for our outsourcing… "*

In addition, the delegation of authority and responsibility and existence of teams were also observed in Telecom X's service structure. Further to function and team specific roles and responsibilities, there were also task-specific managerial activities including designing, budgeting, planning, resourcing and real-time monitoring of services:

"So there's a chap who does design, delivery and quality… there's my role which is a group of different functions grouped together needed to support the contact centre - to understand the budget, create the budget. I have a group of people who do the resource planning management… We then have a group of people who do our real time day management…

Thirdly, there is a holistic view of the organisation in terms of the overall management within Telecom X:

"What makes us different to other really large ones is we run it as a one single business unit. If you look at some of the [organisations] quite similar to us, they will tend to run a retail division end to end over here and there, corporate division over here and there. They run [each segment of business as different units]. We decided to run as one entire organization." (Neil)

This was also underpinned by Fayol (1949) in his advocacy of a holistic approach to management. Fourthly, through interviews with Neil and other managers from different functions, it was identified that all shared one single objective of Telecom X, that is, *to become number one for service*, thereby, further exemplifying the top-down unity of direction - Fayol's (1949) belief was that there should one plan and the same objective. This objective was also exemplified by independent consultants in designing and planning contact centres and by mangers in case of Telecom X, referring to it as 'mission and vision statement'.

Similarly, fair remuneration, as advocated by Fayol (1949) was also exemplified by Neil in his narrative of the organisation-wide performance pay system. Although his views were not significantly different to that of Taylor (1911) in this regard, Fayol (1949) added that that beyond financial remuneration, employers should account for health, strength, education and moral stability of employees:

"organizations may separate out the contact centres. [However] what you can quite then find the tension in the centres. May be, for example, the bonus scheme in one [centre] may be different to the bonus scheme in another [centre]. One of them has decided that it

> *has got enough budget for Christmas party whereas the other hasn't. These are the things you make sure are common when you're running a single operation."* (Neil)

Fayol's (1949) principles of management are often treated as complementary to Taylor's (1911) scientific management principles in terms of the rigid approach to organisation, the division of labour, centralised planning, management and control of employees (Parker and Ritson, 2005; Brunsson, 2008). Fayol's principles have also been referred to as 'European scientific management' (Brunnson, 2008:41). As a result of such complementary attributes, Fayol's contributions may have been ignored not only by contact centre researchers to date but also in the context of general management, as has been highlighted by Brunnson (2008).

Our current understanding and appraisal of management practice in contact centres are incomplete without Fayol as his principles explain management activities which Taylor may have implicitly assumed in his work. For example, where Fayol (1949) clearly distinguishes from Taylor (1911) is the *esprit de corps* principle in Fayol's (1949) management principles. With reference to this, Fayol (1949) highlighted that where possible, communication within, between and across the functions should be encouraged to leverage the holistic management of the organisation and hence provide the flexibility required. In some ways therefore, Fayol's (1949) contribution could be considered foundational to systems' thinking approach. The following section discusses these contributions within systems' thinking context.

6.4 Systems' thinking in Telecom X

In chapter 2, the paradigm of systems' thinking in contact centres was discussed as one of the contemporary antecedents in line with other post-Taylorist approaches - a break away from a Tayloristic mass-production logic to service management in contact centres.

The attributes of a systems' thinking approach (Seddon, 2003) were evident in following activities X's service management practice:

- Outside-in approach to viewing service provision from an external efficiency and customer's perspective;

- Demand management approach wherein demand is categorised into 'value' demand and 'failure' demand with an aim to eliminate failure demand;
- Holistic organisational improvement through organisational integration (e.g. using initiatives such as organisational-wide performance bonus systems)
- Ethos of learning the problems associated with service processes and service personnel
- Co-operative attitude to suppliers (outsourced partners)
- Managing on the basis of the quality of the service as opposed to internal efficiency only.

For instance, it has already been identified how *Fayolistic* or top-down the approach to organisation and management is evident in case of Telecom X. In addition, the study also highlighted the scientific attributes of demand and capacity management in terms of planning, forecasting and organising the demand and capacity of service personnel in contact centres. This study has also established that Telecom X's approach to service management is 'outside-in' in the sense that the focus is on managing service against customer demand. During the interviews with Neil, he often highlighted how he and his team are working towards the PTC reduction by reducing the failure demand being handled by the contact centres. In other words, what they were really trying to achieve is filtering and identification of problems that are originating in contact centres versus those originating from the rest of the organisations by:

> *"being transparent about the black box [contact centres] and trying to make it clear what's your [contact centre's] internal problem versus your external problem and secondly, being very good at pulling inside out [outside-in] of your call centre and turning that into actionable and tangible items…"*

Fundamentally, this is the foremost priority of contact centres operating within a systems' thinking paradigm (Seddon, 2003), which was also evident in the case of Telecom X. Demand and capacity management entailed pulling the contact centres 'outside in' through its PTC programme. As such, not only did this leverage service quality through improved processes and delivery of these processes but further leveraged internal efficiency through optimisation of demand and capacity. As Neil noted:

> *"[It] is all about understanding the number of contacts we do with our customers and eradicating failure demand [which] reduce ultimately the total amount of labour [and] the labour costs".*

Further, there have been references made by managers, about attaining organisation-wide commitment and integration:

> *"We are getting a lot better at that these days by making sure that it is all harmonized and getting the best out of the support strategy. Our management team has managers in CS, Marketing, Networks, Finance and Fraud. That was a challenge historically but we are getting a lot better at that these days by working together."* (Peter)

Neil highlighted that adopting practices such as an organisation wide performance bonus system, cross-functional communication, collective learning and problem-solving enabled such integration in Telecom X:

> *"everybody has [the customer service bonus] in their remuneration scheme, so even if we weren't forthcoming as a CS [contact centre], we have a whole army of people coming towards us saying that part of their bonus is coming from us and they need you to help them understand how we can help them. Nobody felt like the problems were somebody else's. Everybody understood that there was a bit of problem here and there, and we [emphasised] the need to sort it out."*

In addition, there is an ethos of learning about problems at a strategic or managerial level. Neil highlights how to listen to their own calls and identify areas of improvement in addition to the coaching and training sessions that they are offered:

> *"our agents can listen to their own calls. We hope that they start to feel a bit more responsible for themselves. So that they don't need horrible traditional call centre method of team manager-agent [relationship] or parent child. We can start to reverse that model now. It's the agent job to become better and hence, they have to let the team manager know*

> *where they want to be coached, listen to their own calls, and they should tell them where they have to become better."*

There is therefore, some level of expectation of autonomous learning and self-management. Systems' thinking is thus embedded at the operational level as well.

Furthermore, although the contractual elements associated with sourcing exhibit scientific management aspects, as both Neil and Giovanna, highlighted, Telecom X's partners are fundamentally a co-operative network of national and international outsourced partners, which are bound by outcome based contracts. Operations are based on the quality of service as well as output or efficiency based contracts. Thus, managing the service both internally and externally is driven by a system's purpose to provide service quality rather than merely internal efficiency.

Taylorism or a mass-production paradigm is often seen as opposite or in contrast to a systems' thinking paradigm (Seddon, 2003; Jaaron and Backhouse, 2011a). In the case of Telecom X's contact centres, however, attributes of Taylorism, Fayolism and systems' thinking appear to co-exist.

What is common between Taylorism and systems' thinking, is the need for employees to buy into the shared beliefs, practices, the vision and goals of an organisation. Callaghan and Thompson (2001) described these practices as bureaucratic and normative controls respectively which are fundamental to the success of contact centres. The head of training at Telecom X, Chuck, highlighted the content of their training includes *background knowledge of the brand, their vision, messages, and other things to help them[service personnel] identify themselves what is good and bad service*. Fundamentally, both systems' thinking paradigm and Taylorism operate on the principles of bureaucratic and normative controls. Whether the purpose is to achieve efficiency and prosperity or to deliver what customers want, training on these aspects and embedding such controls is be fundamental to contact centre service management.

Lastly, both a systems' thinking paradigm and Taylorism have performance based rewards and bonus systems as common practices. This was evident in Jaaron and Backhouse's (2009) research on systems' thinking in contact centres and Taylor's (1911) on differential pay systems.

In terms of a systems' thinking approach to leadership, Friends (2013:3) suggested that in order to turn contact centres into learning organisations and break from linear thinking (or mass-production logic thinking) *"a person must shift from seeing the world primarily from a linear perspective to seeing and acting systematically"*. Accordingly, contact centre leaders ought to recognise that decision making is based on shared understanding of interrelationships and a collaborative approach of resolving challenges through managers, service personnel, customers and others within the organisation (Friends, 2013). In addition and supported by Cleveland (2012), Friends (2013) also highlights that managers should have a supportive culture towards employees through processes of empowerment and focus on employee needs and satisfaction in terms of what service personnel need - to leverage their motivation and performance. These themes have also been echoed by Jaaron and Backhouse (2011a), Seddon and O'Donovan (2010) and others.

In reality, however, this is difficult to achieve. In the case of Telecom X for example, whilst Neil exhibits such leadership thinking, he also suggested that this ideal is not achieved. For instance, he differentiates between 'good' managers who follow this approach to leadership and leverage performance through learning and motivating service personnel and 'bad' managers who manage by numbers rather than focusing on how to achieve those numbers:

> *"What you'll find is good managers who understand [that] if they want to help agent improve their AHT, they will think how…one agent is doing differently to other agent and compare/contrast the steps taken by individual agents and see where they are doing things differently…Bad managers manage by numbers. All they do is compare numbers."*

There is thus a contrast in the approach and thinking of the leadership team and that of certain operational managers and team leaders. This can contradict the objective of a common vision and the shared ethos of learning and management role that is behind systems' thinking (Jaaron and Backhouse, 2011a; Seddon (2003). The differences in management approach, the sense of purpose of service provision, managing service personnel's learning, development and motivation may result in performance variation. For a systems thinker, this may seem to be jeopardising the very achievement of the service system's purpose through systems' thinking and ultimately attainment of the ‘sweet spot’ between efficiency, cost and quality in contact centres.

This is where the co-existence of Taylorist, Fayolist and systems' thinking comes into play. Contact centres can only deliver both cost reduction and service quality and hence value (Piercy and Rich, 2009) when there is a combination of top-down leadership and bottom-up integration, to leverage the 'outside-in' initiatives of contact centres. There has to be a pluralistic alignment of scientific and administrative managerial practices along with managerial thinking to drive the purpose of the service so that the practice delivers that purpose. Only then, strategic plurality is attained. In summary, there are complementary attributes between all the three paradigms and therefore these paradigms can simultaneously serve as antecedents to re-enforce the understanding of management practice of contact centre services.

6.5 Service management in Telecom X

Service management is a holistic approach that emphasises a fundamental shift of management focus from product-based utility to the quality of service (see Normann, 1984; Gronroos, 1990). Here, the 'holistic' approach entails integration of the factors of production (including physical, technology and service personnel), systems and customers operate as a system to produce and deliver the quality of service. 'Holistic' approach also means intra-organisational and cross-functional collaboration to manage the quality of service provision. In addition, there is an emphasis on development and management of organisation and service personnel towards leveraging the commitment to quality focused goals and objectives of the organisation (Gronroos, 1990) rather than focusing on internal efficiency.

This study has highlighted that the foundations of service management are very similar to that of a systems' thinking paradigm. Attributes of service management including customer focused holistic organisation-wide approaches to achieving and managing a shared vision of the organisation equate to systems' thinking in contact centres. In addition, there seem to be commonalities between service management and systems' thinking narratives in terms of how both differentiate from traditional mass-production management practices that were fundamentally driven by cost reduction motives and attaining economies of scale (Gronroos, 1990; Normann, 1984). For Telecom X however, service management is not just confined to systems' thinking but a combination of three philosophies namely, Taylorism, Fayolism and Systems thinking, for managing various elements of service provision.

Gronroos (1990) also highlighted that service management is a *perspective* resulting from multi or inter-disciplinarity and different yet inter-related views about managing service. Through the findings of this study, this 'perspective' can be further elaborated. The very term 'perspective' means a viewpoint or attitude towards something (management in this case). To hold a service management perspective is for managers to accept and embrace the plurality of the strategic goals and objectives of the organisation that is simultaneous pursuit of cost-to-serve, service quality and value. As such, it is vital that managers of Telecom X recognise that there needs not to be a trade-off between following one scientific, administrative and systems' thinking approach. This perspective is also about adopting an ambidextrous leadership style and way of thinking. Embracing that depends on the purpose, appropriate practice and relevant tools to be adopted and adapted for the the simultaneous attainment of cost, quality and value at optimum levels. Thus, a service management perspective is to eliminate 'one size fits all' and embrace 'fit for purpose' thinking and management practice. This enables getting closer to what underpins service science.

Chapter 4 and Chapter 5 discussed a pluralist focus on the strategic value of contact centre services and the pluralist nature of customer service work and its management attributes. The purpose of this chapter was to synthesise the findings of this study in order to address how relevant are the existing narratives of contact centre service management to customer service attributes and management practice of contact centre under examination and more widely.

Exploring the nature of customer service work and management attributes of Telecom X has revealed that principles of scientific management by Taylor (1911) are still relevant to the understanding of service organisation and management in contact centres.

However, Taylorism itself does not contribute to the understanding of service management of Telecom X's contact centres in their entirety. Elements of a systems' thinking paradigm (Seddon, 2003) and Fayol's (1949) principles of management are relevant with regards to contact centre services and their management. All three paradigms overlap one another, as well as having certain distinctive elements and objectives. This is illustrated in figure 6.1 below.

Figure 6.2 (see p. 178) illustrates that the three tenets of focus for X's contact centres namely cost-to-serve, quality of service, and to add value to both customers and the organisation. These tenets are fundamental objectives of service management practice and, which are not independent of the product associated with the service provided by the contact centre. In other words, the product remains fundamental to the success of the attainment of these objectives especially in case of telecommunication services.

Therefore, the strategic focus of service management practice accommodates the individual and overlapping attributes of scientific, administrative and systems paradigms that serve as antecedents to service management practice. For example, standardisation, de-skilling of work, measuring and management organisation work in terms of output and budget were related to the Taylorist practice of work organisation.

Similarly, the top-down direction of command, forecasting and planning, and delegation of authority was found to uniquely associated with Fayol's thinking of management practice. With systems' thinking, characteristics of Telecom X's practice contribute, such as managing against customer demand, performing towards a purpose (service quality) and organisation-wide integration and organisation of work to meet its purpose.

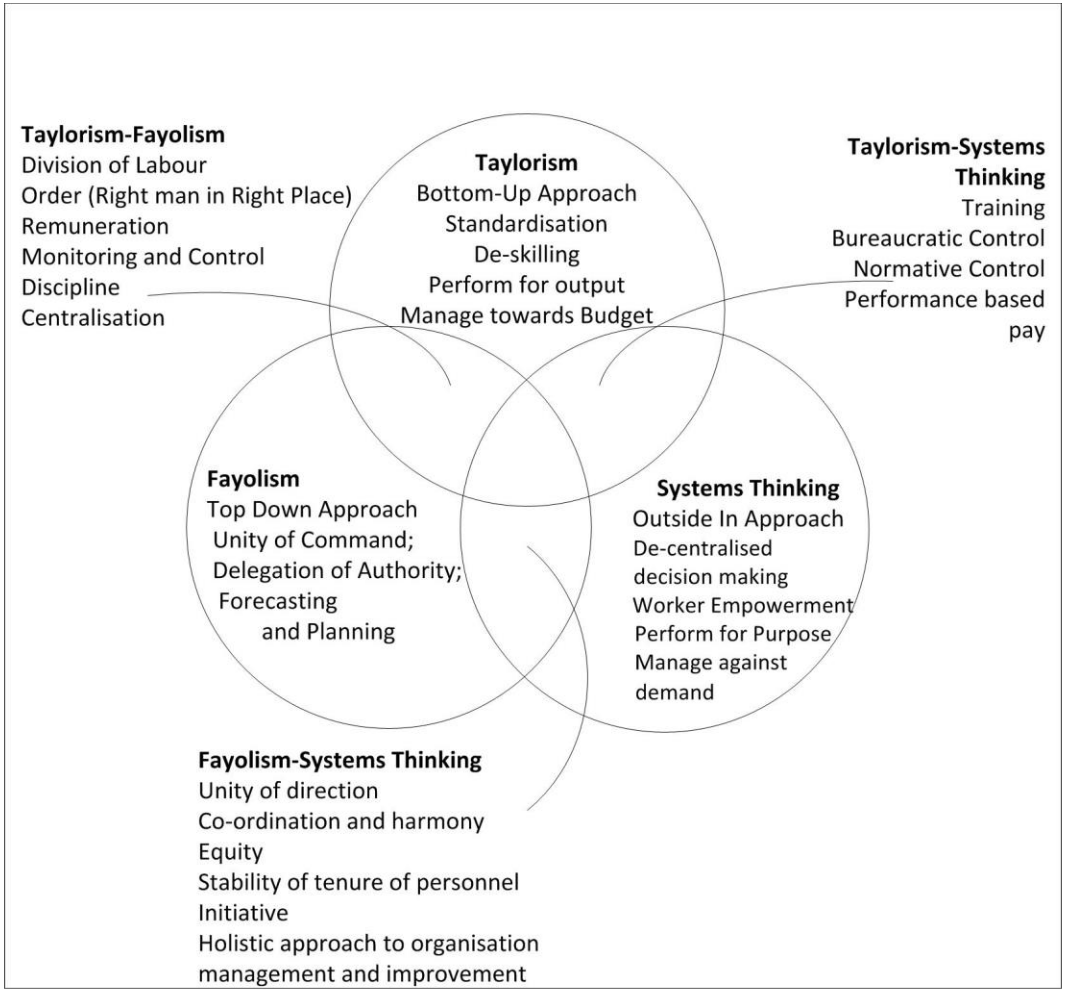

Figure 6.1 Theoretical Foundations of service management theory (Source: Author)

However, there are also some attributes that can be perceived as overlapping within these paradigms. For example, both Taylorism and Fayolism share characteristics such as centralisation of command, the division of labour, authority, order, discipline, remuneration of service personnel, monitoring and control. Similarly, it has also been highlighted that there are common attributes between Fayol's approach and systems' thinking such as a holistic approach to organisation and management. Interestingly, this study also established some commonalities between Taylorism and systems' thinking. For example, both Taylor (1911) and systems' thinking proponents encourage training and development of personnel to meet the performance standards or as a systems thinker would suggest, the *purpose* of the organisation. In addition, personnel were encouraged to have shared values, vision and beliefs of the organisations which have been conceptualised by Callaghan and Thompson (2001) as attributes of bureaucratic and normative controls.

