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**Understanding Organisational Digital Transformation:
Towards a Theory of Search**

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**This thesis has been submitted in order to fulfil the requirements for
the degree of Doctor of Philosophy**

**The University of Edinburgh
2019**

Declaration

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Abstract

As new forms of digital technologies continue to proliferate, Information Systems (IS) scholars argue that we are witnessing a paradigmatic shift in the nature of technologies and their potential in profoundly changing organisations and ways of working. These technologies and changes have implications across the information technology and marketing functions. Scholars have only thus far developed a rather partial understanding of these technologies and changes, adopting either a single disciplinary lens (IS or Marketing). To throw light on the nature of these transformations, this thesis produces an interdisciplinary study that draws insights from not just IS but also Marketing. The thesis studies the emergence of an exemplary digital organisation which appears to be heralding in a new form of data manipulation. Drawing on qualitative data and through developing a practice-oriented approach, this research shows how: i) the technology is remaking the organisation internally, leading to ii) the development of new roles and expertise outside Information Technology (IT) departments, and iii) recreating the organisations' relationship with its customers. Whilst existing discussions have primarily looked at the implications of such technologies for organisations and their interactions with customers, they have not studied 'how' customers have been made more central within organisations. This study develops the idea of the 'extended user' and shows how these users (or data about these customers) are leading to the reconfiguration of work practices. The main contribution of the thesis is to articulate how there is a new 'search' logic emerging. This logic contains three elements: (i) the work organisations do to foster and facilitate the ways customers are accessing and searching their offerings (remaking the organisation customer relationship); (ii) how they handle this search processes through building new internal knowledge and expertise (adapting and changing, disrupting routines); (iii) how this new expertise within the organisation is responding to platform developments (elastic reactions to platforms). The more theoretical contribution of this thesis is to extend practice-oriented studies of technology and organisation by proposing a new analytical approach to study the digital transformation of work and organisation. In responding to recent calls (e.g. Orlikowski and Scott 2016) for the development of approaches to

understand how “algorithmic phenomena” have the potential to transform how work is done, the thesis proposes a multi-level analysis of the ‘search’ logic mentioned above.

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List of abbreviations

AI: Artificial Intelligence

ANT: Actor Network Theory

API: Application Programming Interface

CDO: Chief Digital Officer

CDP: Customer Data Platform

CIO: Chief Information Officer

CLV: Customer Lifetime Value

CMO: Chief Marketing Officer

CPC: Cost Per Click

CRM: Customer Relationship Management

CTR: Click Through Rate

ERP: Enterprise Resource Planning

ES: Enterprise Systems

IS: Information Systems

IT: Information Technology

ROI: Return on Investment

SCM: Supply Chain Management

SEM: Search Engine Marketing

SEO: Search Engine Optimisation

Prologue: ‘One thing is constant, change will happen!’

21st September 2017, Sixty-One Whitehall, London. More than a hundred individuals have gathered for the Westminster Media Forum¹ (WMF) conference to learn about new developments in digital technology. The conference is about how the marketing and advertising field is being unsettled by the rise of digital platforms. Sat in the room are professionals with a diverse range of titles such as directors, digital marketing managers, content editors or digital media managers coming from organisations of different sizes and sectors. They are all interested in understanding the latest approaches in the field, ‘native advertising’ and ‘influencer marketing’, to put it in their professional terminology. Among them is Mike, a marketer, concerned with how to respond to the latest developments in platforms and the ways consumers are beginning to access their products in different ways.

The keynote is Client Director of Media and Digital at Kantar, and she talks about the rise of businesses’ investment in native advertising and content marketing, which is predicted to be doubled in value by 2020. These are emerging formats that are driven by social media technologies such as Facebook, Instagram and Twitter or content recommendation systems. Despite the increase in attention towards them, at the conference there is still not a consensus among the professionals present about what precisely they are: *‘I’m not sure everyone knows exactly what it is... If you’re a content marketer and you’re a purist, you’re going to say that native advertising is a tool in the toolbox, it’s not the entire toolbox. If you’re an advertiser, you’re going to say that actually it’s a means to get the thing that you want in front of the audience you want to reach’*, says one Chief Digital Officer (CDO). Considering such ambiguity, another CDO (Figure 0-1) explains: *“Native advertising sits in the crosshairs of art and science, creativity and data. Very much it is at*

¹ ‘WMF is one of the 16 forums offered by Westminster Forum Projects (WFP). WFP has its origins in the UK national Parliament, but its work now extends to policy decided in UK devolved Parliaments and Assemblies, the Oireachtas, and the European Commission and Parliament’ (Source: Westminster Forum Projects).

the cutting-edge point of all forms of digital advertising and marketing. It is the main experimentation format in digital today”.