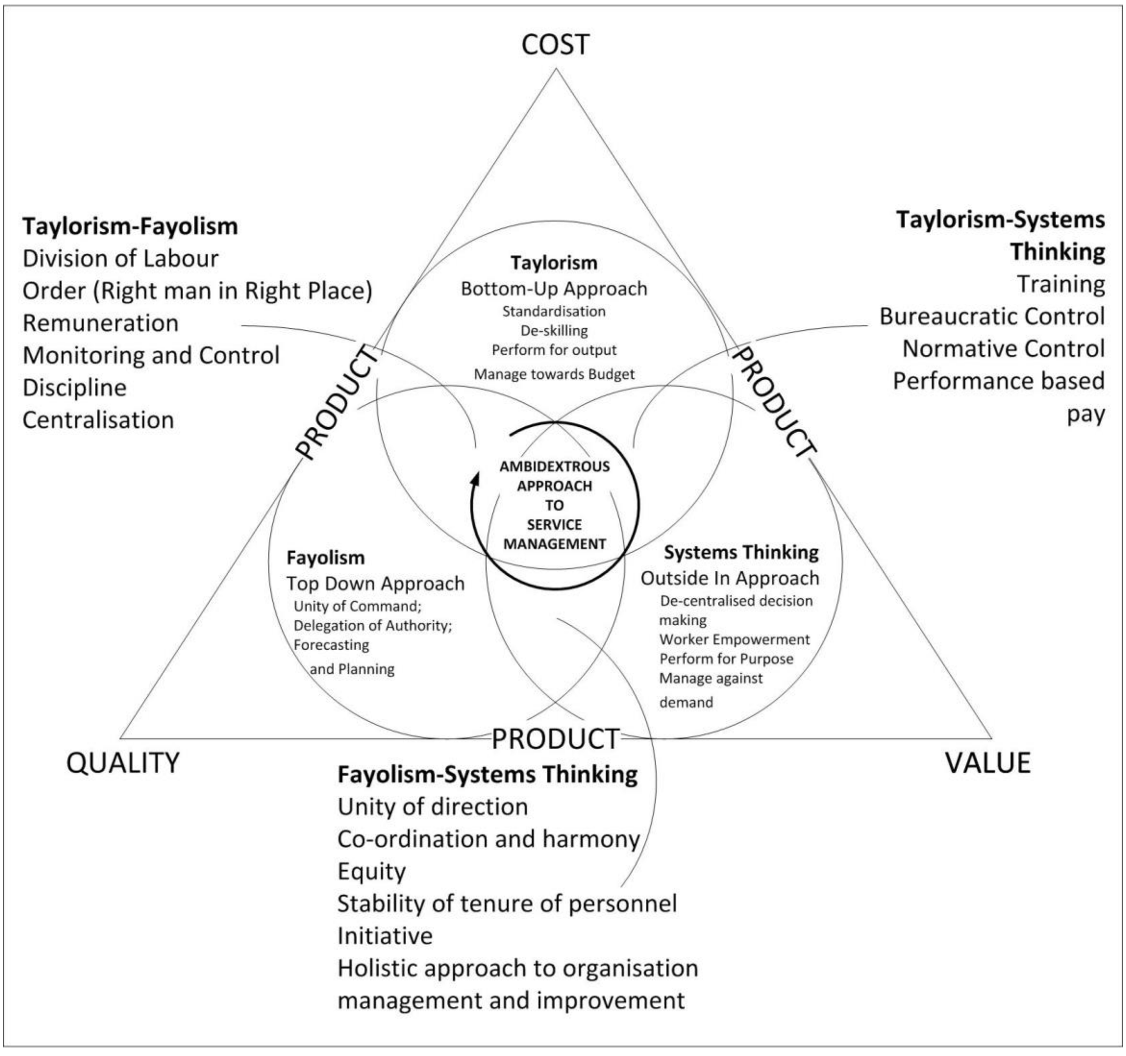

Figure 6.2 Framework of service management (Source: Author)

This study also recommends that for service management practice to be established as a theory, an ambidextrous perspective to management needs incorporating. Service management entails that managers have to avoid 'either/or' approach in adopting their approach to service management. Managers have to adopt ambidextrous or paradoxically both-and thinking (Hodgkinson et al., 2014) at both a strategic and operational level to achieve internal and external efficiency, and further competitive advantage through value.

Finally, this study has laid the foundations of service management within service science by adopting a holistic approach to understand contact centre services within a service science context. However, true systems research and more importantly, true service science research should respect that understanding service systems is not about developing a finite, exhaustive, or 'one best way' of understanding and managing service systems. Instead, this study proposes that further development of these foundations is necessary and continual for knowledge and contributions to evolve. Therefore, the model presented in this thesis should not be perceived as exhaustive and further evaluation should be undertaken to strengthen these foundations and appraise service management within the context of service science.

Chapter 7 : Conclusion and directions for future research

7.1 Introduction

This chapter concludes the thesis by reviewing the rationale and aim to explore contact centre service management within a service science context. It reviews the research questions set out for this study and how these research questions have been addressed. Thereafter, the chapter summarises the key contributions of this study towards the understanding of contact centre services and their management followed by discussing limitations and also directions for further research. Finally, personal reflections on both the research associated professional development and as a doctoral student are highlighted.

7.2 Revisiting thesis rationale, aim and research questions

The aim of this study was to explore contact centre service management within a service science context. Within this context, the purpose of this research was to explore the nature and evolution of contact centre services as service systems and the management of these service systems. As such, the research questions I had set out to achieve this aim were as follows:

1. What is the strategic value of contact centre to organisations?

2. What are the attributes of customer-service work and its management in contact centres?

3. What are the existing narratives of customer service work and management practice of contact centres?

4. How do these narratives inform the service management practice of the contact centre under examination and more widely?

The rationale for this study primarily stemmed from theoretical gaps in knowledge regarding contact centre services and their management. The mainstream contact centre services literature is formed of multiple diverse strands that provide a detailed yet dilemmatic understanding of what contact centre services are, their value proposition to the businesses and how they are managed. Within these strands, debates have had a central focus on differentiating contact centre services on the spectrum of their strategic propositions to the organisations and considering the attributes and nuances of Taylorism which characterised the management of labour process within these centres. In my view, 'management' of contact centres has been misconstrued as management of the labour process rather than a holistic consideration of the various activities and elements of services that are required in managing in contact centre services. As a result, there has been a limited consideration of understanding service management practice in contact centres except the systems' thinking service management approach exemplified by Seddon (2003) and his advocates.

During the initial formulation of this study, several research related gaps were also found that formed further rationale to place this thesis within the context of service science. Firstly, the literature on contact centre services is scattered across disciplines (e.g. marketing, operations management and information systems) and relate to micro-level issues of service management (e.g. service quality, offshoring, capacity management). The approach to contact centre services research is therefore often reductionist rather than holistic wherein the focus has been on 'parts' rather than the 'whole' (Ng and Maull, 2009). Several discipline specific and issue specific silos exist within the praxis of contact centre services research. With the emergence of service science, associated advocates conveyed that its purpose is to converge these silos and aim towards a holistic understanding of services (Spohrer and Maglio, 2008) and their management. Yet, there has been a lack of such convergence or an in-depth holistic approach to exploring specific contact centre services. These issues become especially concerning as contact centre services are becoming central to communications between organisations and customers.

Lastly, the practice related issues were established as a result of theoretical and research related issues highlighted above. Consequently, the strategic value of contact centre services, the evidence of their evolution within industry and management practice is far from clear. An initial review of industry reports and academic literature on contact centre services has revealed that the latter is lagging in terms of understanding the evolution of products, services and the linkages between them. This is especially the case with the telecommunication industry where for example, the emergence of smartphones and mobile devices as complex products has rarely been taken into account when understanding services and their management. Instead, contact centre services have been often investigated without much attention to the product.

In summary, the rationale of this thesis was established from several theoretical, research related and practice related gaps in knowledge and understanding of contact centre services and their management.

7.3 Addressing research questions and key contributions

The study began with developing an initial understanding of contact centre services and their types, followed by the antecedents used to characterise the customer service work and its management in contact centres. In doing so, Taylor's scientific management or *Taylorism*, Braverman's labour process theory, Edwards' control systems and Foucault's panopticon prison were found to be initial antecedents used to describe and characterise customer service work and management in contact centres. While Taylorism remained the overarching management practice to characterise contact centres, other antecedents were also intertwined in the overall characterisation of labour process of contact centres. As such, six key dimensions emerged namely, standardisation through ICT, control, the structure of customer service work, discretion, skills and job complexity - often used to characterise customer service work and management in contact centres. As a complement to but also a divergence from Taylorism, the administrative management principles from Fayol (1949) proved to be of relevance to this study particularly as Fayol contributed to the forecasting and planning of work in organisations. However, his contributions have been largely neglected as an antecedent towards the understanding of customer service work and its management.

Thereafter, contemporary narratives were reviewed, beginning with nuances of Taylorism such as neo- and post/anti- Taylorism on the basis of which, characteristics of customer service work and its management were found to be varied. In contrast, the emergence of a systems' thinking paradigm and how contact centres were viewed within this paradigm was critically reviewed. Alongside this service management as a phenomenon was introduced and reviewed. In doing so, similarities between systems' thinking and the conceptualisation of service management were also highlighted.

The review also found that to date, service management has not been conceptualised holistically with reference to contact centre services. This is one of the gaps that this study aimed to address. Moreover, this study established some understanding and convergence between the emerging discipline of service science which is the study of service systems and service management and its common goals within a systems' thinking paradigm. Contact centre services were then contextualised within service science logic.

This study was exploratory in nature. Exploration of service systems and their management require both objective and subjective lenses to view the world and obtain knowledge respectively (Reynolds and Holwell, 2010). As such, adopting an objective-subjective position also contextualised this study within the emerging discipline of service science wherein holistic understanding of service systems and their management is attained using a systems' thinking approach.

I chose to interview elites within the field of contact centre services, who have specific expertise (Rose et al., 2014). These were senior managers, consultants and influential decision makers within the organisations (Harvey, 2010). These elites offered both broader (holistic) as well as function-specific 'know-how' (reductionist) views towards understanding contact centre services and their management. In addition, several other data sources such as artefacts collected during interviews, Internet forums, customer feedback data and news press were used to triangulate data.

Interviewing elites can have specific limitations relating to the quality and credibility of data gathered during the study. However, being an 'insider' as well as 'outsider' to the exploration and context aided in counteracting power differences between myself and the participants, poor recollection of events by participants and rehearsed responses through my prior experience and iterative design of my interviewing procedure during the data collection.

Data was analysed flexibly using a combination of general analytic induction and thematic analysis to generate relevant themes and narratives. Through constant reflection, verification with stakeholders of this study and multiple iterations of reporting, themes were scrutinised and refined before mapping the findings under relevant research questions. The following sections summarise these findings.

7.3.1 What is the strategic value of contact centre to the organisation?

The findings of this study have revealed that the contact centres do not hold any single strategic value or purpose to Telecom X. Rather, it is regarded as a competitive differentiator in terms of quality of service provided as well as act as a profit-centre to generate revenue for the business. Thus, contact centre services hold a pluralist value proposition and not one or the other as is often suggested in the literature.

Holding such a pluralist strategic position does not mean that contact centres are no longer perceived as 'cost-centres'. Rather, the very purpose of contact centres has been to provide services efficiently whilst controlling the cost-to-serve. However, the means to achieve efficiency and control over costs have to be driven by utilising contact centres as sources of information for the rest of the business rather than through rationalisation and capitalisation of resources. The information obtained about product issues faced by customers or service process failures can be channelled through contact centres to the relevant functions of the organisation to improve products and processes.

These improvements can reduce service failures that are often seen as the cause of drivers of cost-to-serve in contact centres. Reducing such failures can also lower cost-to-serve and offer an increased quality of service as perceived by the customer. Once the fundamental goals of cost and quality are attained, contact centres can then be utilised to leverage value through the sale of additional products and services contributing to revenue generation for the organisation. As such, service management in contact centre services entails three main tenets namely, cost-to-serve, efficiency and value, including quality of service and revenue generation opportunities.

With equipment based services, however, price and product quality are the main drivers of customer loyalty. In the case of telecommunications services, the primary product is the network coverage and the smartphone bundles from the service provider such as Telecom X. Hence, value propositions of this contact centre appear to be driven by the product. The strategic value of contact centres to businesses such as Telecom X is therefore, fundamentally dependent on the quality of the product.

7.3.2 What are the attributes of customer service work and its management in contact centres?

The review of literature in Chapter 2 revealed several attributes of customer service work that were consolidated into six key dimensions to best explain the characterisation of customer service work performed in contact centres thus far. In particular, the customer service work in contact centres varied on the basis of:

1) Technological manifestation in standardisation of customer service work

2) Managerial Control

3) Structure of customer service work

4) Discretion of service personnel over customer service work

5) Skills entailed in customer service work

6) Job complexity entailed in customer service work

The findings of this study helped in the further articulation of these six dimensions. It was found that the attributes reflected characteristics of mass-production logic or mechanistic methods for gaining efficiency, forecasting, planning and top-down administration of direction, decision making and authority. In addition they pointed to a systems' thinking or organic approach for gaining effectiveness from customer service work performed in Telecom X's contact centres.

In other words, attributes to attain both efficiency and effectiveness co-existed rather than being in contradiction. This study found that managing demand, capacity, and sourcing and performance management within the contact centres are fundamental management activities that managers were concerned with. These activities were further expanded to highlight the key decisions to be made and the factors influencing these decisions. Again, characteristics of scientific management, administrative management and a systems' thinking approach were evident. Therefore, both Ambidexterity in the nature of customer service work and hence an ambidextrous approach to organisation and management of customer service work was found.

The objectives of cost and quality and value were aspired to be simultaneously attainable rather than being in contradiction.

7.3.3 What are the existing narratives of customer service work and management practice of contact centres? How do these narratives inform the service management practice of the contact centre under examination and more widely?

For the purpose of clarity of discussion, research question 3 and 4 are addressed together in this section.

These two questions entailed identifying, comparing and contrasting the customer service work and its management attributes found by this study with the existing narratives in order to establish an appraisal of service management practice holistically. To date, management practice in contact centres has been mostly explored and explained using mass-production logic such as Taylorism and its nuances and recently using a systems' thinking approach. Moreover, these explanations often viewed in contradiction to each other.

The study has established that contact centres can be reflective of a mass-production logic and systems' thinking attributes and hence both the logics are mutually re-enforcing to explain service management practice in contact centres.

More importantly, this study introduces Fayol's principles of administrative management as an antecedent towards service management theory development. Specific attributes of customer service management such as top-down direction and unity of command and decision making and management activities such as forecasting, authority and planning found within Telecom X's contact centres are not explained by either Taylorism or systems' thinking. However, these are clearly articulated within administrative principles of management by Henri Fayol.

This study has established the importance of Fayol's work as an antecedent to develop service management theory for contact centre services. This study also highlighted the complementary attributes of Fayol's administrative principles with both Taylorism and systems' thinking which further strengthened the compatibility and relevance of all three antecedents towards a service management model within service science.

Finally, the service management theory model was proposed by outlining the three main objectives of service management namely, to optimise the cost-to-serve associated with service provision, leverage quality of service and thirdly, leverage value for customers through recognition of additional needs of customers and for business through leveraging internal efficiency through revenue generation opportunities. Within these objectives lie the three logics of management that are instrumental to the achievement of these objectives.

7.3.4 Overall contribution

There are some holistic contributions that this study makes to the existing body of knowledge. In doing so, this study does not undermine the contributions made by pioneers of contact centre service research thus far. On the contrary, this study has appraised and appreciated their contributions in developing the understanding of contact centre services. This study has developed new perspectives and where applicable, has supported the existing perspectives.

Holistic account and development of contact centre service management

The purpose of this study was to develop an in-depth account of service management practice holistically, meaning that to establish the key attributes of customer service work and other activities of management that best describes service management in contact centres. Some of these attributes have been reported by Rijo et al. (2012) with specific reference to contact centre services.

Although the phrase 'service management' has been often used in the literature, it was surprising to see this has neither been explored nor discussed as holistically as for example, IT service management theory in a B2B context (see Information Technology Infrastructure Library e.g., Cronholm and Salomonson, 2014). This study has provided a consolidated and reconciled understanding of narratives and attributes of contact centre services in order to provide initial foundations of 'service management' theory within a B2C context.

Clarification towards existing antecedents within the context of contact centre services

This study has clarified some of the misconceptions associated with F.W. Taylor and scientific management practice within the context of contact centre services.

To begin with, Taylor (1911) did not appraise employer's welfare and prosperity at the cost of welfare and well-being of employees in manufacturing environments. Rather he argued that employer's prosperity is inherently linked with the welfare of employees.

Secondly, Taylor (1911) did not appraise efficiency and productivity at the cost of quality. Rather, he warned employers of such trade-off and suggested that quality of work should be attended to before efficiency is appreciated and rewarded. Within the context of contact centres then, it is inaccurate to construe that trade-off of qualitative goals against quantitative goals is fundamental to the scientific management application.

To achieve these goals, lastly, the logic of mass-production and systems' thinking or quality focused management practices are not to be perceived as mutually exclusive but mutually reinforcing. Rather the very foundation of systems' thinking is based on holism and integration of approaches to viewing service systems. As such, systems' thinking has to encompass both mass-production attributes and systems attributes to achieve holism.

Addition of new antecedents within the context of contact centre services

In addition to Taylorism and systems' thinking attributes that aid in the characterisation of service management in contact centres, this study has also provided an understanding of contact centre service management using new antecedents.

Firstly, this study added the management activities from Henri Fayol (1949) that has either been largely neglected in contact centre literature or has been considered synonymous to Taylor's (1911) scientific management. On the contrary, a top-down approach to management and planning of contact centre work found in this study reflects Fayol's administrative management paradigm as much as Taylor's management and organisation of work.

In addition, this study also found similarities between Taylor's scientific management, Fayol's administrative management and systems' thinking approach that further establishes the theoretical foundations of service management in contact centre services.

Thirdly, this study contextualises Ambidexterity within the context of contact centre services. It suggests that ambidextrous leadership and thinking - the simultaneous adoption of scientific, administrative and systems' view is required of managers in contact centres at both strategic and operational levels to attain the strategic tenets of service management.

Establishing contact centre services within context of service science

Contact centres are becoming the central point of contact for customers and hence perceived as a 'listening post' for the rest of the organisation. As such, these services are equally important to be explored as any other services. However, this study has shown that contact centre services have been largely absent from the emerging literature of service science despite their growth and evolving value to both the organisation and customers. In particular, contact centre services have been studied with an aim to address the issues of discipline based silos and reductionist approaches and to develop a more holistic understanding of service systems and their management. This study brings together a significant amount of literature to converge - the traditional and contemporary narratives of contact centres and labour process issues specific to contact centres and systems' thinking - to enable development of service management practice within the context of service science. At the same time, this study is context specific so that it fits well within the existing debates of transitions to a service science discipline as for example, highlighted by Ng and Maull (2009) and other studies evaluating the emergence of service science as a discipline.

Novel methodological approach to exploring contact centre services and management

This study has also taken a novel approach by contextualising the research within the proximities of service science and systems' thinking, both of which share similar objectives - to study service systems and service management as a whole rather than in parts. As such, the philosophical commitments which were mostly justified within the context of social science thus far have been justified within the context of service science and systems' thinking by this study. It is hoped that this will enable future researchers to articulate their ontological and epistemological underpinnings within service science.

Such clarification and establishment of philosophical commitments within the discipline of service science are yet to be achieved at least in case of contact centre services research.

Also, this study has explored the overall service management practice using the narratives of elites such as strategic planners, senior managers and independent consultants. Exploratory studies discussed in Chapter 2 have mostly focused on specific issues relating to the labour process management in contact centres and not concentrating on strategic and managerial activities performed by these entities. By doing this, the study has established that a lot has to be explored about the mainstream management by focusing on narratives and experiences of elites. This study has opened avenues for future researchers to focus on mainstream management literature. Especially with contact centres, this study establishes that the frame of reference to evaluate overarching management practice should not be limited to the 'taken for granted' Taylorism.

Lastly, this study also clearly articulates how qualitative analytical procedures are adopted and adapted to suit the thematic analysis of data thereby, contributing to the methodological praxis specific to contact centre service research.

Further understanding and issues specific to telecommunications services and their implications to contact centre service management and delivery

Telecommunication organisations such as Telecom X are facing competitive pressures to sustain and attain growth amid increasing customer expectations (Key Note, 2015). These are not supernormal profit markets like the finance and airline sector. Customer expectations are high in terms of cost and value of both the product and service. As such, this study has developed further understanding of the products, their complexity and their implications on service provision and management. It has raised further awareness of the service structure, operational elements of service and its evaluation (e.g. use of new performance metrics such as NPS) and the issues of managing these elements within the specific context of telecommunications services.

Although studies in the past have focused on telecommunications services and with specific reference to contact centres, the consideration on product and service elements specific to telecommunications and their impact on service provision and management have not been fully explored. This study recommends telecommunications sector contact centre managers to align their service management practice ambidextrously to the strategic tenets of cost, quality, value, and product offerings to attain a desired 'sweet spot'.

Although this study has made some significant contributions as discussed above, it also has limitations which are discussed in the following section.

7.4 Limitations and directions for further research

No study is without limitations, including this one. Research on contact centre services and managerial issues associated with these services is not a new phenomenon. The task of this study, however, was to deviate from the ongoing focus on labour process analysis or specific service management issues such as service forecasting, queueing and quality management. Instead the focus was to explore the overarching attributes of service management activities in contact centres using managerialist narratives so that the holistic practice then could be co-created, compared and contrasted with existing dominant antecedents and explanations. As such, this objective was fulfilled and several other contributions were made as discussed above. There are, however, theoretical, methodological and practical limitations associated with this study.

Firstly, the exploration of contact centre services and service management practice within a service science context is a new focus. The holistic account of contact centre services, their nature and evolution, and the management of these services, is largely absent within the emerging discipline of service science. Due to the absence of such holistic accounts in the past, the research began 'from scratch' and as such, comprised of developing an initial framework through the descriptions of managers about what they do and how they manage contact centre services. The developed framework was not thoroughly tested and hence may have limitations. However, it is to be noted that this framework was co-created with the industry experts and was subject to several iterations before it was used further in the research. Thereafter, the Director at Telecom X also verified the framework to ensure it was fit for purpose that is, to explore the managerial elements within this framework in-depth. As such, this framework was deemed suitable for the exploratory purpose of this study at least. Nonetheless, empiricists may find the framework worthy of further scrutiny and hence further development.

Secondly, the findings of this study are based on narratives of independent consultants and largely on narratives of the senior management team at Telecom X along with secondary sources of data. Such a narrow scope of research was mainly due to the in-depth nature of this study. In addition, interviewing elites also imposed some limitations which were also discussed in Chapter 3. As a result of this, one could be critical about the generalisation of the findings of this study as only Telecom X and independent consultants were the primary source of data. However, generalisation was never the goal of this study. It has been argued for a long time that services in general, are too complex to be categorised or typified like goods. The same then applies to service research and especially contact centre service research, due to the variations in customer service work and other attributes of contact centres. In addition, this research focused on one single telecommunication services organisation. Single organisational research helped in focusing on unique issues associated with this organisation and rich exploration of the phenomenon (Siggelkow, 2007; Eisenhardt and Graebner, 2007). Nonetheless, further cases could be explored within the telecommunication sector to develop the findings of this study and in particular appraisal and development of service management practice.

Thirdly and relatedly, this study is managerialist in nature. Grey and Mitev (1995:76) suggested that managerial research "describe the activity of management and prescribe ways in which managerial effectiveness may be enhanced, thereby boosting productivity and profitability". This study fulfils the first objective of the managerial research described above. That is, the study entailed exploring the narratives of elites that described the planning and management activities performed by them and the challenges faced by them in performing those activities and hence in managing the overall service. However, the data demonstrated both exploration and explanations of the activities performed by the managers as well as their reflections on the issues that are unique and individualistic yet submissive to the organisation's goals of growth and performance (Watson, 1997). As a result of such submission however, researchers especially those that are operating within critical paradigms may see the findings of this study and the managerial focus of this study to be an unproblematic account of managerial activities (see Grey and Mitev, 1995).

However, this issue was addressed by taking several precautions to mitigate participant's bias as well as researcher bias. Throughout the data collection, analysis and reporting the findings, I have been reflexive towards my status both as an 'insider' and 'outsider' to ensure that the approach, data handling and findings reported in this study are 'trustworthy' and critically evaluated. In addition, the information collected during interviews was also cross-checked with other participants to ensure the reliability of that information within the organisational context. Besides such careful design, precautionary measures and reflexivity, it has to be noted that this study questioned the existing dogma of traditional management theories deeply embedded in mass-production logic and its relevance in explaining management practice in contact centres. In addition, the study has also appraised attributes of relevant contemporary management theories that explained management practice in contact centre under examination, thereby further contributing to the development of a service management theory model. The task of future researchers is to conduct this research from the critical paradigmatic approach and consider the voices of the workforce to strengthen theoretical foundations of service management and hence, of the emerging discipline of service science.

7.5 Reflections and closing remarks

The final task of this thesis is to reflect on the value and significance of this thesis by extending some key debates surrounding the nature of managerial research such as this study. Following this, the thesis is concluded with a closing summary of my personal journey.

Management research is considered to be of potential interest to both academic and managerial readership (Watson, 1997). However, matters relating to what is considered as 'good research' are different for academics and managers. Academics are fundamentally seeking convincing conceptualisation, theory building, rigour, consistency and plausibility with methodological debates whereas managers seek practical understanding of organisational know-how and life. Managers are interested in relevance relating to practice than the rigour entailed in theory generation. Managerial knowledge or knowledge regarding managerial work, however, is almost discarded by critical management studies scholars as it seems to neglect 'social, moral, political and ideological ingredients underpinning management practice' (Samra-Fredericks, 2003:294). On the other hand, managers have been often ruthless about the theory-led nature of academic research as they find little value in academic writings confined within strict rules (Watson, 1997). Even at the time of writing this thesis, criticisms such as 'this sounds like more of consultancy thesis' by academics and 'you need to include relevant knowledge' by practitioners (personal correspondence) were made despite my best intentions to accommodate the interests of both academic research and practitioners' needs.

In response to academic concerns firstly, I believe that this study has offered thorough review of issues associated with service research and that of the emerging discipline of service science. It has provided enough credible and triangulated representations of elites and their practice along with thick descriptions of managerial activities and concepts that may be transferrable for further evaluation (Lorelli et al., 2017) within service science. In addition, issues relating to bias have been addressed to address the 'she would say that, wouldn't she?' problem that is commonly associated with managerial research (Watson, 2011: 210).

Secondly, the relevance of management research should be fundamentally determined by whether the research is effective in informing the activities that an individual or group might undertake in managerial situations, regardless of whether they are managers or opponents of managers (Watson, 2001). As such, this study has explored and explained the fundamental activities associated with management of contact centres as service systems, which will aid academics to develop these explanations further. With regards to its relevance for practitioners, this study can be seen as foundational in the development of service management practice. It has been often argued that managers are less attracted to academic readership (see Seal, 2012; Pfeffer, 2007) for the reasons of differing interests and needs.

It is hoped that this study will contribute to mitigating such differences and enhance the confidence and interest of managers to academic research and co-create knowledge that will be beneficial for both academia and industry.

I would like to conclude this thesis by reflecting briefly on my journey of development of this thesis. Although my doctoral study began in 2012, my interest in contact centres goes back to 2007 when I first started working in one of the outsourced-offshored contact centres in India. As a qualified software engineer, I was often criticised by my family and friends for working in the contact centre as a service personnel. According to them, contact centre jobs should never have been my first choice being an engineer, given the routine, laborious, low-paid and unsocial working hours entailed in these jobs. It was difficult to convince them that software engineering jobs were in decline given the recession of 2008 and the number of graduates waiting to be employed. For me, neither of them were my choices as I always wanted to study management. Nonetheless, following a stop-gap arrangement for six months in an international contact centre and working in network order management as an assistant team leader for a year and a half, I moved to Sheffield, England to pursue Master's degree in Business Administration in 2009.

Whilst studying, finding part-time work in England was equally challenging, due to the restriction on my working hours because of my foreign student status. After working as a kitchen porter and door-to-door charity fundraiser, I managed to secure a job in one of the outsourced telecommunication services contact centres. Not only did this job provided me with regular income and stability towards my life in the UK, it also served as a platform for me to conduct my first study into contact centre services for my dissertation. Although this was not state-of-art research, I embraced this opportunity develop my understanding of contact centres. This contact centre was typically reflective of the criticisms about the routine, repetitive, tightly controlled and low-paid nature of the work and the emotionally exhausting life of service personnel in contact centres held by my family, friends and news press.

In 2011, one of the major media and broadband services company in the UK opened its first in-house contact centre in Sheffield.

Since its opening, many of my friends who were working with me in the outsourced contact centre moved to this in-house contact centre due to increased wages and additional incentives on offer. Their narratives about the nature of work and life in that centre exhibited significant positive differences. Lunch and break times, relaxed and friendly environment at work and empowerment in performing service work were some of the common attributes of work and life in this contact centre that distinguished it from the former outsourced telecom services contact centre. Considering these narratives and suggestions from friends, I applied to this contact centre and was offered a job in 2011.

The nature of customer service work and life in this contact centre was indeed positive and more relaxed than in the centre I worked in previously. I discussed these differences in comparison with my earlier study of outsourced contact centres with the supervisor of my master's project. Following our discussion, we pursued the senior management at this contact centre to allow us to explore this phenomenon further. We developed some understanding regarding the benefits and weaknesses of outsourced contact centres and conceptualised the decision making to outsource or not on the basis of knowledge intensity and information velocity entailed in customer service work (see Parikh and Walton, 2011). Later, we explored the differences entailed in these two centres in terms of psychological contracts between service personnel and service provider, and the influence of power-distance on knowledge management mediated by the degree of Taylorism (see Parikh and Walton, 2012; Walton and Parikh, 2012).

These studies revealed that there is a lot more to learn about contact centres. During our attendance at conferences, however, scholars in the field of information systems research often conveyed that contact centre service research is saturated. A colleague at Sheffield Hallam University once said, 'there is nothing left to research in contact centres. It is a waste of time'. This was an inspiration in disguise to conduct the further examination in the field of contact centre services. In 2012, I applied for funding at Sheffield Business School to pursue my doctoral studies and to conduct this study.

Where I am now, I am fortunate to have had the opportunity to learn to research through my doctoral programme. This programme enabled me to develop a detailed understanding of relevant theoretical, methodological and practical knowledge required to conduct research. In addition, it aided me in developing relevant knowledge and skills to assess and review my own work, as a result of which, I am able to recognise the weaknesses and limitations of my previous work. By developing the necessary understanding of the elements and process of conducting research, I am now able to review existing knowledge rigorously and critically evaluate my contributions systematically and consistently in line with that existing knowledge. Moreover, these skills have developed my confidence to present my research to range of audiences including at conferences and to my colleagues, students, friends and family, to convey that ultimately, it was neither undermining nor a waste of time to work in contact centres, learn to research and more importantly, research contact centre services. On the contrary, I look forward to contributing to this area of service research further.

References

Aamir, M., Mahfooz, O., & Memon, M. (2016). Role of Contact Center for Smart Cities. *Pakistan Journal of Engineering, Technology & Science*, *3*(1).

Abdullateef, A. O., Mokhtar, S. S., & Yusoff, R. Z. (2010). The impact of CRM dimensions on call center performance. *International Journal of Computer Science and Network Security*, *10*(12), 184-195.

Ackroyd, S. (2009) 'Research Designs for Realist Research' in D. Buchanan and A.E. Bryman (eds.) *The Handbook of Organizational Research Methods.* London: Sage.

Adler, P. S., Goldoftas, B., & Levine, D. I. (1999). Flexibility versus efficiency? A case study of model changeovers in the Toyota production system. *Organization science*, *10*(1), 43-68.

Aksin, Z., Armony, M., & Mehrotra, V. (2007). The modern call center: A multi-disciplinary perspective on operations management research. *Production and operations management*, *16*(6), 665-688.

Akşin, Z., De Véricourt, F., & Karaesmen, F. (2008). Call center outsourcing contract analysis and choice. *Management Science*, *54*(2), 354-368.

Alcock, T., & Millard, N. (2006). Self-service—but is it good to talk?. *BT Technology Journal*, *24*(1), 70-78.

Aldor-Noiman, S., Feigin, P. D., & Mandelbaum, A. (2009). Workload forecasting for a call center: Methodology and a case study. *The Annals of Applied Statistics*, 1403-1447.

Allway, M., & Corbett, S. (2002). Shifting to lean service: Stealing a page from manufacturers' playbooks. *Global Business and Organizational Excellence*, *21*(2), 45-54.

Antaki, C., Billig, M., Edwards, D., & Potter, J. (2003). Discourse analysis means doing analysis: A critique of six analytic shortcomings.

Anton, J., Monger, J., & Perkins, D. S. (1997). *Callcenter Management: By the Numbers*. Purdue University Press.

Antony, J. (2015). Six-sigma for improving Top-Box Customer Satisfaction score for a banking call centre. *Production Planning & Control*, *26*(16), 1291-1305.

Argyris, C., & Schon, D. A. (1974). *Theory in practice: Increasing professional effectiveness*. Jossey-Bass.

Armstrong, P. (1989). Management, labour process and agency. *Work, Employment and Society*, *3*(3), 307-322.

Aron, R., & Singh, J. V. (2005). Getting offshoring right. *Harvard business review*, *83*(12), 135-43.

Awasthi, P., Dubey, N., & Sangle, P. S. (2014). Contemporary challenges in CRM technology adoption: a multichannel view. *International Journal of Electronic Customer Relationship Management*, *8*(1-3), 51-71.

Badinelli, R., Barile, S., Ng, I., Polese, F., Saviano, M., & Di Nauta, P. (2012). Viable service systems and decision making in service management. *Journal of Service Management*, *23*(4), 498-526.

Bagnara, S., & Marti, P. (2001). Human work in call centres: A challenge for cognitive ergonomics. *Theoretical Issues in Ergonomics Science*, *2*(3), 223-237.

Bain, P., & Taylor, P. (2000). Entrapped by the ‘electronic panopticon’? Worker resistance in the call centre. *New technology, work and employment*, *15*(1), 2-18.

Bain, P., & Taylor, P. (2008). No passage to India? Initial responses of UK trade unions to call centre offshoring. *Industrial Relations Journal*, *39*(1), 5-23.

Bain, P., Watson, A., Mulvey, G., Taylor, P., & Gall, G. (2002). Taylorism, targets and the pursuit of quantity and quality by call centre management. *New Technology, Work and Employment*, *17*(3), 170-185.

Bajaj (2011), A New Capital of Call Centres - The New York Times. Retrieved October 31, 2013, from: http://www.nytimes.com/2011/11/26/business/philippines-overtakes-india-as-hub-of-call-centers.html?pagewanted=all&_r=0

Baldry, C., Bain, P., & Taylor, P. (1998). ‘Bright satanic offices’: intensification, control and team Taylorism. In *Workplaces of the Future* (pp. 163-183). Macmillan Education UK.

Bamforth, R., & Longbottom, C. (2010). Telecoms re-invention–death of the traditional telco. *Quocirca Ltd.*

Banks, D., & Roodt, G. (2011). The efficiency and quality dilemma: What drives South African call centre management performance indicators?. *SA Journal of Human Resource Management*, *9*(1), 1-17.

Barnett, N. J., Parry, G., Saad, M., Newnes, L. B., & Goh, Y. M. (2013). Servitization: is a paradigm shift in the business model and service enterprise required?. *Strategic Change*, *22*(3-4), 145-156.

Batt, R. (1999). Work organization, technology, and performance in customer service and sales. *ILR Review*, *52*(4), 539-564.

Batt, R. (2000). Strategic segmentation in front-line services: matching customers, employees and human resource systems. *International Journal of Human Resource Management*, *11*(3), 540-561.

Batt, R., & Moynihan, L. (2002). The viability of alternative call centre production models. *Human Resource Management Journal*, *12*(4), 14-34.

Behling, O. (1980). The case for the natural science model for research in organizational behavior and organization theory. *Academy of Management Review*, *5*(4), 483-490.

Belt, V., Richardson, R., & Webster, J. (2000). Women's work in the information economy: The case of telephone call centres. *Information, Communication & Society*, *3*(3), 366-385.

Belt, V., Richardson, R., & Webster, J. (2002). Women, social skill and interactive service work in telephone call centres. *New technology, work and employment*, *17*(1), 20-34.

Benner, C., & Mane, F. (2011). From internal to network labor markets? Insights on new promotion processes from the call center industry. *Industrial Relations: A Journal of Economy and Society*, *50*(2), 323-353.

Benner, C., Lewis, C., & Omar, R. (2007). The South African call centre industry: A study of strategy, human resource practices and performance. *The Global Call Centre Industry Project*, Sociology of Work Unit.

Benner, M. J., & Tushman, M. L. (2003). Exploitation, exploration, and process management: The productivity dilemma revisited. *Academy of management review*, *28*(2), 238-256.

Berry, J. M. (2002). Validity and reliability in elite interviewing. *PS: Political Science and Politics*, *35*, 679–682.

Betts, A., Meadows, M., & Walley, P. (2000). Call centre capacity management. *International Journal of Service Industry Management*, *11*(2), 185-196.

Bishop, P., Gripaios, P., & Bristow, G. (2003). Determinants of call centre location: some evidence for UK urban areas. *Urban studies*, *40*(13), 2751-2768.

Bittner, S., Schietinger, M., Schroth, J., & Weinkopf, C. (2002). Call centres in Germany: Employment, training and job design. *Re-Organising Service Work.* Ashgate Publishing Limited, 63-85.

Blaikie, N. (2007). *Approaches to social enquiry: Advancing knowledge*. Polity.

Bochaton, A., & Lefebvre, B. (2011). Interviewing elites: Perspectives from the medical tourism sector in India and Thailand. *Fieldwork in tourism: Methods, issues and reflections*, 70-80.

Bodine, K. (2017). Wake Up Call: Call Centers Hold Enormous Potential For Brands. Retrieved January 20, 2018, from: https://go.forrester.com/blogs/11-03-07-wake_up_call_call_centers_hold_enormous_potential_for_brands/

Boje, D. M., & Winsor, R. D. (1993). The resurrection of Taylorism: total quality management's hidden agenda. *Journal of organizational change management*, *6*(4), 57-70.

Bolton, K. (2013). World Englishes and international call centres. *World Englishes*, *32*(4), 495-502.

Bolton, S. (2004). Conceptual confusions: emotion work as skilled work. *The skills that matter*, *19*, 37.

Bolton, S. C., & Houlihan, M. (2005). The (mis) representation of customer service. *Work, employment and society*, *19*(4), 685-703.

Bolton, S. C., & Houlihan, M. (2007). Risky business; re-thinking the human in interactive service work. *Searching for the Human in Human Resource Management,* London: Palgrave Macmillan.

Bose, D., & Chatterjee, A. K. (2015). Specialized versus Multi-skilled Workforce: A Newsboy Approach for Call Centre Resource Planning. *Management and Labour Studies*, *40*(3-4), 252-267.

Botla, L. (2009). Systems thinking: the Gandhian way. *Journal of Human Values*, *15*(1), 77-90.

Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Sage.

Brannan, M. J. (2005). Once more with feeling: ethnographic reflections on the mediation of tension in a small team of call centre workers. *Gender, Work & Organization*, *12*(5), 420-439.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, *3*(2), 77-101.

Braverman, H. (1974). *Labor [labour] and Monopoly Capital*. Monthly Review Press.

Breen, L. (2007). The researcher'in the middle': Negotiating the insider/outsider dichotomy. *The Australian Community Psychologist*, *19*(1), 163-174.

Bristow, G., Munday, M., & Gripaios, P. (2000). Call centre growth and location: corporate strategy and the spatial division of labour. *Environment and Planning A*, *32*(3), 519-538.

Brown, G., & Maxwell, G. (2002). Customer Service in UK call centres:: organisational perspectives and employee perceptions. *Journal of Retailing and Consumer Services*, *9*(6), 309-316.

Brown, P., Lauder, H., & Ashton, D. (2010). *The global auction: The broken promises of education, jobs, and incomes*. Oxford University Press.