Figure 0-1 One Chief Digital Officer (CDO) Presenting at WMF Conference

According to this industry player, these new marketing approaches merge and fuse creative content, data and technology to present it to the users (consumers) in interesting ways as *“a reaction to some major digital consumer trends... mobile, social media, content”*. These (digital consumer trends) are considered as some of the challenges for marketers by another industry leader which he believes is ‘very different’ from traditional media such as TV: *‘So the first thing you have to do is stop, listen to what your audience are talking about, what their interests are... to find a way of having a value exchange with them, [unlike distribution method of] television’*. He thinks marketers are just learning this difference and joining the audiences through conversations and listening. As one of the CDOs asserts, this also allows them to offer more personalisation and targeting for customers as they have *‘an arsenal of tools at their disposal’* (technology and data). Apparently, this is important because it has brought the customers inside the firms and,

according to the speakers at the conference, this means organisations must change their technologies and processes to take account of this. Mike is increasingly confused. He had always been taught that customers were best kept at distance. Now he is hearing that he has to take an active role in creating pathways into the firm so that they can shape their offerings.

To be successful in this new world, the speakers argue, requires access to and reaching the right individuals that can be realised through the rising practice of ‘influencer marketing’. This is because it is a ‘very well targeted’ approach and it is said to be used by 80% of marketers in some form. The practice involves a new kind of person – ‘social media influencers’ - creating a change in how brands’ offerings can be communicated to their customers. According to the Director of an influencer marketing agency, *‘no niche is too small’* and influencers allow brands to access niches, without which are impossible to reach. Despite its promise, the speakers point to challenges of influencer marketing in terms of the value of the practices and how organisations can measure it. Thus, there is also the emergence of new influencer marketing platforms such as ‘Social Circle’ to connect influencers and businesses and enable them with measurement apparatuses.

This new approach is founded on social media platforms. The challenge that these practitioners find is about the dynamics of digital platforms and particularly Facebook as one of the major players. One of the things that the speakers and panellists agree on is the change. For instance, a CDO argues about how advertising has been transformed and how native advertising is being altered: *‘It’s a chameleon in many ways, just like the internet itself... The buying and selling of advertising in 2030 will be so fundamentally different to the advertising landscape that existed in the year 2000, that it’ll be like comparing modern life to the Bronze Age. The same is true if you look at where we are today, in 15 years’ time. It’s quite difficult to comprehend exactly how that market will evolve. But one thing is constant, change will happen’*.

Looking at the transformation of marketing and advertising, these specialists (Figure 0-2) present in the room highlight the constant changes in digital technologies and consumer trends and how marketing and advertising practices are responding to such developments.

Through technological developments, they have access to consumers' data and measurement devices such that they can offer more targeted and personalised advertising. The final round of questions seems to be unending, but it is 1 pm and the conference is over. Participants are leaving the room, so is Mike, sweating as he realises, he has entered a path where learning and changing will be his new routine.



Figure 0-2 The Panel Discussion

1 Chapter One: Introduction

1.1 The Background of This Research

1.1.1 Digital Technologies and Organisational Transformations

The significance of digital technologies for organisations has been recognised by both scholars and practitioners. This is how new forms of Information Technology (IT) are transforming organisations in unprecedented ways both in relation to their internal processes and also to how these organisations relate to their external environment. Previous studies of technology and organisation have predominately focused on the digitisation of the organisations' 'back offices' (e.g. Leonardi and Meyer, 2015; Leonardi, 2014a; Majchrzak et al., 2013). However, in recent years, digital technologies have fundamentally changed the ways that organisations are now relating to their customers and markets (Aral, Dellarocas and Godes, 2013; Granados and Gupta, 2013). Social media technologies have been considered to be amongst those technologies triggering the most transformative changes within organisations.