Brunsson, K. H. (2008). Some effects of Fayolism. *International Studies of Management & Organization*, *38*(1), 30-47.

Bryman, A., & Bell, E. (2011). Business research methods. 3 uppl. *Malmö: Liber AB*.

Bryson, J. R. (2007). The 'second'global shift: The offshoring or global sourcing of corporate services and the rise of distanciated emotional labour. *Geografiska Annaler: Series B, Human Geography*, *89*(s1), 31-43.

Budhwar, P. S., Varma, A., Malhotra, N., & Mukherjee, A. (2009). Insights into the Indian call centre industry: can internal marketing help tackle high employee turnover?. *Journal of Services Marketing*, *23*(5), 351-362.

Bunyaratavej, K., Doh, J., Hahn, E. D., Lewin, A. Y., & Massini, S. (2011). Conceptual issues in services offshoring research: a multidisciplinary review. *Group & Organization Management*, *36*(1), 70-102.

Burgess, J., & Connell, J. (2004). Emerging developments in call centre research. *Labour & Industry: a journal of the social and economic relations of work*, *14*(3), 1-13.

Burns, B. (2008). Offshoring: secure or open to the praying mantis?. *Strategic Outsourcing: An International Journal*, *1*(1), 77-86.

Burns, B., & Light, B. (2007). Users as developers: a field study of call centre knowledge work. *Journal of Organizational and End User Computing*, *19*(4), 42.

Burns, T., & Stalker, G. M. (2005). Mechanistic and organic systems. *Organizational behavior*, *2*, 214-25.

Burrell, G., & Morgan, G. (1994). *Sociological paradigms and organisational analysis*. Arena* Ashgate.

Buttle, F. A. (2002). Is it worth it? ROI on CRM. In *Proceedings of the Academy of Marketing Annual Conference, Academy of Marketing, Nottingham, England* (pp. 2-5).

Callaghan, G., & Thompson, P. (2001). Edwards revisited: technical control and call centres. *Economic and Industrial Democracy*, *22*(1), 13-37.

Callaghan, G., & Thompson, P. (2002). ‘We recruit attitude’: the selection and shaping of routine call centre labour. *Journal of Management Studies*, *39*(2), 233-254.

Calvert, N. (2001). Today's changing call centre: An overview. *Journal of Database Marketing & Customer Strategy Management*, *8*(2), 168-175.

Campagnolo, D., & Gianecchini, M. (2015). Backshoring Strategies: Toward a typology.

Carey, M. (2009). It's a Bit Like Being a Robot or Working in a Factory': Does Braverman Help Explain the Experiences of State Social Workers in Britain Since 1971?. *Organization*, *16*(4), 505-527.

Carter, B., Danford, A., Howcroft, D., Richardson, H., Smith, A., & Taylor, P. (2011). ‘All they lack is a chain’: lean and the new performance management in the British civil service. *New Technology, Work and Employment*, *26*(2), 83-97.

Cavalieri, S., Gaiardelli, P., & Ierace, S. (2007). Aligning strategic profiles with operational metrics in after-sales service. *International Journal of Productivity and Performance Management*, *56*(5/6), 436-455.

Chakrabarty, S. (2006). Making Sense of the Sourcing and Shoring Maze: Various Outsourcing and Offshoring Activities. *Outsourcing and Offshoring in the 21st Century: A Socio-Economic Perspective* , IGI Global, 18-53.

Chambel, M. J., & Alcover, C. M. (2011). The psychological contract of call-centre workers: Employment conditions, satisfaction and civic virtue behaviours. *Economic and Industrial Democracy*, *32*(1), 115-134.

Checkland, P. (1981). Systems thinking, systems practice.

Cheong, K., Kim, J., & So, S. (2008). A study of strategic call center management: relationship between key performance indicators and customer satisfaction. *European Journal of Social Sciences*, *6*(2), 268-276.

Chicu, D., Valverde, M., Valverde, M., Ryan, G., Ryan, G., & Batt, R. (2016). The service-profit chain in call centre services. *Journal of Service Theory and Practice*, *26*(5), 616-641.

Child, J. (2005). *Organization: contemporary principles and practice*. John Wiley & Sons.

Christensen, L., Fuat Fırat, A., & Torp, S. (2008). The organisation of integrated communications: toward flexible integration. *European Journal of Marketing*, *42*(3/4), 423-452.

Churchman, C. W (1968). *The systems approach*. Delta, New York.

Claver-Cortés, E., Pertusa-Ortega, E. M., & Molina-Azorín, J. F. (2012). Characteristics of organizational structure relating to hybrid competitive strategy: Implications for performance. *Journal of Business Research*, *65*(7), 993-1002.

Clegg, S. R., da Cunha, J. V., & e Cunha, M. P. (2002). Management paradoxes: A relational view. *Human relations*, *55*(5), 483-503.

Cleveland, B. (2012). *Call Center Management on Fast Forward: Succeeding in the New Era of Customer Relationships*. ICMI Press.

Cleveland, B., & Mayben, J. (1997). *Call center management on fast forward: succeeding in today's dynamic inbound environment*. ICMI Inc.

Coelho, F., Easingwood, C., & Coelho, A. (2003). Exploratory evidence of channel performance in single vs multiple channel strategies. *International Journal of retail & distribution management*, *31*(11), 561-573.

Connell, J., & Burgess, J. (Eds.). (2006). *Developments in the call centre industry: Analysis, changes and challenges*. Routledge.

Contact Babel (2012). The UK Contact Centre Decision-Makers' Guide 10th edition - 2012. Retrieved January 17, 2018, from: http://www.contactbabel.com/pdfs/oct2012/The-UK-Contact-Center-Decision-Makers-Guide-2012.pdf

Contact Babel (2015). UK contact centres: 2016-2020. Retrieved January 17, 2018, from: http://www.contactbabel.com/pdfs/dec2015/UK-SOITP-2016-Marketing-v2.pdf

Contact Babel. (2017). The UK Contact Centre Decision-Makers Guide 2017-18. Retrieved January 20, 2018, from: http://www.contactbabel.com/pdfs/nov%2017/UK-CC-DMG-2017-18%20v3.pdf

Contractor, F. J., Kumar, V., Kundu, S. K., & Pedersen, T. (2010). Reconceptualizing the firm in a world of outsourcing and offshoring: The organizational and geographical relocation of high-value company functions. *Journal of Management Studies*, *47*(8), 1417-1433.

Cornell, Camilla (2004), "Offshore Options: Outsourcing operations to overseas providers can save you money or cause you pain. The choice is yours," *Profit*, 23 (4), 87-88.

Coyle, A. (2010). Are you in this country? How “local” social relations can limit the “globalisation” of customer services supply chains. *Antipode*, *42*(2), 289-309.

Creswell, J. W. (2003). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. SAGE Publications.

Cronholm, S., & Salomonson, N. (2014). Measures that matters: service quality in IT service management. *International Journal of Quality and Service Sciences*, *6*(1), 60-76.

Cronin, B., Catchpowle, L., & Hall, D. (2004). Outsourcing, Offshoring-Outsourcing and Offshoring. *CESifo Forum*, 5(2), 17-21.

Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. Sage.

Cullen, S., Wilcocks, L. P., & Lacity, M. C. (2009). Selecting and Leveraging Outsourcing Suppliers. *Information Systems and Outsourcing*, *11*(1), 280-302.

Cunliffe, A. L. (2011). Crafting qualitative research: Morgan and Smircich 30 years on. *Organizational Research Methods*, *14*(4), 647-673.

Curry, A., & Lyon, W. (2008). Call centre service quality for the public: a Scottish framework for the future. *Managing Service Quality: An International Journal*, *18*(2), 194-208.

D’Cruz, P., & Noronha, E. (2012). High commitment management practices re-examined: The case of Indian call centres. *Economic and industrial democracy*, *33*(2), 185-205.

Dalla Pozza, I. (2014). Multichannel management gets “social”. *European Journal of Marketing*, *48*(7/8), 1274-1295.

Darke, P., Shanks, G., & Broadbent, M. (1998). Successfully completing case study research: combining rigour, relevance and pragmatism. *Information systems journal*, *8*(4), 273-289.

Das, D., Nandialath, A., & Mohan, R. (2013). Feeling unsure: quit or stay? Uncovering heterogeneity in employees' intention to leave in Indian call centers. *The international journal of human resource management*, *24*(1), 15-34.

Dašić, D., & Kostić-Stanković, M. (2015). Contact centers organization, communication channels, and contact centers employees. *Bankarstvo*, *44*(1), 116-135.

Davies, P. H. (2001). Spies as informants: Triangulation and the interpretation of elite interview data in the study of the intelligence and security services. *Politics*, *21*(1), 73-80.

D'Cruz, P., & Noronha, E. (2007). Technical call centres: beyond ‘electronic sweatshops’ and ‘assembly lines in the head’. *Global Business Review*, *8*(1), 53-67.

D'Cruz, P., & Noronha, E. (2008). Doing emotional labour: The experiences of Indian call centre agents. *Global Business Review*, *9*(1), 131-147.

De Montmollin, M. (1975). Taylorism and anti-Taylorism. *International Studies of Management & Organization*, *5*(3), 4-15.

Dean, A. M. (2002). Service quality in call centres: implications for customer loyalty. *Managing Service Quality: An International Journal*, *12*(6), 414-423.

Dean, A. M., & Rainnie, A. (2009). Frontline employees' views on organizational factors that affect the delivery of service quality in call centers. *Journal of Services marketing*, *23*(5), 326-337.

Deery, S. J., Iverson, R. D., & Walsh, J. T. (2010). Coping strategies in call centres: Work intensity and the role of co-workers and supervisors. *British Journal of Industrial Relations*, *48*(1), 181-200.

Deery, S., & Kinnie, N. (2002). Call centres and beyond: a thematic evaluation. *Human Resource Management Journal*, *12*(4), 3-13.

Deery, S., & Kinnie, N. (2004). Introduction: The nature and management of call centre work. In *Call centres and human resource management* (pp. 1-22). UK: Palgrave Macmillan

Deery, S., Nath, V., & Walsh, J. (2013). Why do off-shored Indian call centre workers want to leave their jobs?. *New Technology, Work and Employment*, *28*(3), 212-226.

Deming, W. (1982). Out of the crisis. *MIT Center for Advanced Engineering Studies, Cambridge,* Mass.

Dharamdass, S., & Fernando, Y. (2017). Enablers of contact centre service excellence: a practitioner's perspective. *International Journal of Business Excellence*, *11*(3), 381-396.

Dibbern, J., Winkler, J., & Heinzl, A. (2008). Explaining variations in client extra costs between software projects offshored to India. *MIS quarterly*, *32*(2), 333-366.

Dimension Data (2013). Global Contact Centre Benchmarking Report. Retrieved January 17, 2018, from: https://www.dimensiondata.com/Global/Downloadable%20Documents/2013_14_benchmarking%20summary%20report.pdf

Dimension Data (2016). Global Contact Centre Benchmarking Report. Retrieved January 17, 2018, from: https://www.dimensiondata.com/Global/Downloadable%20Documents/2016%20Global%20Contact%20Centre%20Benchmarking%20Report%20Summary.pdf

Dinh, T. L., & Leonard, M. (2009). A Conceptual Framework for Modelling Service Value Creation Networks. In *Proceedings of the 2009 International Conference on Network-Based Information Systems* (pp. 463-468). IEEE Computer Society.

Dintrans, P., Anand, A., & Bhattacharyya, J. (2014). Output- and Outcome-Based Service Delivery and Commercial . Retrieved January 20, 2018, from: https://www.cognizant.com/InsightsWhitepapers/Output-and-Outcome-Based-Service-Delivery-and-Commercial-Models.pdf

Doellgast, V. (2008). National industrial relations and local bargaining power in the US and German telecommunications industries. *European Journal of Industrial Relations*, *14*(3), 265-287.

Doellgast, V. (2010). Collective voice under decentralized bargaining: a comparative study of work reorganization in US and German call centres. *British Journal of Industrial Relations*, *48*(2), 375-399.

Donofrio, N., Sanchez, C., & Spohrer, J. (2010). Collaborative innovation and service systems. In *Holistic engineering education* (pp. 243-269). Springer New York.

Dossani, R., & Kenney, M. (2007). The next wave of globalization: relocating service provision to India. *World Development*, *35*(5), 772-791.

Dossani, R., & Panagariya, A. (2005, January). Globalization and the Offshoring of Services: The Case of India [with Comment and Discussion]. In *Brookings trade forum* (pp. 241-277). Brookings Institution Press.

Downey, J. (2005). *Indian Take-away: Offshore Outsourcing for Small to Medium-sized Enterprises*. UK: Exposure Publishing.

Dvořáková, L., & Faltejsková, O. (2017). Strategic Corporate Performance Management: A Customer-Oriented Approach. *Corporate Governance and Strategic Decision Making*. InTech.

Dyer, W. G., & Wilkins, A. L. (1991). Better stories, not better constructs, to generate better theory: A rejoinder to Eisenhardt. *Academy of management review*, *16*(3), 613-619.

Easterby-Smith, M. P., Thorpe, R., & Jackson, P. (2008). Management research: theory and research.

ECCBP (2012). European Contact Centre Benchmark Platform. Retrieved October 9, 2013, from: http://cdn2.hubspot.net/hub/27327/file-69336109-pdf/docs/EU-CC-Benchmark-Platform-EN-Executive-Summary.pdf

Edvardsson, B., Gustafsson, A., & Roos, I. (2005). Service portraits in service research: a critical review. *International journal of service industry management*, *16*(1), 107-121.

Edwards, R. C., & Edwards, R. (1979). *Contested terrain*. Basic Books.

Eger, L., & Mičík, M. (2017). Customer-oriented communication in retail and Net Promoter Score. *Journal of Retailing and Consumer Services*, (35), 142-149.

Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of management review*, *14*(4), 532-550.

Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of management journal*, *50*(1), 25-32.

Ellis, V., & Taylor, P. (2006). 'You don't know what you've got till it's gone': re-contextualising the origins, development and impact of the call centre. *New Technology, Work and Employment*, *21*(2), 107-122.

Ellway, B. P., & Walsham, G. (2015). A doxa-informed practice analysis: reflexivity and representations, technology and action. *Information Systems Journal*, *25*(2), 133-160.

Fayol, H. (1949). General and industrial administration. New York: Pitman.

Feinberg, R. A., Kim, I. S., Hokama, L., De Ruyter, K., & Keen, C. (2000). Operational determinants of caller satisfaction in the call center. *International Journal of Service Industry Management*, *11*(2), 131-141.

Fells, M. J. (2000). Fayol stands the test of time. *Journal of Management History*, *6*(8), 345-360.

Fenwick, T., Seville, E., & Brunsdon, D. (2009). Reducing the impact of organizational silos on resilience. *Resilient Organizations Research Programme.* New Zealand.

Ferguson, I. (2007). Increasing user choice or privatizing risk? The antinomies of personalization. *British journal of social work*, *37*(3), 387-403.

Fernie, S., & Metcalf, D. (1998). *(Not) hanging on the telephone: payment systems in the new sweatshops*. Centre for Economic Performance, London School of Economics and Political Science.

Fish, K. E., & Seydel, J. (2006). Where IT outsourcing is and where it is going: A study across functions and department sizes. *Journal of Computer Information Systems*, *46*(3), 96-103.

Fisher, J., Miller, K., & Thatcher, A. (2007). Performance monitoring, supervisory support, and job characteristics and their impact on employee well-being amongst four samples of call centre agents in South Africa. *Ergonomics and Health Aspects of Work with Computers*, 48-56.

Fitzgerald, B., & Howcroft, D. (1998). Towards dissolution of the IS research debate: from polarization to polarity. *Journal of Information Technology*, *13*, 313-326.

Fitzgerald, G., & Willcocks, L. (1994). Contracts and Partnerships in the Outsourcing of IT. *ICIS 1994 Proceedings*, 8.

Fitzsimmons, J. A., Fitzsimmons, M. J., & Bordoloi, S. (2008). *Service management: Operations, strategy, and information technology* (p. 4). New York: McGraw-Hill.

Foucault, M. (1977). Discipline and punishment: the birth of the prison, trans. *Alan Sheridan (New York: Vintage-Random House, 1979)*, *217*.

Fox, A. (1974). *Beyond contract: Work, power and trust relations*. Faber & Faber.

Freedman, D. H. (1992). Is management still a science? *Harvard Business Review*, *70*(6), 26.

Frenkel, S. J., Korczynski, M., Shire, K., & Tam, M. (1999). *On the Front Line: Organization of Work in the Information Economy*. Cornell University Press.

Frenkel, S. J., Tam, M., Korczynski, M., & Shire, K. (1998). Beyond bureaucracy? Work organization in call centres. *International Journal of Human Resource Management*, *9*(6), 957-979.

Frenkel, S., & Donoghue, L. (1996). *Call Centres and Service Excellence: Design and Management Challenges to Support a Service Excellence Strategy: A knowledge Worker Case Study*. Centre for Corporate Change, Australian Graduate School of Management, University of New South Wales.

Friends, T. (2013). Turning call centres into learning organizations. *Journal of International*.

Gabisch, J. A., & Gwebu, K. L. (2011). Impact of virtual brand experience on purchase intentions: the role of multichannel congruence. *Journal of Electronic Commerce Research*, *12*(4), 302.

Gable, R. A. (1993). Planning 800 disaster rerouting in distributed call centers. *Bus. Comm. Rev*, *23*, 74-77.

Gadrey, J., & Gallouj, F. (1998). The provider-customer interface in business and professional services. *Service Industries Journal*, *18*(2), 01-15.

Gaiardelli, P., Cavalieri, S., & Saccani, N. (2008). Exploring the relationship between after-sales service strategies and design for X methodologies. *International Journal of Product Lifecycle Management*, *3*(4), 261-278.

Gallouj, F., & Weinstein, O. (1997). Innovation in services. *Research policy*, *26*(4-5), 537-556.

Gans, N., Koole, G., & Mandelbaum, A. (2003). Telephone call centers: Tutorial, review, and research prospects. *Manufacturing & Service Operations Management*, *5*(2), 79-141.

Garson, B. (1988). The Electronic Sweatshop: How Computers are Transforming the Office of Today into the Factory of the Future.

Genesys. (2012). Deploying a Contact Center in the Cloud. Retrieved January 20, 2018, from http://www.genesys.com/resources/whitepapers/deploying-a-contact-center-in-the-cloudin-the-cloud.pdf

Gerpott, T. J., Rams, W., & Schindler, A. (2001). Customer retention, loyalty, and satisfaction in the German mobile cellular telecommunications market. *Telecommunications policy*, *25*(4), 249-269.

Gibson, C. B., & Birkinshaw, J. (2004). The antecedents, consequences, and mediating role of organizational Ambidexterity. *Academy of management Journal*, *47*(2), 209-226.

Gill, J., Johnson, P. and Clark, M.C. (2010) *Research Method for Managers*. 4th

Gilmore, A., & Moreland, L. (2000). Call centres: how can service quality be managed?. *Irish Marketing Review*, *13*(1), 3.

Glucksmann, M. A. (2004). Call configurations: varieties of call centre and divisions of labour. *Work, employment and society*, *18*(4), 795-811.

Glucksmann, M. A. (2009). Formations, connections and divisions of labour. *Sociology*, *43*(5), 878-895.

Goffin, K., & New, C. (2001). Customer support and new product development-An exploratory study. *International Journal of Operations & Production Management*, *21*(3), 275-301.

Goldkuhl, G. (2004). Meanings of pragmatism: Ways to conduct information systems research. *Action in Language, Organisations and Information Systems*.

Golovatchev, J., & Budde, O. (2013). Complexity measurement metric for innovation implementation and product management. *International Journal of Technology Marketing*, *8*(1), 82-98.

González-Benito, J., & Suárez-González, I. (2010). A study of the role played by manufacturing strategic objectives and capabilities in understanding the relationship between Porter's generic strategies and business performance. *British Journal of Management*, *21*(4), 1027-1043.

Graetz, F., & Smith, A. C. (2008). The role of dualities in arbitrating continuity and change in forms of organizing. *International Journal of Management Reviews*, *10*(3), 265-280.

Gray, P. H., & Durcikova, A. (2005). The role of knowledge repositories in technical support environments: Speed versus learning in user performance. *Journal of Management Information Systems*, *22*(3), 159-190.

Grey, C., & Mitev, N. (1995). Management education: A polemic. *Management Learning*, *26*(1), 73-90.

Gronroos, C. (1988). Service quality: The six criteria of good perceived service. *Review of business*, *9*(3), 10.

Gronroos, C. (1990). Service management: a management focus for service competition. *International Journal of Service Industry Management*, *1*(1), 6-14.

Grönroos, C. (1994). From scientific management to service management: a management perspective for the age of service competition. *International Journal of Service Industry Management*, *5*(1), 5-20.

Grönroos, C. (2001). The perceived service quality concept–a mistake?. *Managing Service Quality: An International Journal*, *11*(3), 150-152.

Größler, A., Timenes Laugen, B., Arkader, R., & Fleury, A. (2013). Differences in outsourcing strategies between firms in emerging and in developed markets. *International Journal of Operations & Production Management*, *33*(3), 296-321.

Gulati, R., & Soni, T. (2015). Digitization: A strategic key to business. *Journal of Advances in Business Management*, *1*(2), 60-67.

Hales, C. (2013). Stem Cell, Pathogen or Fatal Remedy? The Relationship of Taylor's Principles of Management to the Wider Management Movement. In *Re-Tayloring Management*. 15-40.

Hammer, M., & Champy, J. (1993). *Reengeneering the corporation*.

Hampson, I., & Junor, A. (2005). Invisible work, invisible skills: interactive customer service as articulation work. *New Technology, Work and Employment*, *20*(2), 166-181.

Hannif, Z., Burgess, J., & Connell, J. (2006). The quality of work life in call centres: A research agenda. In *Proceedings of 2006 ACREW Conference, Prato: Italy*.

Hannif, Z., Burgess, J., & Connell, J. (2008). Call centres and the quality of work life: Towards a research agenda. *Journal of industrial relations*, *50*(2), 271-284.

Hannif, Z., Cox, A., & Almeida, S. (2014). The impact of ICT, workplace relationships and management styles on the quality of work life: insights from the call centre front line. *Labour & Industry: a journal of the social and economic relations of work*, *24*(1), 69-83.

Hannif, Z., McDonnell, A., Connell, J., & Burgess, J. (2013). Teams in call centres: does size make a difference?. *Labour & Industry: a journal of the social and economic relations of work*, *23*(2), 121-136.

Harvey, D. E., Hogan, S. M., & Payseur, J. Y. (1991). Call center solutions. *Bell Labs Technical Journal*, *70*(5), 36-44.

Harvey, W. S. (2010). Methodological approaches for interviewing elites. *Geography Compass*, *4*(3), 193-205.

Hatch, M. J., & Cunliffe, A. L. (2006). *Organization Theory: Modern, Symbolic and Postmodern Perspectives.* Oxford: Oxford University Press.

Hätönen, J. (2009). Making the locational choice: A case approach to the development of a theory of offshore outsourcing and internationalization. *Journal of International Management*, *15*(1), 61-76.

He, Z. L., & Wong, P. K. (2004). Exploration vs. exploitation: An empirical test of the Ambidexterity hypothesis. *Organization science*, *15*(4), 481-494.

Herod, A. (1999). Reflections on interviewing foreign elites: praxis, positionality, validity, and the cult of the insider. *Geoforum*, *30*(4), 313-327.

Hõbe, L., & Alas, R. (2015, February). Management Challenges for the Financial Services Sector. In *International Conference on Management, Leadership & Governance* (p. 103). Academic Conferences International Limited.

Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling*. Univ of California Press.

Hodgkinson, I. R., Ravishankar, M. N., & Aitken-Fischer, M. (2014). A resource-advantage perspective on the orchestration of Ambidexterity. *The Service Industries Journal*, *34*(15), 1234-1252.

Holland, B., & Lambert, D. (2013). How to measure contact center skills using multimedia simulations. In *Simulations for Personnel Selection* (pp. 129-156). Springer New York.

Holman, D. (2002). Employee wellbeing in call centres. *Human Resource Management Journal*, *12*(4), 35-50.

Holman, D. (2003). Call centres. *The new workplace: A guide to the human impact of modern working practices*, 115-134.

Holman, D., Batt, R., & Holtgrewe, U. (2007). The global call center report: International perspectives on management and employment.

Holman, D., Wood, S., & Stride, C. (2005). *Human resource management in call centres*. Institute of Work Psychology, University of Sheffield.

Holtgrewe, U. (2014). New new technologies: the future and the present of work in information and communication technology. *New technology, work and employment*, *29*(1), 9-24.

Holtgrewe, U. (2014). New new technologies: the future and the present of work in information and communication technology. *New technology, work and employment*, *29*(1), 9-24.

Holtgrewe, U., Longen, J., Mottweiler, H., & Schönauer, A. (2009). Global or embedded service work? the (limited) transnationalisation of the call-centre industry. *Work Organisation, Labour and Globalisation*, *3*(1), 9-25.

Houlihan, M. (2001). Managing to manage? Stories from the call centre floor. *Journal of European Industrial Training*, *25*(2/3/4), 208-220.

Houlihan, M. (2004). Tensions and variations in call centre management strategies. In *Call centres and human resource management* (pp. 75-101). Palgrave Macmillan UK.

Howard, M., & Worboys, C. (2003). Self-service–a contradiction in terms or customer-led choice?. *Journal of Consumer Behaviour*, *2*(4), 382-392.

Howcroft, D., & Richardson, H. (2008). Gender matters in the global outsourcing of service work. *New Technology, Work and Employment*, *23*(1-2), 44-60.

Hsu, C. F., & Peng, C. H. (2012). A case study of using 7S framework to improve business process for call centre reforming. *International Journal of Enterprise Network Management*, *5*(1), 17-32.

Hudson, A. (2011). Are call centres the factories of the 21st Century? Retrieved December 23, 2017, from http://www.bbc.co.uk/news/magazine-12691704

Hughes, T. (2006). New channels/old channels: Customer management and multi-channels. *European Journal of Marketing*, *40*(1/2), 113-129.

Hultgren, A. K., & Cameron, D. (2010). Communication skills in contemporary service workplaces: Some problems. *Globalisation, communication and the workplace: Talking across the world.* London: Continuum International Publishing Group, 41-57.

Huo, J., & Hong, Z. (2013). The Rise of Service Science. In *Service Science in China* (pp. 39-68). Springer Berlin Heidelberg.

Hutchinson, S., Purcell, J., & Kinnie, N. (2000). Evolving high commitment management and the experience of the RAC call centre. *Human Resource Management Journal*, *10*(1), 63-78.

Huws, U., Flecker, J., & Dahlmann, S. (2004). Status report on outsourcing of ICT and related services in the EU. *Dublin, European Foundation for the Improvement of Living and Working Conditions*.

Ibrahim, R., Regnard, N., L'Ecuyer, P., & Shen, H. (2012, December). On the modeling and forecasting of call center arrivals. In *Proceedings of the Winter Simulation Conference* (p. 23). Winter Simulation Conference.

ICS (2015). UK Customer Satisfaction Index - January 2015. Retrieved January 17, 2018, from: https://www.instituteofcustomerservice.com/research-insight/research-library/uk-csi-executive-summary-january-2015

Inman, J. J., Shankar, V., & Ferraro, R. (2004). The roles of channel-category associations and geodemographics in channel patronage. *Journal of Marketing*, *68*(2), 51-71.

Iqbal, Z., & Dad, A. M. (2013). Outsourcing: A review of trends, winners & losers and future directions. *International Journal of Business and Social Science*, *4*(8).

Jaaron, A. A., & Backhouse, C. J. (2011b). Systems thinking for call centre service design: affective commitment implications in manufacturing enterprises. *The Service Industries Journal*, *31*(4), 613-628.

Jaaron, A. A., & Backhouse, C. J. (2013). Systems Thinking for Service Delivery Design: A Real Time Mass Customisation Model. *IFAC Proceedings Volumes*, *46*(9), 228-233.

Jaaron, A. A., & Backhouse, C. J. (2014). Service organisations resilience through the application of the vanguard method of systems' thinking: a case study approach. *International Journal of Production Research*, *52*(7), 2026-2041.

Jaaron, A., & Backhouse, C. (2009). Systems thinking for call centre service operations: implications for affective commitment in manufacturing enterprises. In *19th International Conference of RESER - Public and Private Services in the New Global Economy,* 24-26.

Jaaron, A., & Backhouse, C. (2010). Lean manufacturing in public services: prospects for value creation. *Exploring Services Science*, 45-57.

Jaaron, A., & Backhouse, C. (2011a). A comparison of competing structural models in call centres: prospects for value creation. *International Journal of Services and Operations Management*, *10*(3), 294-315.

Jack, E. P., Bedics, T. A., & McCary, C. E. (2006). Operational challenges in the call center industry: a case study and resource-based framework. *Managing Service Quality: An International Journal*, *16*(5), 477-500.

Jackson, M. C. (2009). Fifty years of systems' thinking for management. *Journal of the Operational Research Society*, *60*(1), 24-32.

Jahns, C., Hartmann, E., & Bals, L. (2006). Offshoring: Dimensions and diffusion of a new business concept. *Journal of Purchasing and Supply Management*, *12*(4), 218-231.

Jaiswal, A. K. (2008). Customer satisfaction and service quality measurement in Indian call centres. *Managing Service Quality: An International Journal*, *18*(4), 405-416.

Jansen, A. (2015). *Implicit leadership theories, leader-member exchange and its workplace outcomes: a case of South African call centre agents* (Doctoral dissertation).

Jansen, A., & Callaghan, C. W. (2014). Call centre job differences. *Mediterranean Journal of Social Sciences*, *5*(20), 466.

Jansen, J. J., Tempelaar, M. P., Van den Bosch, F. A., & Volberda, H. W. (2009). Structural differentiation and Ambidexterity: The mediating role of integration mechanisms. *Organization Science*, *20*(4), 797-811.

Jansen, J. J., Van Den Bosch, F. A., & Volberda, H. W. (2005). Managing potential and realized absorptive capacity: how do organizational antecedents matter?. *Academy of management journal*, *48*(6), 999-1015.

Jarman, J., Butler, E., & Clairmont, D. (1998). From fish and forestry to phones and the new information economy in maritime Canada. In *Work Employment and Society Conference.* Cambridge University, Cambridge.

Järvensivu, T., & Törnroos, J. Å. (2010). Case study research with moderate constructionism: Conceptualization and practical illustration. *Industrial marketing management*, *39*(1), 100-108.

Jasmand, C., Blazevic, V., & de Ruyter, K. (2012). Generating sales while providing service: A study of customer service representatives' ambidextrous behavior. *Journal of Marketing*, *76*(1), 20-37.

Jason, B., & Calitz, A. (2009). A model for the adaptation of contact centre computer user interfaces. *Strengthening the Role of ICT in Development*, 152.

Jayaraman, R., & Mahajan, A. (2015). The SMAC Revolution in New Generation Call Centres. *MERC Global's International Journal of Social Science & Management*, *2*(1), 24-42.

Jena, F., & Reilly, B. (2013). The determinants of United Kingdom student visa demand from developing countries. *IZA Journal of Labor & Development*, *2*(1), 6.

Jenkins, P., & Kavanagh, M. (2011). Santander shifts India call centre back to UK. Retrieved December 2, 2013, from: http://www.ft.com/cms/s/0/f08f6bf6-a996-11e0-a04a-00144feabdc0.html#axzz2kqJyq6Ei

Jenkins, S., Delbridge, R., & Roberts, A. (2010). Emotional management in a mass customised call centre: examining skill and knowledgeability in interactive service work. *Work, employment and society*, *24*(3), 546-564.

Jeong, J., Bekmamedova, N., & Kurnia, S. (2012, January). Exploring the current status of call centre offshoring research: a research agenda and future directions. In *ACIS 2012: Location, location, location: Proceedings of the 23rd Australasian Conference on Information Systems 2012* (pp. 1-10). ACIS.

Jobs, C., Burris, D., & Butler, D. (2007). The social and economic impact of the call center industry in Ireland. *International Journal of Social Economics*, *34*(4), 276-289.

Johnson, P., & Duberley, J. (2000). *Understanding management research: An introduction to epistemology*. Sage.

Johnston, C. (2015). O2 deal threatens mobile competition - BBC News. Retrieved January 19, 2018, from: http://www.bbc.co.uk/news/business-34428141

Johnston, R. (1994). Operations: from factory to service management. *International Journal of Service Industry Management*, *5*(1), 49-63.

Kakabadse, A., & Kakabadse, N. (2002). Trends in outsourcing:: Contrasting USA and Europe. *European management journal*, *20*(2), 189-198.

Kakabadse, N., & Kakabadse, A. (2006). Global IT Sourcing: Analysis, Developments and Best-Practice Considerations. *Global outsourcing strategies: An international reference on effective outsourcing relationships*, 49.

Kalaignanam, K., & Varadarajan, R. (2012). Offshore outsourcing of customer relationship management: conceptual model and propositions. *Journal of the Academy of Marketing Science*, *40*(2), 347-363.

Kallberg, M. (2013). Issues with contact centres–as a new interface between public organisations and citizens. *Records Management Journal*, *23*(2), 90-103.

Katzan Jr, H. (2008). *Foundations of Service Science: A Pragmatic Approach*. iUniverse.

Keiningham, T. L., Cooil, B., Andreassen, T. W., & Aksoy, L. (2007). A longitudinal examination of net promoter and firm revenue growth. *Journal of Marketing*, *71*(3), 39-51.

Kennedy, C. (2002). Name and shame: if you outsource, beware. Your brand may be in tatters through appalling customer service–and you may never know it. *Director*, *56*(5), 23.

Kenney, M., Massini, S., & Murtha, T. P. (2009). INTRODUCTION Offshoring administrative and technical work: New fields for understanding the global enterprise. *Journal of International Business Studies*, *40*(6), 887-900.

Kern, T., & Willcocks, L. (2001). *The relationship advantage: Information technologies, sourcing, and management*. New York: Oxford University Press.

Kernaghan, K., & Berardi, J. (2001). Bricks, clicks and Calk: Clustering services for citizen-centred delivery. *Canadian Public Administration*, *44*(4), 417-440.

Key Note (2015). contact centres. Retrieved April 14, 2017, from: https://www.keynote.co.uk/market-report/business-services/contact-centres

Kim, E., Nam, D. I., & Stimpert, J. L. (2004). Testing the applicability of Porter's generic strategies in the digital age: A study of Korean cyber malls. *Journal of Business Strategies*, *21*(1), 19.

Kim, H. (2007). The knowledge-led accumulation regime: A theory of contemporary capitalism. *Institute for Research on Labor and Employment*.

King, N. (2004). Using Interviews in Quatitative Research. *Essential guide to qualitative methods in organizational research*, *2*.

Kinnie, N., Hutchinson, S., & Purcell, J. (2000). 'Fun and surveillance': the paradox of high commitment management in call centres. *International Journal of Human Resource Management*, *11*(5), 967-985.

Kinnie, N., Purcell, J., & Adams, M. (2008). Explaining employees' experience of work in outsourced call centres: the influence of clients, owners and temporary work agencies. *Journal of Industrial Relations*, *50*(2), 209-227.

Kjellberg, A., Toomingas, A., Norman, K., Hagman, M., Herlin, R. M., & Tornqvist, E. W. (2010). Stress, energy and psychosocial conditions in different types of call centres. *Work*, *36*(1), 9-25.

Klassen, K. J., & Rohleder, T. R. (2001). Combining operations and marketing to manage capacity and demand in services. *Service Industries Journal*, *21*(2), 1-30.

Knemeyer, A. M., & Naylor, R. W. (2011). Using behavioral experiments to expand our horizons and deepen our understanding of logistics and supply chain decision making. *Journal of Business Logistics*, *32*(4), 296-302.

Knights, D. (2010). Sustainability of the international sourcing model. *Organizing and Managing in the Era of Globalization*, 111.

Knights, D., & McCabe, D. (2003). Governing through teamwork: Reconstituting subjectivity in a call centre. *Journal of Management Studies*, *40*(7), 1587-1619.

Koh, S. L., Gunasekaran, A., Thomas, A., & Arunachalam, S. (2005). The application of knowledge management in call centres. *Journal of Knowledge Management*, *9*(4), 56-69.

Kolesar, P. J., & Green, L. V. (1998). Insights on service system design from a normal approximation to Erlang's delay formula. *Production and Operations Management*, *7*(3), 282-293.

Koole, G., & Mandelbaum, A. (2002). Queueing models of call centers: An introduction. *Annals of Operations Research*, *113*(1), 41-59.

Korczynski, M. (2001). The contradictions of service work: call centre as customer-oriented bureaucracy. *Customer Service: empowerment and entrapment*, 79-101.

Korczynski, M. (2003). Communities of coping: collective emotional labour in service work. *Organization*, *10*(1), 55-79.

Korczynski, M. (2005). Skills in service work: an overview. *Human Resource Management Journal*, *15*(2), 3-14.

Koskina, A. (2006). 10 How ‘Taylorised’is call centre work?. *Developments in the call centre industry: analysis, changes and challenges*, 170.

Koskina, A., & Keithley, D. (2010). Emotion in a call centre SME: A case study of positive emotion management. *European Management Journal*, *28*(3), 208-219.

Kouropalatis, Y., Hughes, P., & Morgan, R. E. (2012). Pursuing “flexible commitment” as strategic Ambidexterity: An empirical justification in high technology firms. *European Journal of Marketing*, *46*(10), 1389-1417.

Kumar, V., Dalla Pozza, I., Petersen, J. A., & Shah, D. (2009). Reversing the logic: The path to profitability through relationship marketing. *Journal of Interactive Marketing*, *23*(2), 147-156.

Lacity, M. C., & Hirschheim, R. A. (1993). *Information systems outsourcing; myths, metaphors, and realities*. John Wiley & Sons.

Lacity, M. C., Willcocks, L. P., & Rottman, J. W. (2008). Global outsourcing of back office services: lessons, trends, and enduring challenges. *Strategic Outsourcing: An International Journal*, *1*(1), 13-34.

Lacity, M., & Willcocks, L. (2012). Outsourcing business and IT services: the evidence of success, robust practices and contractual challenges. *Legal Information Management*, *12*(1), 2-8.

Lampel, J., & Bhalla, A. (2011). Living with offshoring: The impact of offshoring on the evolution of organizational configurations. *Journal of World Business*, *46*(3), 346-358.

Langley, S., Fjalestad, E., Fichtner, B., & Hart, M. (2006). Contact centre performance: In pursuit of first call resolution. *Management Dynamics: Journal of the Southern African Institute for Management Scientists*, *15*(4), 17-28.

Lankford, W. M., & Parsa, F. (1999). Outsourcing: a primer. *Management Decision*, *37*(4), 310-316.

Lankshear, G., Cook, P., Mason, D., Coates, S., & Button, G. (2000). Call centre: something old, something new, what's different, what's true?. In *Labour Process Conference, University of Strathclyde*.

Larner, W. (2002). Calling capital: call centre strategies in New Brunswick and New Zealand. *Global Networks*, *2*(2), 133-152.

Larsen, M. M., Manning, S., & Pedersen, T. (2013). Uncovering the hidden costs of offshoring: The interplay of complexity, organizational design, and experience. *Strategic Management Journal*, *34*(5), 533-552.