Studies have shown the potential outcomes of utilising digital technologies for organisations in their marketing practices and relationship with customers. The analyst firm, Gartner Inc., calls the current wave of digital and social media technologies a "revolutionary platform for marketers" as businesses are looking for different ways of using digital and social media technologies to create new growth opportunities (Sarner and Wilson, 2016, p.2). Much of the nascent literature (Rishika et al., 2013; Goh, Heng and Lin, 2013) discusses how the organisations' use of such technologies is bringing forth positive behavioural impacts on customers and more value for the businesses. In these depictions of the potential of technology, the role of the 'organisation' in realising the potentials has come to the fore (Benthaus, Risius and Beck, 2016; Risius and Beck, 2015). For example, Aral, Dellarocas and Godes (2013, p.9) highlight that:

"[t]here is, currently, little understanding with respect to the best ways in which companies should organize and manage social media. There is no consensus with respect to how responsibility for social media should be allocated within organizations, [...] and

what broader changes with regard to an organization's structures, processes, leadership, training, and culture are needed to harness the potential of this transformative force."

However, despite the growing interest in the role of the organisation in digitisation processes (e.g. having a social media strategy and adopting social media management technologies), there is a need to focus on the 'organising' processes to understand how those potentials are realised.

In this regard, Information Systems (IS) scholars have pointed out that the current wave of digital transformation (Urbach, Drews and Ross, 2017; Gregory et al., 2015) amounts to a 'paradigm shift'. This shift can be viewed from two perspectives. One is related to the consumerisation of IT and it includes digital platforms such as ubiquitous connectivity and Web 2.0 platforms (Yoo, 2010; Gregory et al., 2018). The other is related to the dynamic character of these platforms and their algorithmic basis (e.g. Google page rank algorithm, Facebook newsfeed algorithm, Instagram explore algorithm etc.) (Introna, 2015; Faraj, Pachidi and Sayegh, 2018). It has been argued that the material affordances of these new technologies make them distinct from other types of information technologies (Kallinikos, Aaltonen and Marton, 2013), especially in relation to how their composition and content (data) is constantly changing.

New forms of technologies are increasingly becoming embedded in consumers daily lives and hence they, the consumers, as the argument goes, have become more empowered and well-informed than before (Granados and Gupta, 2013). Legions of so called 'empowered consumers' now increasingly inhabit social media platforms and are richly networked to organisations. This 'digitalisation' of the individual consumer has arguably shifted the scope of digital technologies well beyond the focus of the traditional literature, which concentrated predominately on the use of IT in information processing and performing tasks within organisations (Yoo, 2010). At the same time, it seems that the distinctive functions and affordances of the new technologies (Kallinikos, Aaltonen and Marton, 2013) and their transformative power are changing conceptions of work and the nature of their organisations beyond the narrow IT function.

Notwithstanding the significance of these shifts, there is still a limited scholarly understanding of how these new forms of technologies are changing the organisations' functions and processes in relation to the consumer. Existing literature has yet to fully characterise the nature of such changes, nor has it provided much clarification about how one might go about studying them (e.g. do we need to study them as we did with previous generations of organisational technology or are new approaches necessary?).

1.1.2 New Organisational Roles and Expertise in Digital Transformation

The changes described above suggest that the organisations require new forms of skills and competencies in relation to digital platforms (Fitzgerald et al., 2013). From 'governance' (e.g. top down) perspective, there is nascent research suggesting that, as the organisations are finding their way in managing digital transformation, the responsibility of digital transformation is shared between Chief Information Officers (CIOs), Chief Marketing Officers (CMOs) and the new actors labelled Chief Digital Officers (CDOs) (Deans, 2011; Westerman, 2013; Singh et al., 2017). Because digital technologies are externally-oriented toward customers, recent studies suggest that the skills and knowledge needed to govern and manage these technologies is shifting (Horlacher and Hess, 2016; Faraj, Pachidi and Sayegh, 2018). While organisations will still rely on their IT departments, the salient point is that there has been the establishing of new roles – such as the new CDO position - to help provide the management and administration of this digital transformation (Berkman, 2013; Tumbas, Berente and Brocke, 2018). According to Gartner, CDOs are “business oriented and outward facing to customers and markets” (White, 2017).

Studies such as Tumbas, Berente and Brocke's (2018) research on the rise of the CDO roles, have recently suggested that these new occupational groupings are creating their domain of practice between IT and marketing. This domain specifically involves managing the dimensions of digital transformation related to customers (e.g. in particular enhancing customer experience and customer engagement and interaction) (Tumbas, Berente and Brocke, 2018; Singh and Hess, 2017). The implication of this insight is that, it potentially extends the area of practice beyond the IT department, out towards a more

external orientation in the direction of customers (Singh and Hess, 2017; Tumbas, Berente and Brocke, 2017; Haffke, Kalgovas and Benlian, 2016). It has been suggested that this extension requires the wider involvement of other functions and departments such as marketing² (Royle and Laing, 2014). Thus, it is pointed out that IT and marketing are converging in response to recent digitalisation initiatives. A corollary of this, as researchers have begun to argue (Goes, 2014; Deans, 2011), is that there is a growing need for more interdisciplinary research on the digitalisation phenomena.

The CDO role is responsible for creating the organisation's digital vision and providing oversight in digitisation initiatives (Westerman, 2013; Haffke, Kalgovas and Benlian, 2016). In doing so, they also provide the resources, and particularly, the necessary expertise in the domain of digital platforms (Haffke, Kalgovas and Benlian, 2016). However, despite nascent studies, there is still limited understanding of how digital transformation is occurring beyond the senior management roles. This includes areas such as 'customer experience enhancement' that cross the domain of IT and marketing and appear to require some specific form of expertise that has not yet been discussed within the literature. Therefore, more research is needed beyond the level of technology governance to throw light on the various roles involved in digitalisation initiatives and the ways that this new digital expertise emerges in organisations. Although marketing and IS studies point out the need for new roles and expertise in managing digital platforms, they have not unpacked how such expertise is developed, the range of organisational actors involved, and what these experts actually do.

1.1.3 Organisational Work Practices in Managing Digital Technologies

As mentioned above, to understand the transformative power of these technologies requires drawing on research from different disciplines. A comprehensive understanding

² According to the recent CMO surveys (Moorman, 2017, 2018), the marketing profession is changing as organisations need to build new marketing capabilities. According to the CMO survey in 2017 (Moorman, 2017), the two top rated areas where digital marketing has changed the organisations are: 'the importance of marketing capabilities to competitive advantage' and 'technical skills required of marketers'. This indicates the increasing importance of digital marketing and particular skills that are needed within organisations. In addition, 'data science background' and 'experience of marketing technology platform' are the most important skills that CMOs look for in recruiting marketers (Moorman, 2018).

of these technologies requires building bridges between the two areas of IS and Marketing. The danger of studying these transformation processes from only one or other perspective is that we develop only disconnected discussions or partial understanding of the implications of such technologies. In particular, what is missing is an attempt to drill down into the practice of digital transformation.

Whilst the mainstream research in this area has noted key trends and developments, these studies offer a somewhat incomplete view by ignoring the complex ways that the organisations actually manage digital work practices. The majority of the studies in IS and more particularly in Marketing, have focused on quantifying the impact of the digitalisation of marketing on customers and showing what counts as requirements for a successful practice of digital marketing (e.g. engagement with customers, active content sharing on social media, adopting social media management technologies, etc.) (Kumar et al., 2016; Malthouse et al., 2013).

This has resulted in an unbalanced development of research in this area. I will now briefly review some of the current limitations in both disciplines.

First, in attempting to identify the factors in digital marketing that ultimately lead to better business outcomes in terms of customer relations, marketing scholars have not drawn attention to the practices, activities and resources within the organisation necessary for generating these potential results (in many respects, they have produced 'impact' studies). Second, the majority of research in the IS discipline is centred around either the technology itself and the distinctive nature of the new digital technologies, or on the transformative power of these technologies and how they can change work practices.