Laureani, A., Antony, J., & Douglas, A. (2010). Lean six sigma in a call centre: a case study. *International journal of productivity and performance management*, *59*(8), 757-768.

Leech, B. L. (2002). Asking questions: Techniques for semi-structured interviews. *PS: Political Science & Politics*, *35*, 665–668.

Leffingwell, W. H. (1917). *Scientific office management* ,*1*, AW Shaw Company.

Legard, R., Keegan, J., & Ward, K. (2003). In-depth interviews. *Qualitative research practice: A guide for social science students and researchers*, 138-169.

Lele, M. M. (1997). After-sales service-necessary evil or strategic opportunity?. *Managing Service Quality: An International Journal*, *7*(3), 141-145.

Lewin, A. Y., & Peeters, C. (2006). Offshoring work: business hype or the onset of fundamental transformation?. *Long Range Planning*, *39*(3), 221-239.

Lilleker, D. G. (2003). Interviewing the political elite: Navigating a potential minefield. *Politics*, *23*(3), 207–214.

Lloyd, A. (2016). Understanding the Post-Industrial Assembly Line: A Critical Appraisal of the Call Centre. *Sociology Compass*, *10*(4), 284-293.

Lloyd, C., & Payne, J. (2009). 'Full of sound and fury, signifying nothing' interrogating new skill concepts in service work—the view from two UK call centres. *Work, Employment and Society*, *23*(4), 617-634.

LMR (2012). Contact Centre Operations, Labour Market Report. Retrieved October, 16, 2013, from http://www.oph.fi/download/145729_Contact_Centres_LMI_2012_.pdf

Lomba, C. (2005). Beyond the debate over 'post'-vs 'neo'-Taylorism: The contrasting evolution of industrial work practices. *International Sociology*, *20*(1), 71-91.

Lonsdale, C., & Cox, A. (2000). The historical development of outsourcing: the latest fad?. *Industrial management & data systems*, *100*(9), 444-450.

Lorelly, N. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*, *16*(1), 1609406917733847.

Lovelock, C., & Wirtz, J. (2004). Services Marketing: People. *Technology, Strategy*, *5*.

Mack, D., & Bateson, C. (2002). *Understanding the Contact Centre Environment*. Financial World.

Madsen, E. S., & Slepniov, D. (2011). The Path from Outsourcing to Backsourcing: Debating its Logic and Considerations. *Det Danske Ledelsesakademi*, 1-12.

Maglio, P. P., & Spohrer, J. (2008). Fundamentals of service science. *Journal of the academy of marketing science*, *36*(1), 18-20.

Maglio, P. P., Srinivasan, S., Kreulen, J. T., & Spohrer, J. (2006). Service systems, service scientists, SSME, and innovation. *Communications of the ACM*, *49*(7), 81-85.

Maglio, P. P., Vargo, S. L., Caswell, N., & Spohrer, J. (2009). The service system is the basic abstraction of service science. *Information Systems and e-business Management*, *7*(4), 395-406.

Malhotra, N., & Mukherjee, A. (2003). Analysing the commitment–service quality relationship: a comparative study of retail banking call centres and branches. *Journal of Marketing Management*, *19*(9-10), 941-971.

Malhotra, N., & Mukherjee, A. (2004). The relative influence of organisational commitment and job satisfaction on service quality of customer-contact employees in banking call centres. *Journal of services Marketing*, *18*(3), 162-174.

Manzoor, A. K., & Shahabudeen, P. (2014). A Study on Key Performance Indicators and their Influenceon Customer Satisfaction in Call Centres. *International Journal of Economic Research*, *11*(2).

Marr, B., & Neely, A. (2004). *Managing and measuring for value: The case of call centre performance*. Cranfield School of Management and Fujitsu.

Marshall, C., & Rossman, G. B. (2014). *Designing qualitative research*. Sage publications.

Marshall, J. N., & Richardson, R. (1996). The impact of ‘telemediated’services on corporate structures: the example of ‘branchless’ retail banking in Britain. *Environment and Planning A*, *28*(10), 1843-1858.

Marx, R., Vasconcellos, L. H. R., & Lara, F. F. D. (2015). Can the call centre contribute to innovation? A multiple case study in service companies. *International Journal of Business Excellence*, *8*(3), 251-267.

Mayo, E. (1933). The human problems of an industrial organization. *New York: McMillan*.

McAdam, R., Davies, J., Keogh, B., & Finnegan, A. (2009). Customer-orientated Six Sigma in call centre performance measurement. *International Journal of Quality & Reliability Management*, *26*(6), 516-545.

McGuire, D., & McLaren, L. (2009). The impact of physical environment on employee commitment in call centres: The mediating role of employee well-being. *Team Performance Management: An International Journal*, *15*(1/2), 35-48.

McIvor, R. (2010). *Global services outsourcing*. Cambridge: University Press.

McIvor, R. (2013). What do we know about services outsourcing. *ICAS, Edinburgh*.

McLaughlin, D., & Peppard, J. (2006, June). IT Backsourcing: from'make or buy' to 'bringing it back in-house'. *ECIS 2006* , 1735-1746.

McPhail, B. (2002). What is on the line in call centres studies? A review of key issues in the academic literature. *Faculty of Information Studies,* University of Toronto: Toronto-Canada. Obtenido desde.

Melnic, E. L. (2016). The Science of Customer Satisfaction in the Retail Banking System-A Critical Comparison between the Two International Indexes: Net Promoter Score (NPS) and American Customer Satisfaction Index (ACSI). *Journal of Emerging Trends in Marketing and Management*, *1*(1), 215-223.

Metters, R. (2008). A typology of offshoring and outsourcing in electronically transmitted services. *Journal of Operations Management*, *26*(2), 198-211.

Michael, S., & Mariappan, V. (2012). Strategic role of capacity management in electricity service centre using Markovian and simulation approach. *International Journal of Business and Systems Research*, *6*(1), 59-88.

Miciak, A., & Desmarais, M. (2001). Benchmarking service quality performance at business-to-business and business-to-consumer call centers. *Journal of Business & Industrial Marketing*, *16*(5), 340-353.

Mihalache, M., & Mihalache, O. R. (2016). A decisional framework of offshoring: integrating insights from 25 years of research to provide direction for future. *Decision Sciences*, *47*(6), 1103-1149.

Mikecz, R. (2012). Interviewing elites: Addressing methodological issues. *Qualitative inquiry*, *18*(6), 482-493.

Miles, I. (2007). Research and development (R&D) beyond manufacturing: the strange case of services R&D. *R&D Management, 37*(3), 249-268.

Miles, I., & Boden, M. (2000). Introduction: Are services special?. *Services and the knowledge-based economy*, *1*(1), 1-20.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. sage.

Millard, N., & Alcock, T. (2015). The omni-channel swap shop. Retrieved December 23, 2017, from: https://www.globalservices.bt.com/uk/en/point-of-view/omnichannel-swap-shop

Miller, N. B. (2014). *The impact of the workplace environment on the emotional and physical wellbeing of call centre agents in the Cape Metropole* (Doctoral dissertation, Cape Peninsula University of Technology).

Miller, N., & Hendrickse, R. (2016). Differences in call centre agents' perception of their job characteristics, physical work environment and wellbeing. *Problems and Perspectives in Management, Volume* 14(1), 51-63.

Minkara, O. (2013). The Hidden ROI of a Cloud-based Contact Center. *Aberdeen Group*.

Mintzberg, H. (1980). Structure in 5's: A Synthesis of the Research on Organization Design. *Management science*, *26*(3), 322-341.

Miozzo, M., & Ramirez, M. (2003). Services innovation and the transformation of work: the case of UK telecommunications. *New Technology, Work and Employment*, *18*(1), 62-79.

Misra, R. B. (2004). Global IT outsourcing: Metrics for success of all parties. *Journal of Information Technology Case and Application Research*, *6*(3), 21-34.

Moberg, A., Rapp, B., Stoltz, C., & Suomi, R. (2004). On Locations of Call Centres. *Building the E-Service Society*, 203-223.

Molnar, G., Jakobović, D., & Pavelić, M. (2016, March). Workforce Scheduling in Inbound Customer Call Centres with a Case Study. In *European Conference on the Applications of Evolutionary Computation* (pp. 831-846). Springer, Cham.

Morgan, D. L. (2014). Pragmatism as a paradigm for social research. *Qualitative Inquiry*, *20*(8), 1045-1053.

Morris, H. (2016). The Influence of Taylor on UK Business and Management Education. *Re-Tayloring Management: Scientific management a Century On*, 41.

Morris, Z. S. (2009). The truth about interviewing elites. *Politics*, *29*(3), 209-217.

Moussa, S., & Touzani, M. (2010). A literature review of service research since 1993. *Journal of Service Science*, *2*(2), 173-212.

Mulholland, K. (2002). Gender, emotional labour and teamworking in a call centre. *Personnel Review*, *31*(3), 283-303.

Mullings, B. (1999). Insider or outsider, both or neither: some dilemmas of interviewing in a cross-cultural setting. *Geoforum*, *30*(4), 337-350.

Mustosmäki, A., Anttila, T., & Oinas, T. (2013). Engaged or not? A comparative study on factors inducing work engagement in call center and service sector work. *Nordic Journal of Working Life Studies*, *3*(1), 49.

Ng, I. C., & Maull, R. (2009). Embedding the new discipline of service science: A service science research agenda. In *Service Operations, Logistics and Informatics, 2009. SOLI'09. IEEE/INFORMS International Conference,* 68-73.

Ng, I. C., Maull, R., & Yip, N. (2009). Outcome-based contracts as a driver for systems' thinking and service-dominant logic in service science: Evidence from the defence industry. *European Management Journal*, *27*(6), 377-387.

Ng, I., & Briscoe, G. (2012). Value, Variety and Viability: New Business Models for Co-Creation in Outcome-based Contracts. *International Journal of Service Science, Management, Engineering, and Technology (IJSSMET)*, *3*(3), 26-48.

Ng, I., Maull, R., & Smith, L. (2011). Embedding the new discipline of service science. In *The science of service systems* (pp. 13-35). Springer US.

Ng, I., Parry, G., Smith, L., Maull, R., & Briscoe, G. (2012). Transitioning from a goods-dominant to a service-dominant logic: Visualising the value proposition of Rolls-Royce. *Journal of Service Management*, *23*(3), 416-439.

Nicholson, B., & Aman, A. (2008). *Offshore accounting outsourcing: the case of India* (pp. 1-17). Centre for Business Performance.

Niranjan, T. T., Saxena, K. B. C., & Bharadwaj, S. S. (2007). Process-oriented taxonomy of BPOs: an exploratory study. *Business Process Management Journal*, *13*(4), 588-606.

Normann, R. (1984). *Service management* . Chichester: Wiley.

Noronha, E., & D'Cruz, P. (2006). Organising call centre agents: Emerging issues. *Economic and Political Weekly*, 2115-2121.

Noronha, E., & D'Cruz, P. (2009). *Employee identity in Indian call centres: The notion of professionalism*. SAGE Publications India.

Nyland, C. (1996). Taylorism, John R. Commons, and the Hoxie Report. *Journal of Economic Issues*, *30*(4), 985-1016.

Of Com. (2016). The Communications Market Report 2016. Retrieved January 20, 2018, from https://www.ofcom.org.uk/research-and-data/multi-sector-research/cmr/cmr16

Ohno, T. (1988). *Toyota production system: beyond large-scale production*. crc Press.

Olsen, K. (2006). *Productivity Impacts of Offshoring and Outsourcing: A Review*. OECD Publishing.

Oshri, I., Kotlarsky, J., & Willcocks, L. P. (2009). *The handbook of global outsourcing and offshoring*. New York: Palgrave Macmillan.

Oshri, I., Kotlarsky, J., & Willcocks, L. P. (2015). *The Handbook of Global Outsourcing and Offshoring 3/E*. Springer.

Owens, A. R. (2014). Exploring the benefits of contact centre offshoring: a study of trends and practices for the Australian business sector. *The International Journal of Human Resource Management*, *25*(4), 571-587.

Panda, Aruna Kumar. "Business process outsourcing: a strategic review on Indian perspective." *Business Process Management Journal* 18.6 (2012): 876-897.

Parikh, V., & Walton, J. (2011). A phenomenological study of the impact of knowledge intensity and environmental velocity on in source or hosted contact centres. In *Proceedings of the IADIS international conference on Information Systems 2012*, 393-398.

Parikh, V. & Walton, J. (2012). Psychological contract and knowledge management mediated by cultural dynamics. In *Proceedings of the 13th European Conference on Knowledge Management*, 923-932.

Parker, L. D., & Ritson, P. A. (2005). Revisiting Fayol: anticipating contemporary management. *British Journal of Management*, *16*(3), 175-194.

Parry, G., McLening, M., Caldwell, N., & Thompson, R. (2011). Complex deployed responsive service. In *Service Design and Delivery*, 95-117.

Patel, R. (2010). *Working the night shift: Women in India's call center industry*. Stanford University Press.

Patel, S., Xing, Y., & Patel, D. (2011). A Performance Measurement Framework For UK contact centres. In *PACIS Proceedings,* 149.

Paton, S. (2012). Introducing Taylor to the knowledge economy. *Employee Relations*, *35*(1), 20-38.

Pawson, R., & Tilley, N. (2004). How to construct realistic data. *Realistic Evaluation*.

Payne, A., & Frow, P. (1999). Developing a segmented service strategy: improving measurement in relationship marketing. *Journal of Marketing Management*, *15*(8), 797-818.

Payne, A., & Frow, P. (2004). The role of multichannel integration in customer relationship management. *Industrial marketing management*, *33*(6), 527-538.

Payne, J. (2015). Evolution of the Contact Centre - Enghouse Interactive. Retrieved January 20, 2018, from http://www.enghouseinteractive.com/wp-content/uploads/2015/07/WHITEPAPER-The-Evolution-of-the-Contact-Centre.pdf

Peaucelle, J. L. (2000). From Taylorism to post-Taylorism: Simultaneously pursuing several management objectives. *Journal of Organizational Change Management*, *13*(5), 452-467.

Peppard, J., & Ward, J. (2016). *The strategic management of information systems: Building a digital strategy*. John Wiley & Sons.

Pfeffer, J. (2007). A modest proposal: How we might change the process and product of managerial research. *Academy of Management Journal*, *50*(6), 1334-1345.

Piercy, N., & Rich, N. (2009). High quality and low cost: the lean service centre. *European Journal of Marketing*, *43*(11/12), 1477-1497.

Piers William Ellway, B. (2014). Is the quantity-quality trade-off in call centres a false dichotomy?. *Managing Service Quality*, *24*(3), 230-251.

Pitman, G. E. (2002). Outsider/insider: the politics of shifting identities in the research process. *Feminism & Psychology*, *12*(2), 282-288.

Porter, M. E. (1980). Competitive strategy: Techniques for analyzing industries and competition. *Free Press New York*.

Prabhakar, P. R., Sheehan, M. J., & Coppett, J. I. (1997). The power of technology in business selling: call centres. *Journal of Business and Industrial Marketing*, *12*(3), 222-235.

Price, B., & Jaffe, D. (2011). *The best service is no service: how to liberate your customers from customer service, keep them happy, and control costs*. John Wiley & Sons.

Procter, R., Wherton, J., Greenhalgh, T., Sugarhood, P., Rouncefield, M., & Hinder, S. (2016). Telecare call centre work and ageing in place. *Computer Supported Cooperative Work (CSCW)*, *25*(1), 79-105.

Procter, S. J., & Mueller, F. (Eds.). (2000). *Teamworking*. St. Martin's Press.

Pruijt, H. (1999, September). Teams between Anti-Taylorism and Neo-Taylorism. In *Third International Workshop on Teamworking, School of Management, Royal Holloway and University of London* (pp. 14-15).

Pruijt, H. (2000). Repainting, modifying, smashing Taylorism. *Journal of Organizational Change Management*, *13*(5), 439-451.

Pruijt, H. D. (1997). *Job design and technology: Taylorism vs. anti-Taylorism* (Vol. 4). Psychology Press.

Pugh, J., Mitchell, M., & Brooks, F. (2000). Insider/outsider partnerships in an ethnographic study of shared governance. *Nursing Standard*, *14*(27), 43-44.

Qu, S. Q., & Dumay, J. (2011). The qualitative research interview. *Qualitative research in accounting & management*, *8*(3), 238-264.

Quinn, J. B. (1988). Technology in services: Past myths and future challenges.Technological *Forecasting and Social Change, 34*(4), pp. 327-350.

Quinn, J. B., & Hilmer, F. G. (1994). Strategic outsourcing. *Sloan management review*, *35*(4), 43.

Raiborn, C. A., Butler, J. B., & Massoud, M. F. (2009). Outsourcing support functions: Identifying and managing the good, the bad, and the ugly. *Business Horizons*, *52*(4), 347-356.

Raisch, S., & Birkinshaw, J. (2008). Organizational Ambidexterity: Antecedents, outcomes, and moderators. *Journal of management*, *34*(3), 375-409.

Ray, B. (2011). Brits love their phones, but spend less than ten years ago. *The Register.* Retrieved January 25, 2018, from: https://forums.theregister.co.uk/forum/1/2011/08/04/ofcom_report/#c_1138615

Raz, A. E., & Blank, E. (2007). Ambiguous professionalism: managing efficiency and service quality in an Israeli call centre. *New Technology, Work and Employment*, *22*(1), 83-96.

Reichheld, F. F. (2003). The one number you need to grow. *Harvard business review*, *81*(12), 46-55.

Ren, Z. J., & Zhou, Y. P. (2008). Call center outsourcing: Coordinating staffing level and service quality. *Management Science*, *54*(2), 369-383.

Reynolds, M., & Holwell, S. (Eds.). (2010). *Systems approaches to managing change: a practical guide*. Springer Science & Business Media.

Richards, D. (1996). Elite interviewing: Approaches and pitfalls. *Politics*, *16*(3), 199–204.

Richardson, H. J., & Howcroft, D. (2006). The contradictions of CRM–a critical lens on call centres. *Information and Organization*, *16*(2), 143-168.

Richardson, R., & Marshall, J. N. (1996). The growth of telephone call centres in peripheral areas of Britain: evidence from Tyne and Wear. *Area*, 308-317.

Richardson, R., & Marshall, J. N. (1999). Teleservices, call centres and urban and regional development. *Service Industries Journal*, *19*(1), 96-116.

Richardson, R., Belt, V., & Marshall, N. (2000). Taking calls to Newcastle: the regional implications of the growth in call centres. *Regional Studies*, *34*(4), 357-369.

Rijo, R. (2011). Contact Centers: Tool for Effective E-Business. In *Innovations in SMEs and Conducting E-Business: Technologies, Trends and Solutions* (pp. 98-115). IGI Global.

Rijo, R., Varajão, J., & Gonçalves, R. (2012). Contact center: information systems design. *Journal of Intelligent Manufacturing*, *23*(3), 497-515.

Robinson, G., & Morley, C. (2006). Call centre management: responsibilities and performance. *International Journal of Service Industry Management*, *17*(3), 284-300.

Robinson, G., & Morley, C. (2007). Running the electronic sweatshop: Call centre managers' views on call centres. *Journal of Management & Organization*, *13*(3), 249-263.

Robinson, M., & Kalakota, R. (2004). *Offshore outsourcing: Business models, ROI and best practices*. Mivar Press.

Robinson, M., Kalakota, R., & Sharma, S. (2005). *Global outsourcing: executing an onshore, nearshore or offshore strategy*. Mivar Press.

Robson, C. (2011). *Real world research: A resource for users of social research methods in applied settings 3/e*. West Sussex: John Wiley & Sons.

Rod, M., & Ashill, N. J. (2013). The impact of call centre stressors on inbound and outbound call-centre agent burnout. *Managing Service Quality: An International Journal*, *23*(3), 245-264.