This is also problematic for a number of reasons. Firstly, studying the new digital technologies and foregrounding their characteristics offer a rather organisationally disembodied view of the process of digital transformation. Secondly, by exploring the changing nature of work, the studies have primarily focused on only IT functions and how they are changing to incorporate the digitalisation into their agenda (e.g. IT exploration for innovation in addition to the conventional role of IT exploitation for IT efficiency)

(Gregory et al., 2015; Chun and Mooney, 2009). In addition, bringing a marketing lens into the picture reveals how there is an ‘enterprise’ bias in IS research (e.g. IS scholars have concentrated on internally-oriented technologies such as enterprise systems and intranets at the expense of consumerised and externally-oriented IT). This has led to blind spots. For instance, whilst there has been much focus on ‘organisational users’, there has been little work into the role of consumers as users.

In sum, limitations with the marketing perspective, as well as gaps in the IS literature especially the inadequate attention given to the role of other individual users of new digital technologies, shape the background of this doctoral thesis.

1.2 The Research Objectives and Questions

Given the kinds of changes mentioned above, and our current gaps in understanding, there is a need for more fine-grained discussions of how organisations are responding to both the opportunities and obstacles presented by the new wave of digital technologies. In this regard, the research follows this primary objective: to explore the dynamics of organisations’ work practices, new emerging expertise, and changing organising approaches. In order to throw light on these central issues, the study will address three main research questions.

There is a need for further studies that move beyond viewing these technologies as ‘tools’ (as espoused by some marketing studies) and that lead only (again as found in some of the marketing literature) to positive outcomes for organisations in relation to their customers and sales. Even though there is a growing awareness that consumers as users might now be playing a greater role in the shaping of the organisation, there are still few studies to explain this. Thus, this thesis attempts to answer the following question:

- 1. What new practices are emerging to handle the current wave of digital technologies and how do external individual users play a role in shaping these work practices?*

In answering this question, I will discuss ‘what’ new work practices are created. The aim here, following the tradition of practice-based studies of technology and organisation (Orlikowski, 2000; Schultze and Orlikowski, 2004), is to consider the

emergence of new work practices [and how they are brought to life by organisational actors]. In doing so, I will focus on the particular characteristics of the technology in question and the involvement of individual users.

Also, related to the above question is ‘who’ carries out these work practices and how do they learn to perform them. Currently, there are only a few studies (Deans, 2011; Westerman, 2013; Singh et al., 2017) that have drawn attention to the new roles that are rising within organisation around these new generations of technology. The majority of discussions in this area only highlight the importance of developing new skills and expertise for organisation dealing with digital platforms. As mentioned, research has focused on the senior management roles, but this forms the point of view of the governance of these technologies. Such studies provide insight on how roles such as CDOs position themselves in the organisation in competing with traditional CIO roles (Singh and Hess, 2017; Tumbas, Berente and Brocke, 2017; Haffke, Kalgovas and Benlian, 2016). However, there is a need to understand how new expertise emerge beyond focusing on occupational tension and rivalry (e.g. to focus on the experts’ practices).

In addition, research on the role of new technology in organisational work has primarily studied how technologies change existing occupations (e.g. Bailey and Leonardi, 2015; Susskind and Susskind, 2015). Despite an increasing emphasis on the rise of new expertise and skillsets that organisations should develop, there is limited understanding on how the new forms of technology are leading to the emergence of new roles and occupations. Therefore, the way that such particular expertise is being formed and what those experts do in their roles, forms the second research question:

2. *How does new occupational expertise emerge in the organisation and what are the mechanisms that organisations use to facilitate its emergence and development?*

One of the reasons that the area of organisational work practices with regard to the dynamic digital technologies is under-researched, is the lack of appropriate analytical approaches that enable scholars to study them. This is because the nature of these

technologies that operate through learning algorithms, scholars argue, cannot be known (Introna, 2015; Faraj, Pachidi and Sayegh, 2018). Their apparent inscrutability provides important challenges for organisations and work (Orlikowski and Scott, 2016). Therefore, this has led to studies that focus on the implications of these technologies for organisations and their customers, which only offer a partial understanding of the phenomenon and tend to disregard the technology itself. To address this problem, I will answer the following research question in this thesis:

3. *How are the organisations being transformed as they reorganise around digital technologies and how might we go about studying such re-organisations through digital transformation?*

In answering these questions, this thesis is based on an in-depth study of a digital organisation that has gone through a major transformation in managing digital technologies. For this purpose, I will use a practice-oriented approach to foreground the inside story of the organisation by looking into the details of the digital work practices and seeing how knowledge about the technologies and user practices, norms of working and facilities are formed in conducting new work practices. Another aim of this study, by focusing on the practices but also using an occupational approach, is to see how the expertise is developed, particularly in digital marketing, and extended to other areas. Finally, I take a broader view toward those work practices and experts' doings, to understand the organising approaches in digital transformation and offer insights on how researchers might go about studying organisational internal implications of customer-oriented digital technologies.

1.3 An Overview of Research Design and Method

While digital technologies are seen to have unprecedented transformational implications for organisations, current studies from IS and Marketing (Kannan and Li, 2017; Goes, 2014) portray only part of the phenomenon of digital transformation, and in some cases tend towards a rather deterministic view, leaving out the details of how these outcomes are achieved or adapted. Thus, to understand the intricacies of managing digital technologies, this thesis adopts a practice-oriented approach to unravel how the doing of

work can be conceptualised in the case of dynamically changing platforms that operate based on unknown algorithms.

In contrast to some of the more positivistic research philosophies adopted by Marketing scholars, this research takes on an interpretive case study approach (Walsham, 1995). The benefit of the interpretive approach is that it enables the researcher to focus on human interpretations and meanings, and provide thick descriptions of the phenomena under investigation. The adopted case study approach in this project employs qualitative data gathering methods, including semi-structured interviews, documents, and netnography. This thesis will also use various sources of data, for example, interviewing organisational actors as well as independent experts, and different forms of organisational documents. This is in line with previous recommendations in conducting case studies (Eisenhardt, 1989) to use a combination of methods.

Prior to starting the fieldwork, I tested the field by doing a pilot study. This was to get a broader view of the phenomenon, gain a preliminary insight about the field and enable the case selection process. The primary source of data for this thesis will be semi-structured interviews to understand the underlying dynamics of work practices in the organisation. The second data collection method in this thesis is netnography or observations of the case organisation's social media activities to supplement interviewees' accounts of their work practices. In addition to interviews and netnography, I also do document analysis of company details, brand guidelines, consumer blog, knowledge-sharing blog, and conference presentations.

1.4 Outline of the Thesis

This thesis presents a review of the literature in IS and marketing disciplines, and it also offers a historical overview of IT systems in organisations and the dominant IT paradigm in the IS field. To conclude this review, I problematise the existing discussions and highlight the need for a fresh understanding of digital transformations. This is followed by the methodology chapter explicating the approach, methods and choices that have been made in conducting this research. The next three chapters explain the findings of the case study centring around one specific empirical theme, and in relation to a particular lens.

The discussion chapter then brings together the findings from the empirical chapters to construct a theoretical argument of the phenomenon and explain how this argument is different from the discussions of existing IT paradigms regarding previous IT generations. Finally, in the conclusion chapter, the thesis shows the theoretical, methodological, and practical contributions of this research.

Subsequent to this introductory chapter, I present the state-of-the-art literature about the digital transformation phenomenon in IS and marketing disciplines and the conceptual approach for studying that. Chapter 2 is composed of two main parts. In part I, I review the literature about digitalisation and digital transformation of organisations with a particular focus on social media and other customer-facing digital platforms. In this context, I first explain how the existing literature has focused on the impacts of the digital technologies, while also offering a historical perspective on IT in organisations to explore what went before, in the previous IT paradigm, that is suggested is shifting. Second, I review the studies on organisational roles and expertise with respect to digital technologies, while also providing insight from studies of the former IT-related organisational roles.

Through this review, I will show how the existing research has analysed the impact of digital technologies on organisations and their customers, and has not shown the practices involved. In part II, I offer an overview of a practice-based approach in studying technology and organisations. This includes a brief history of the main strands of the so-called ‘practice’ lens, which is followed by explaining how it gained importance, initially in ethnomethodological studies, and then in IS and organisation studies. Furthermore, this part discusses how such studies developed and the recent sociomateriality perspective in studying technology in organisational work practices. The chapter will conclude by detailing the problems in the assumptions of the literature regarding the view of technology in marketing studies and individual users (consumers) in IS studies.