Romero, D. (2014). contact centres Employ 3.7 Million People in Europe. Retrieved December 23, 2017, from https://www.callcentrehelper.com/contact-centres-employ-3-7-million-people-in-europe-65271.htm

Rose, E., & Wright, G. (2005). Satisfaction and dimensions of control among call centre customer service representatives. *The International Journal of Human Resource Management*, *16*(1), 136-160.

Rose, S., Spinks, N., & Canhoto, A. I. (2014). *Management research: Applying the principles*. Routledge.

Rosemann, M., Vessey, I., Wyssusek, B., & Weber, R. (2005). Reconsidering the notion of requirements engineering for enterprise systems selection and implementation. In *16th Australasian Conference on Information Systems (ACIS 2005)*. Australasian Chapter of the Association for Information Systems.

Russell, B. (2002). The talk shop and shop talk: Employment and work in a call centre. *The Journal of Industrial Relations*, *44*(4), 467-490.

Russell, B. (2004). Are all call centres the same?. *Labour & Industry: a journal of the social and economic relations of work*, *14*(3), 91-109.

Russell, B. (2006). Skill and info-service work in Australian call centres. *Developments in the Call Centre Industry. London: Routledge*, 92-116.

Russell, B. (2008). Call centres: A decade of research. *International journal of management reviews*, *10*(3), 195-219.

Russell, B., & Thite, M. (2008). The next division of labour: work skills in Australian and Indian call centres. *Work, Employment and Society*, *22*(4), 615-634.

Russell, B., & Townsend, K. (2003) ‘Cheating the system’, Getting the Work Done: Challenging Management and Technology in a Call Centre. *TASA 2003 Conference,* University of New England.

Saari, T., & Pyöria, P. (2015). Causes and preconditions for organisational commitment in knowledge work-a comparison of two expert organisations. *International Journal of Work Innovation*, *1*(3), 271-286.

Saberi, M., Khadeer Hussain, O., Khadeer Hussain, O., Chang, E., & Chang, E. (2017). Past, present and future of contact centers: a literature review. *Business Process Management Journal*, *23*(3), 574-597.

Saccani, N. (2012). Forecasting for capacity management in call centres: combining methods, organization, people and technology. *IMA Journal of Management Mathematics*, *24*(2), 189-207.

Saccani, N., Johansson, P., & Perona, M. (2007). Configuring the after-sales service supply chain: A multiple case study. *International Journal of production economics*, *110*(1), 52-69.

Salavou, H. E. (2013). Hybrid strategies in Greece: a pleasant surprise. *European Business Review*, *25*(3), 301-314.

Samra-Fredericks, D. (2003). A proposal for developing a critical pedagogy in management from researching organizational members' everyday practice. *Management Learning*, *34*(3), 291-312.

Sandelowski, M. (2000). Focus on research methods-whatever happened to qualitative description?. *Research in nursing and health*, *23*(4), 334-340.

Sarkar, S., & Charlwood, A. (2014). Do cultural differences explain differences in attitudes towards unions? Culture and attitudes towards unions among call centre workers in Britain and India. *Industrial Relations Journal*, *45*(1), 56-76.

Sasser, W. E., Schlesinger, L. A., & Heskett, J. L. (1997). *Service profit chain*. Simon and Schuster.

Sattar Chaudhry, A., & Jeanne, C. (2004). Call centres for enhanced reference services: a comparison of selected library call centres and the Reference Point at National Library of Singapore. *Library Review*, *53*(1), 37-49.

Saunders, M. N. (2011). *Research methods for business students, 5/e*. Pearson Education India.

Sawchuk, P. H. (2010). Revisiting Taylorism. *Lifelong Learning in Paid and Unpaid Work: Survey and Case Study Findings*, 101-118.

Schiellerup, P. (2008). Stop making sense: the trials and tribulations of qualitative data analysis. *Area*, *40*(2), 163-171.

Schillen, S. J., & Steinke, G. (2011). Mitigating the adversity of outsourcing: Outsourcing from the employee’s perspective. *Communications of the IIMA*, *11*(1), 6.

Schniederjans, M. J., Schniederjans, A. M., & Schniederjans, D. G. (2005). Outsourcing and Insourcing in an International Context: ME Sharpe. *Inc.* New York: Armonk.

Scholarios, D., & Taylor, P. (2010). Gender, choice and constraint in call centre employment. *New Technology, Work and Employment*, *25*(2), 101-116.

Schultz, D., & Schultz, H. (2003). *IMC, The next generation: Five steps for delivering value and measuring returns using marketing communication*. McGraw Hill Professional.

Seal, W. (2012). Some proposals for impactful management control research. *Qualitative Research in Accounting & Management*, *9*(3), 228-244.

Seddon, J. (2000). *The case against ISO 9000* (p. 16). Dublin: Oak Tree Press.

Seddon, J. (2003). *Freedom from command and control*. Vanguard Education Limited.

Seddon, J. (2005). *Freedom from command and control: rethinking management for lean service*. CRC press.

Seddon, J. (2011). Lean is a waning fad. *Management Services*, *55*(4), 34-36.

Seddon, J., & Brand, C. (2008). Debate: systems' thinking and public sector performance.

Seddon, J., & Caulkin, S. (2007). Systems thinking, lean production and action learning. *Action Learning: Research and Practice*, *4*(1), 9-24.

Seddon, J., & O'Donovan, B. (2010). Why aren't we all working for Learning Organisations. *AMED e-Organisations and People*, *17*(2).

Seddon, J., O'Donovan, B., & Zokaei, K. (2009). Rethinking lean service. In *Service Design and Delivery* (pp. 41-60). Springer US.

Seeger, S. (2013). What Determines the Winners Among Europe's Retail Banks? How CRM can Provide the Silver Bullet for the future: A study of KPMG Consulting and Goldman Sachs. *e-Finance: Innovative Problemlösungen für Informationssysteme in der Finanzwirtschaft*, 99.

Senge, P. (1990). The fifth discipline: The art and science of the learning organization. *New York: Currency Doubleday*.

Shah, S., Roy, R., & Tiwari, A. (2006). Development of Fuzzy Expert System for Customer and Service Advisor Categorisation within Contact Centre Environment. In *Applications of Soft Computing* (pp. 197-206). Springer, Berlin, Heidelberg.

Shah, S., Roy, R., Tiwari, A., & Majeed, B. (2007). Categorisation of customer and advisors in contact centres. *International Journal of Computational Intelligence Research*, *3*(3), 193-204.

Shah, V., & Bandi, R. (2003). Capability development in knowledge intensive IT enabled services. *European Journal of Work and Organizational Psychology*, *12*(4), 418-427.

Shaikh, A. A., & Karjaluoto, H. (2016, January). Mobile banking services continuous usage--case study of finland. *System Sciences (HICSS) 2016 49th Hawaii International Conference,* 1497-1506.

Shankar Mahesh, V., & Kasturi, A. (2006). Improving call centre agent performance: A UK-India study based on the agents' point of view. *International Journal of Service Industry Management*, *17*(2), 136-157.

Sharabi, M., & Davidow, M. (2010). Service quality implementation: problems and solutions. *International Journal of Quality and Service Sciences*, *2*(2), 189-205.

Sharda, K., & Chatterjee, L. (2011). Configurations of outsourcing firms and organizational performance: A study of outsourcing industry in India. *Strategic Outsourcing: An International Journal*, *4*(2), 152-178.

Sharma, A., & Loh, P. (2009). Emerging trends in sourcing of business services. *Business Process Management Journal*, *15*(2), 149-165.

Sharma, P., Mathur, R., & Dhawan, A. (2009). Exploring customer reactions to offshore call centers: toward a comprehensive conceptual framework. *Journal of Services Marketing*, *23*(5), 289-300.

Shaw, C., & Hamilton, R. (2016). Imperative 7: Realize the Only Way to Build Customer Loyalty Is through Customer Memories. In *The Intuitive Customer* (pp. 141-159). UK: Palgrave Macmillan.

Shen, H., & Huang, J. Z. (2005). Analysis of call centre arrival data using singular value decomposition. *Applied Stochastic Models in Business and Industry*, *21*(3), 251-263.

Sheremata, W. A. (2000). Centrifugal and centripetal forces in radical new product development under time pressure. *Academy of management review*, *25*(2), 389-408.

Shire, K., Holtgrewe, U., & Kerst, C., & (2002). *Re-organising service work: Call centres in Germany and Britain*. Ashgate.

Shook, C. L., Adams, G. L., Ketchen Jr, D. J., & Craighead, C. W. (2009). Towards a “theoretical toolbox” for strategic sourcing. *Supply chain management: an international journal*, *14*(1), 3-10.

Siggelkow, N. (2007). Persuasion with case studies. *The Academy of Management Journal*, *50*(1), 20-24.

Simmons-Mackie, N., & Lynch, K. E. (2013). Qualitative research in aphasia: A review of the literature. *Aphasiology*, *27*(11), 1281-1301.

Sinha, S., & Gabriel, Y. (2016). 5 Call Centre Work: Taylorism with a Facelift. *Re-Tayloring Management: Scientific management a Century On*, 87.

Smith, C., & Elger, T. (2014). Critical realism and interviewing subjects. *Studying Organizations using Critical Realism: A Practical Guide, Oxford University Press, Oxford*.

Smith, E., & Teicher, J. (2017). Re-thinking skill through a new lens: evidence from three Australian service industries. *Journal of Education and Work*, *30*(5), 515-530.

Smith, K. E. (2006). Problematising power relations in ‘elite’interviews. *Geoforum*, *37*(4), 643-653.

Smith, L., Ng, I., & Maull, R. (2012). The three value proposition cycles of equipment-based service. *Production Planning & Control*, *23*(7), 553-570.

Smith, M. K., Ball, P. D., Bititci, U. S., & van der Meer, R. (2010). Transforming mass production contact centres using approaches from manufacturing. *Journal of Manufacturing Technology Management*, *21*(4), 433-448.

Smith, W. K., & Lewis, M. W. (2011). Toward a theory of paradox: A dynamic equilibrium model of organizing. *Academy of management Review*, *36*(2), 381-403.

Smith, K. (2006). Problematising power relations in ‘elite' interviews. *Geoforum*, *37*, 643–653.

Spohrer, J., & Maglio, P. P. (2008). The emergence of service science: Toward systematic service innovations to accelerate co-creation of value. *Production and operations management*, *17*(3), 238-246.

Spohrer, J., Kwan, S. K., & Demirkan, H. (2013). Service science: On reflection. In *New Business Models and Value Creation: A Service Science Perspective* (pp. 7-24). Springer, Milano.

Spohrer, J., Maglio, P. P., Bailey, J., & Gruhl, D. (2007). Steps toward a science of service systems. *Computer*, *40*(1).

Sprigg, C. A., & Jackson, P. R. (2006). Call centers as lean service environments: job-related strain and the mediating role of work design. *Journal of occupational health psychology*, *11*(2), 197.

Ssengooba, F., McPake, B., & Palmer, N. (2012). Why performance-based contracting failed in Uganda–an “open-box” evaluation of a complex health system intervention. *Social science & medicine*, *75*(2), 377-383.

Staples, W., Dalrymple, J., & Bryar, R. (2002). Assessing call centre quality using the SERVQUAL model. In *7th International Conference on ISO* (Vol. 9000).

Stokes, P. (2011). *Critical concepts in management and organization studies: Key terms and concepts*. Palgrave Macmillan.

Stone, M., Hobbs, M., & Khaleeli, M. (2002). Multichannel customer management: The benefits and challenges. *Journal of Database Marketing & Customer Strategy Management*, *10*(1), 39-52.

Stoshikj, M., Kryvinska, N., & Strauss, C. (2016). Service Systems and Service Innovation: Two Pillars of Service Science. *Procedia Computer Science*, *83*, 212-220.

Strandberg, C., & Dalin, R. (2010). The role of strategic context, operational requirements, and work design in in-house call centres in the financial sector. *Managing Service Quality: An International Journal*, *20*(6), 544-564.

Stringfellow, A., Teagarden, M. B., & Nie, W. (2008). Invisible costs in offshoring services work. *Journal of Operations Management*, *26*(2), 164-179.

Tåhlin, M. (2011). Vertical differentiation of work tasks: conceptual and measurement issues. *Empirical research in vocational education and training*, *3*(1), 55-70.

Taneja, S., Pryor, M. G., & Toombs, L. A. (2011). Frederick W. Taylor's scientific management principles: Relevance and validity. *Journal of Applied Management and Entrepreneurship*, *16*(3), 60.

Tanim, T. R. (2016). Work-Life Balance and Employee Job Satisfaction: A Case of UK Call Centre. *World review of Business research*, *6*(2), 66-79.

Taylor, F. W. (1911). The principles of scientific management. *USA: Harper& Brothers*.

Taylor, F. W. (1947). Scientific management: Comprising Shop Management, *The Principles of Scientific management, Testimony Before the Special House Committee*. New York: Harper & Brothers.

Taylor, P. (2010). The globalization of service work: analyzing the transnational call centre value chain. *Working Life*. Basingstoke: Palgrave Macmillan.

Taylor, P., & Bain, P. (1999). 'An assembly line in the head': work and employee relations in the call centre. *Industrial Relations Journal*, *30*(2), 101-117.

Taylor, P., & Bain, P. (2001). Trade unions, workers' rights and the frontier of control in UK call centres. *Economic and Industrial Democracy*, *22*(1), 39-66.

Taylor, P., & Bain, P. (2004). Call centre offshoring to India: the revenge of history?. *Labour & Industry: a journal of the social and economic relations of work*, *14*(3), 15-38.

Taylor, P., & Bain, P. (2005). ‘India calling to the far away towns’ the call centre labour process and globalization. *Work, employment and society*, *19*(2), 261-282.

Taylor, P., & Bain, P. (2006). Work organisation and employee relations in Indian call centres. *Developments in the call centre industry*, 36-57.

Taylor, P., & Bain, P. (2007). Reflections on the call centre—a reply to Glucksmann. *Work, Employment and Society*, *21*(2), 349-362.

Taylor, P., & Bain, P. (2008). United by a common language? Trade union responses in the UK and India to call centre offshoring. *Antipode*, *40*(1), 131-154.

Taylor, P., Baldry, C., Bain, P., & Ellis, V. (2003). A unique working environment': health, sickness and absence management in UK call centres. *Work, employment and society*, *17*(3), 435-458.

Taylor, P., D'Cruz, P., Noronha, E., & Scholarios, D. (2013). The experience of work in India's domestic call centre industry. *The International Journal of Human Resource Management*, *24*(2), 436-452.

Taylor, P., Mulvey, G., Hyman, J., & Bain, P. (2002). Work organization, control and the experience of work in call centres. *Work, employment and society*, *16*(1), 133-150.

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic management journal*, 509-533.

Teulings, A. W. (1985). The power of corporate management: the powerlessness of the manager. *Economic and Industrial Democracy*, *6*(4), 403-434.

Thelen, S. T., Thelen, T. K., Magnini, V. P., & Honeycutt Jr, E. D. (2008). An introduction to the offshore service ethnocentrism construct. Services Marketing Quarterly, 30(1), 1-17.

Thite, M., & Russell, B. (2010). The next available agent: work organisation in Indian call centres. *New Technology, Work and Employment*, *25*(1), 2-18.

Thomas, D. (2015). BT pledges to bring customer call centres back to UK. Retrieved January 19, 2018, from: https://www.ft.com/content/759f5246-5e21-11e5-9846-de406ccb37f2

Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American journal of evaluation*, *27*(2), 237-246.

Tomek, G., & Vávrová, V. (2001). Product and Its Success on the Market.

Townsend, K. (2004). When the LOST found teams: a consideration of teams within the individualised call centre environment. *Labour & Industry: a journal of the social and economic relations of work*, *14*(3), 111-126.

Townsend, K. (2005). Electronic surveillance and cohesive teams: room for resistance in an Australian call centre?. *New Technology, Work and Employment*, *20*(1), 47-59.

Townsend, K. (2007). Recruitment, training and turnover: another call centre paradox. *Personnel Review*, *36*(3), 476-490.

Tushman, M. L., & O'Reilly III, C. A. (1996). Ambidextrous organizations: Managing evolutionary and revolutionary change. *California management review*, *38*(4), 8-29.

Vagadia, B. (2012). From Tactical to Strategic Outsourcing. In *Strategic Outsourcing* (pp. 27-54). Heidelberg: Springer.

Van Den Broek, D. (2003). Selling human services: public sector rationalisation and the call centre labour process. *Australian bulletin of labour*, *29*(3), 236.

Van den Broek, D., Callaghan, G., & Thompson, P. (2004). Teams without teamwork? Explaining the call centre paradox. *Economic and Industrial Democracy*, *25*(2), 197-218.

Van der Aa, Z., Bloemer, J., & Henseler, J. (2012). Reducing employee turnover through customer contact center job quality. *The International Journal of Human Resource Management*, *23*(18), 3925-3941.

van der Aa, Z., Bloemer, J., & Henseler, J. (2015). Using customer contact centres as relationship marketing instruments. *Service business*, *9*(2), 185-208.

van der Veen, G., & van Ossenbruggen, R. (2015). Mapping out the customer's journey: Customer search strategy as a basis for channel management. *Journal of Marketing Channels*, *22*(3), 202-213.

van Dun, Z., Bloemer, J., & Henseler, J. (2011). Perceived customer contact centre quality: conceptual foundation and scale development. *The Service Industries Journal*, *31*(8), 1347-1363.

van Klaveren, M., Tijdens, K., & Gregory, D. (2013). *Multinational companies and domestic firms in Europe: comparing wages, working conditions and industrial relations*. Springer.

Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of marketing*, *68*(1), 1-17.

Varney, D. S. (2006). *Service transformation: A better service for citizens and businesses, a better deal for the taxpayer*. The Stationery Office.

Venkatesan, R., Kumar, V., & Ravishanker, N. (2007). Multichannel shopping: causes and consequences. *Journal of Marketing*, *71*(2), 114-132.

Wainwright, M., & Russell, A. (2010). Using NVivo audio-coding: Practical, sensorial and epistemological considerations. *Social Research Update*, (60), 1.

Wallace, C. (2009). An overview of the Indian contact centre industry. *The next available operator: Managing human resources in Indian business process outsourcing industry*, 13-32.

Wallace, C. M., Eagleson, G., & Waldersee, R. (2000). The sacrificial HR strategy in call centers. *International Journal of Service Industry Management*, *11*(2), 174-184.

Walsh, J., & Deery, S. (2006). Refashioning organizational boundaries: Outsourcing customer service work. *Journal of Management Studies*, *43*(3), 557-582.

Walton, J., & Parikh, V. (2012). Power distance and knowledge management from a post-Taylorist perspective. *World Academy of Science, Engineering and Technology*, *70*, 119-126.

Watson, T. J. (1997). Theorizing managerial work: a pragmatic pluralist approach to interdisciplinary research. *British Journal of Management*, *8*(1), 3-8.

Watson, T. J. (2001). Beyond managism: Negotiated narratives and critical management education in practice. *British Journal of Management*, *12*(4), 385-396.

Wegge, J., Van Dick, R., Fisher, G. K., Wecking, C., & Moltzen, K. (2006). Work motivation, organisational identification, and well-being in call centre work. *Work & Stress*, *20*(1), 60-83.

Weinkopf, C. (2002). Call-centre work: specific characteristics and the challenges of work organisation. *Transfer: European Review of Labour and Research*, *8*(3), 456-466.

Weinkopf, C. (2006). German call centres between service orientation and efficiency. *Developments in the call centre industry: analysis, changes and challenges*, 58.

Willis, S. J., & Bendixen, M. (2007). A Review of Call Center Measurements.

Winterman, D. (2007). Just returning your call...to the UK, *BBC*, Retrieved on February 14, 2007, from: http://news.bbc.co.uk/1/hi/magazine/6353491.stm

Wolcott, H. F. (2001). Writing up qualitative research better. *Qualitative health research*, *12*(1), 91-103.

Wood, R. E. (1986). Task complexity: Definition of the construct. *Organizational behavior and human decision processes*, *37*(1), 60-82.

Woodward, J. (1958). *Management and technology* (No. 3). HM Stationery Office.

Wook Yoo, J., Lemak, D. J., & Choi, Y. (2006). Principles of management and competitive strategies: using Fayol to implement Porter. *Journal of Management History*, *12*(4), 352-368.

Worrell, J. L., Di Gangi, P. M., & Bush, A. A. (2013). Exploring the use of the Delphi method in accounting information systems research. *International Journal of Accounting Information Systems*, *14*(3), 193-208.

Yin, R. K. (2009). *Case study research: Design and Methods*. SAGE publications.

Yotopoulos, P. A. (2005). Exchange rate parity for trade and development: theory, tests, and case studies. Cambridge University Press.

Yuen, E. F., & Chan, S. S. (2010). The effect of retail service quality and product quality on customer loyalty. *Journal of Database Marketing & Customer Strategy Management*, *17*(3-4), 222-240.

Zokaei, K., Elias, S., O’Donovan, B., Samuel, D., Evans, B., & Goodfellow, J. (2010). Lean and systems' thinking in the public sector in wales. *Lean Enterprise Research Centre report for the Wales Audit Office, Cardiff University*.

Appendix I - Definitions of call/contact centres (Source: Author)

Author(s)	Definition
Harvey et al. (1991)	A Call Centre is a business location that distributes a large volume of inbound or outbound calls to a group of agents or voice response systems.
Richardson and Marshall (1996)	Call Centres are offices providing a variety of sales, marketing and information services remotely by telephone.
Prabhakar et al. (1997) cited in Feinberg et al. (2000)	Call centers allow a company to build, maintain, and manage customer relationships by solving problems and resolving complaints quickly, having information, answering questions, and being available usually 24 hours a day, seven days a week, 365 days of the year.
Taylor and Bain (1999)	Call centre is a dedicated operation in which computer-utilizing employees receive inbound, or make outbound telephone calls, with those calls processed and controlled either by an automatic call distribution (ACD) or predictive dialling system".
Batt (2000)	…where employees interact with customers via telephones and computers to handle service, sales and billing inquiries.
Miciak and Desmarais (2001)	Call centres are involved in many business functions such as handling account inquiries, complaints, dispatching, order taking, pre-sale and post-sale service, telemarketing, and a

	variety of other types of calls for both consumer and business clients.
Reuters (2001) cited in Marr and Neely (2004)	A contact centre is an operational group within a business which is concerned with the development of customer relationships, using integrated technology solutions and business processes
McPhail (2002)	Call centres are specialized offices where service personnel provide information, deliver services, and/or conduct sales using combination of telephony and web-based technologies such as chat, text and e-mails, typically with an aim to enhance customer service while reducing organizational costs
Hale and Owen (2002) cited in Langley et al. (2006)	A contact centre is a facility specifically set up to serve as an interface between customers and the business via employees, called agents, in a structured environment
Gans et al. (2003)	A call centre constitutes a set of resources— typically personnel, computers, and telecommunication equipment—which enable the delivery of services via the telephone.
Marr and Neely (2004)	A call centre is a physical or virtual operation within an organisation in which a managed group of people spend most of their time doing business by telephone, usually working in a computer-automated environment

Connell and Burgess (2006)	Call centres are information and communication technology (ICT) organisations that deliver services to customers independent of their location via electronic media.
D'Cruz and Noronha (2007)	Call centres are organizations/departments, dedicated to provide information, product based services, technical support and/or deal with questions/complaints/requests customers may have, using telephony and web-based technologies.
Shah et al. (2007;2006)	A Contact Centre can be defined as an internal or outsourced operation largely based on telecommunication and data supports whose primary role is to provide one or many relationship channels for customers, clients, or suppliers
Rijo (2011)	A contact centre covers a wide range of an organization's material and human resources with the aim to provide one or more services to users through a channel such as telephone, e-mail or the Web.
Cleveland (2012)	A contact center is a coordinated system of people, processes, technologies and strategies that provides access to information, resources, and expertise, through ap-propriate channels of communication, enabling interactions that create value for the customer and organization
Kallberg (2013)	Contact centre" is defined as an

	organisational unit which serves as interface between the public organisation and the citizens, including private businesses, and which is responsible for dealing with incoming contacts through information technology channels like the Internet, e-mail, chat, telephone or fax
Holland and Lambert (2013)	Contact centres are service functions or service organizations, where in service personnel interact with customers via telephony, and other web based technologies including e-mails, chat, fax (and now, social media) to provide information, support products, solicit new business, and myriad of other activities
Saberi et al. (2017)	Contact centres are worksites where staff interacts with customers over available multi-communication channels such as telephone, email, touch-point telephone, fax, letter, web, online live chat and social networks. This centre is equipped with customized intelligent tools that enable the centre to have clean and integrated data as well as be empowered with customized knowledge.

Appendix II (a) - Example of interview questions (also referred to as 'prompts')

Q1	Please can you introduce yourself and your current role within your organization?
Q2	Can you describe the type of contact centres you designed in your tenure up until now?
Q3	Can you describe above (Q2) in light of industry sectors?
Q4	Can you generally describe what type of clients do you deal with? (B2B, B2C, Sector wise)
Q5	How important do you think is your contact centre for your organization?
Q6	Do you think your contact centre (or your clients' contact centre) is an overhead or a strategic asset for your organization? Why?
Q7	Do you think your contact centre (or your clients' contact centre) is critical? In what way?
Q8	How is the service scoped and categorized into different department/functions?
Q9	In relation to Q5, can you comment on such scoping and categorisation of different department/functions?
Q10	Can you describe your journey of designing the service for the contact centre?
Q11	What are the areas you take into account to design the service?
Q12	What are different channels and technology through which service is delivered? Why these channels?
Q13	How would you describe complexity in contact centre services?
Q14	Do you think the service you provide (or your clients ask you to provide) is complex? In what way?
Q15	How do you manage this complexity across various channels?
Q16	Can you comment on the skills required to deliver services to your clients?
Q17	How do you manage the resourcing of your contact centres?
Q18	Do you engage with any other firms to deliver your services? (If yes, go to next Q18. If no, why not?)
Q19	Is the firm based within or outside the UK?
Q20	What do you think are the drivers for this strategy?
Q21	What are the challenges in choosing this strategy?
Q22	Does location have any influence on your service process?
Q23	What are the factors that you consider in choosing the location for your contact centre? (or for your clients' contact centre)?
Q24	Can you describe a situation where in you might have encountered any issues with managing your service through outsourcing/offshoring? (Applicable to principal participants only)
Q25	Can you describe a situation where in you might have encountered any issues in managing your clients' service through outsourcing/offshoring (Applicable to agents' participants only)
Q26	How did you manage these issues?

Q27	Do you think location has any influence on your service outcome? How?
Q28	Do you think outsourcing has any influence on service outcome? How?
Q29	(If the answer to above questions is no), What do you think are the factors that could influence the service performance/outcome?
Q30	How do you measure/assess the performance of your contact centre?
Q31	What metrics do you take into account? Why these?
Q32	Who decides on these metrics?
Q33	What are the factors do you take into account to design these metrics?
Q34	Do you think there are challenges in managing these metrics? What are they?
Q35	Do you think your contact centre (or your clients' contact centre) have to trade-off between quantitative and qualitative metrics? Why?
Q36	Do you take customers' feedback into account to manage your service outcome? How?
Q37	Are there any challenges in managing your customers' expectations? What are they?
Q38	How do you improve your channels using customer feedback?
Q39	Do you think contact centres have evolved in the last 10 years? How?
Q40	What do you think are the current and future challenges for contact centre industry?

Note:

This list was used as a guide during the semi-structured interviews so that any deflections and/or control/power issues imposed by elites could be managed effectively. This is not exhaustive list of questions as several other questions emerged during the interviews that were too specific and relevant to particular categories and hence, interviewees only. Finally, questions were also rephrased as and when necessary to suit the needs of the interviewing environment and participants.

Appendix II (b) - Examples of initial familiarisation and categorisation

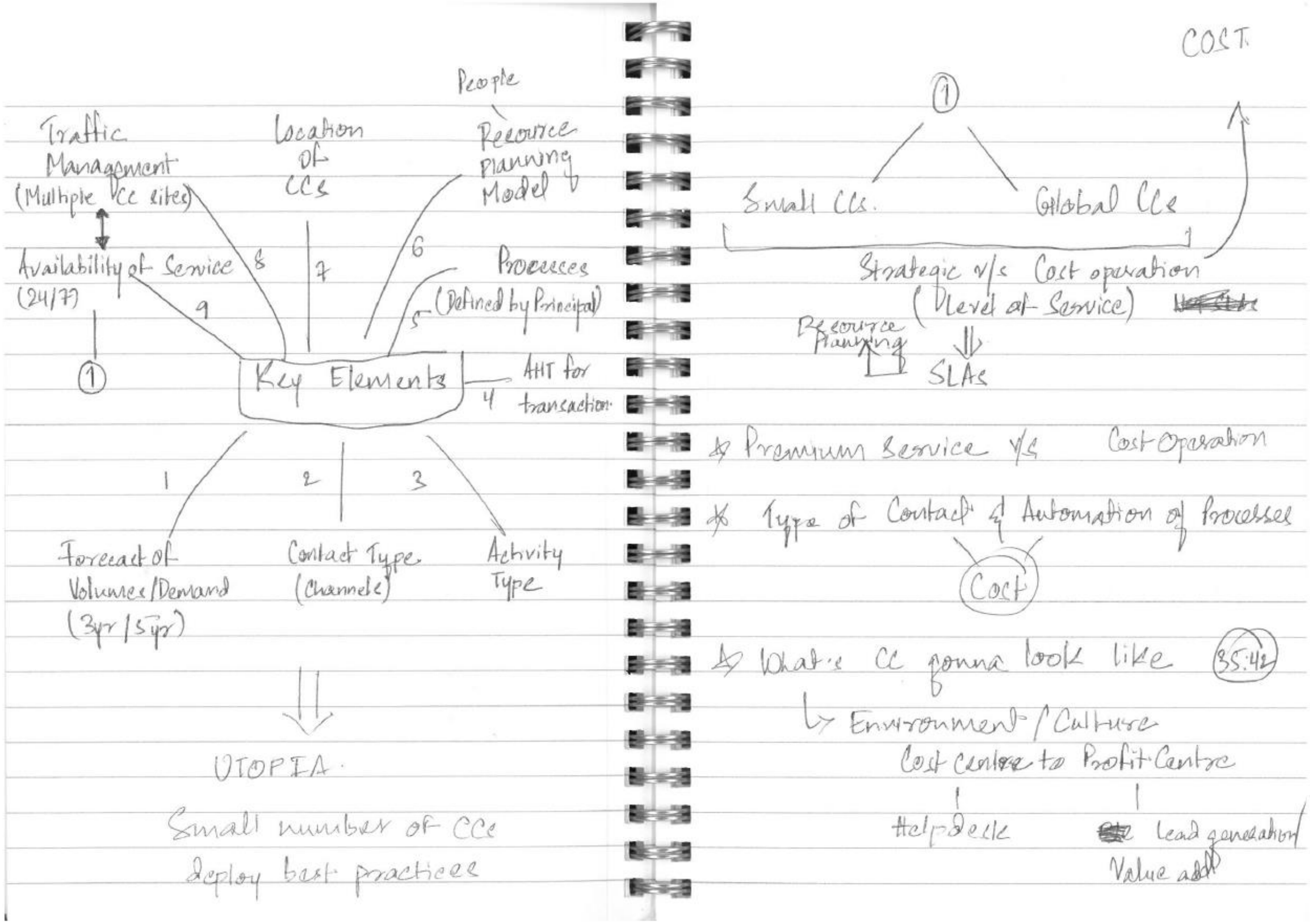

Figure II (b).1 Illustration of notes from interview with Dave (Source: Author)

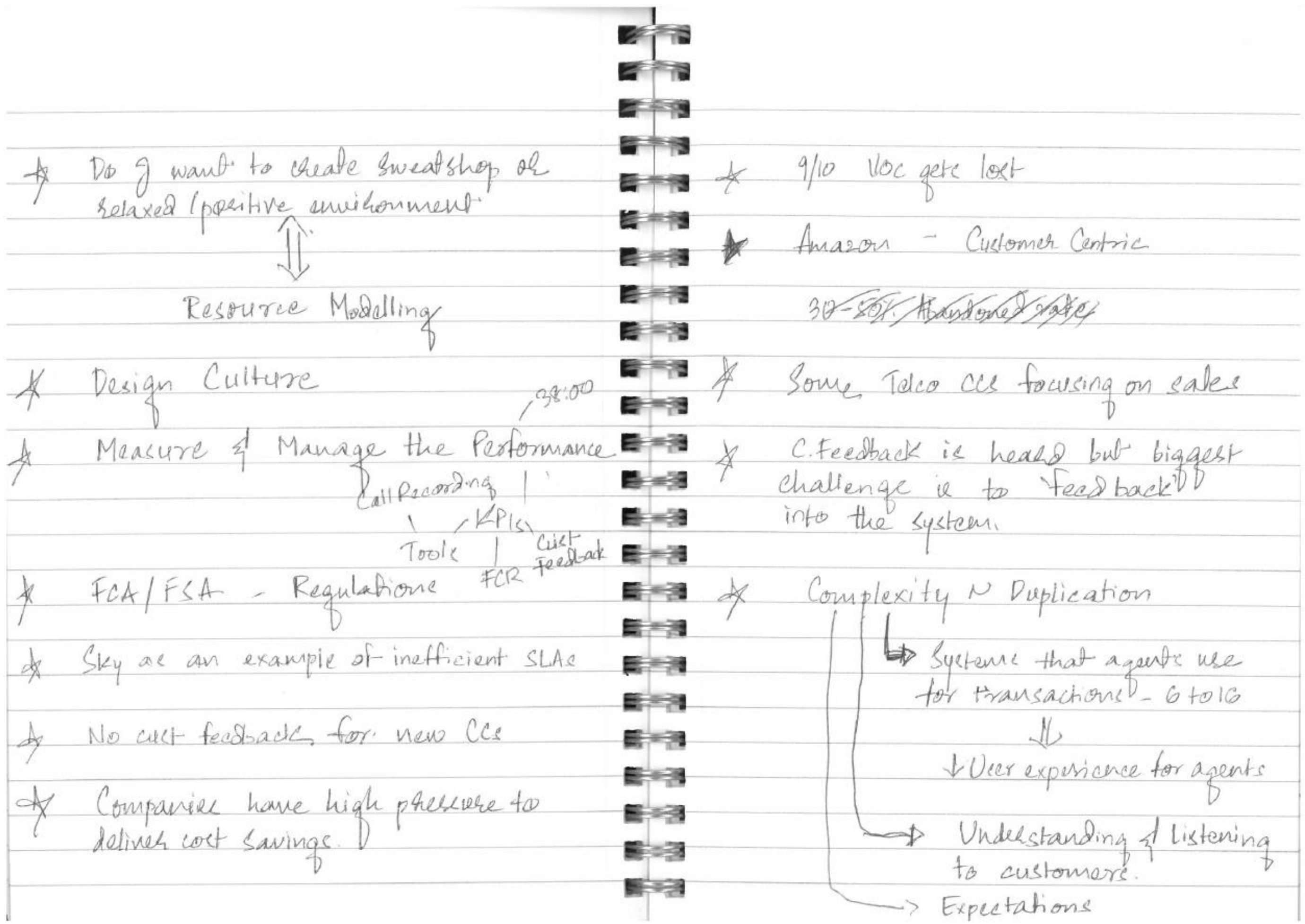

Figure II (b).2 Illustration of notes from interview with Dave (2) (Source: Author)

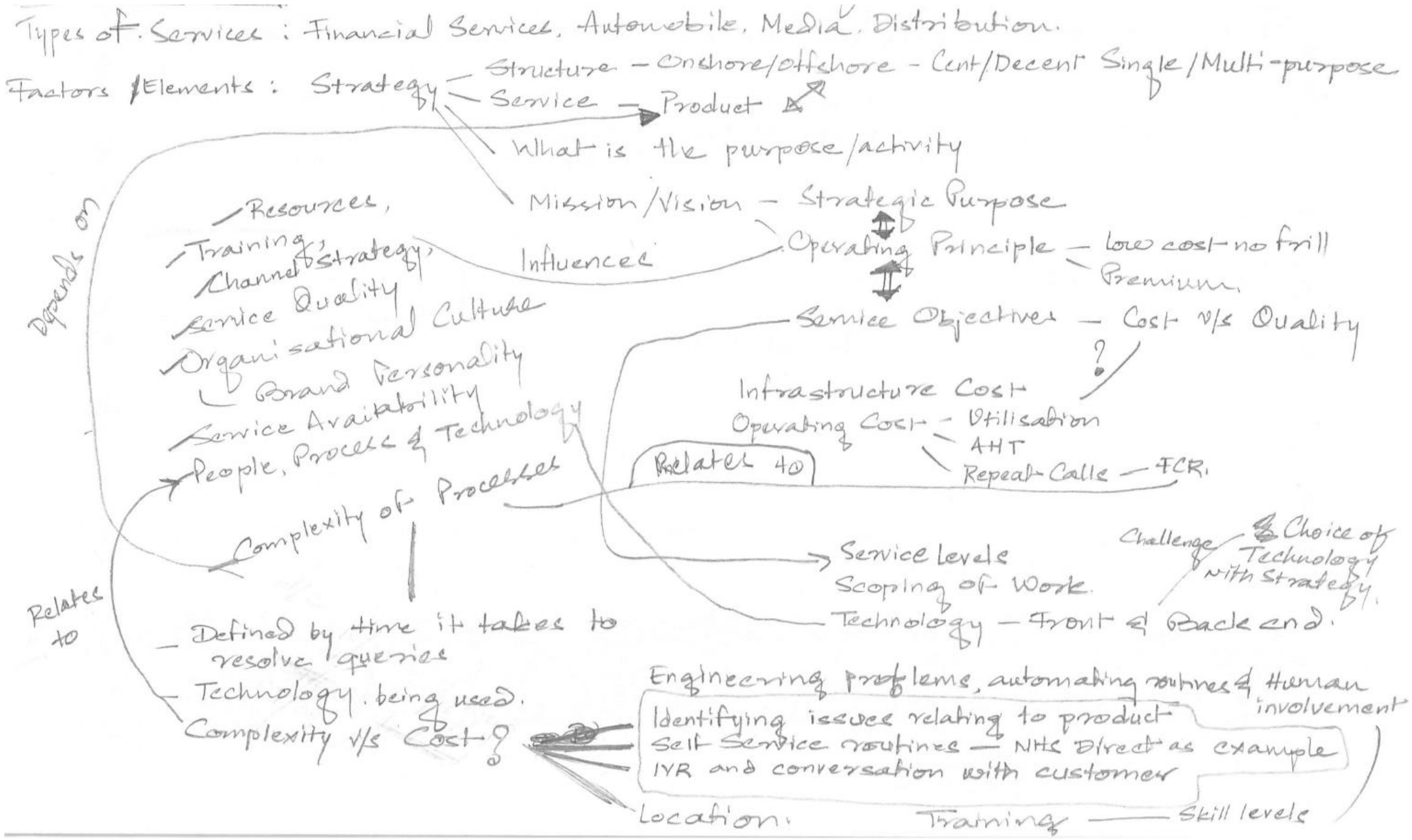

Figure II (b).3 Example of notes from interview with Charlie (Source: Author)