Subsequent to this review, Chapter 3 will continue by explaining the ontological and epistemological assumptions guiding this research. Following an interpretive paradigm and the sociomateriality perspective, the chapter narrates the design of the study and the

methodological choices. In this respect, following a pilot study, it will explicate why a qualitative single case study approach is chosen to present an in-depth view of organisational digital transformation from the inside. This will be followed by, the details of data collection and analysis approaches. Overall, the chapter aims to show the process of this research, how it evolved and the researcher's position in this process.

The aim of Chapter 4 is to explore how the organisations' work practices emerge in managing digital technologies through unpacking the assumptions regarding the technologies, norms and ways of working and facilities. In this respect, I briefly review some of the key works discussing characteristics of these technologies, in addition to providing a discussion about the notion of 'user' in IS studies and the notion of experiential computing (Yoo, 2010). Drawing from the data from the case study, the chapter will discuss how the dynamic and malleable character of digital technologies and individual user practices, bring forth the ongoing (re)configurations of organisational work practices in a mutable state that are not stabilised, unlike the previous generation of IT.

In chapter 5, I take an occupational perspective to explain how the 'doing' of occupations forms the new expertise in managing digital technologies. In this regard, this chapter differentiates itself from the dominant occupational studies and the nascent research on governance of digital transformation in IS literature, by focusing on practices of experts rather than the jurisdictional tensions between occupational groups. Discussing the mechanisms through which such new digital expertise arises, I show how these experts have become measurement experts.

Motivated by the lack of insight about analytical approaches to study algorithmic-based digital technologies and drawing on the notion of 'search' (Stark, 2011), Chapter 6 defines the organising approaches in the digital organisation. This chapter explains how the organisation establishes new approaches in relation to its customers (individual users) and digital platforms, and how it reconfigures itself internally to manage those approaches. While each of the Chapters 4, 5, and 6 present their own findings, Chapter 7 brings these findings together to present a holistic view of digital transformation that conceptualises it

as a new logic of the organisation. Finally, in Chapter 8, the thesis will conclude by discussing the contributions of this research from the theoretical, methodological and practical perspectives.

2 Chapter Two: The Changing Role of Information Technology in Organisations

2.1 Introduction

This chapter presents an overarching review of three strands of the literature: (1) Information Technologies (IT) in organisations to provide an overview of both the state-of-the-art research on the role of digital technologies and a historical background, (2) the organisational roles and expertise regarding digital technologies, and (3) practice-oriented approach and its use in studies of technology and organisation. This review will help in positioning the contributions of this thesis.

The chapter comprises two main parts: part I, to present an overview of the background literature, and part II, to present the theoretical foundation of the research. In part I, first, I present a state-of-the-art discussion in the literature proposing the rise of a seeming new paradigm, explaining the role of the new digital technologies in organisations, and offering relevant insights from the marketing literature. In this section, I highlight the most recent changes in the domain of IT with the rise of digital platforms and connected social media.

In addition, I will argue that, to understand current changes, it is useful (perhaps even necessary) to reflect on recent technology phases. Thus, I present a somewhat historical perspective in the review, comparing how changes today relate to existing or recent paradigms, such as the ‘integration’ logic associated with enterprise systems. Second, changing tact slightly, I then move on to discuss how the new wave of technologies is bringing forth new forms of expertise. In part II, I will present an overview of the ‘practice’ perspective, its use and development in studies of technology and organisation and the recent turn to sociomateriality. Finally, I conclude this chapter by highlighting the gaps in the literature that will be addressed in this research.

Part I: Background Literature

2.2 Digital Transformation: The Emergence of a New Paradigm?

The use of digital technologies in streamlining business processes is not a new phenomenon. Organisations have traditionally used these technologies over several decades in manufacturing as well as business support processes (Niederman, Brancheau and Wetherbe, 1991; Davenport, 1993). Despite the difference between organisations in terms of their degree of digitalisation, these technologies have implications for their internal processes (Dechow and Mouritsen, 2005; Strohmeier, 2007) as well as their relationships with external stakeholders (e.g. suppliers and customers) (Buxmann et al., 2004; Kim and Mukhopadhyay, 2011).

However, digital technologies have evolved and comprise digital platforms with characteristics of ‘editability’ and ‘reprogrammability’ and hence they have become more malleable (Kallinikos, Aaltonen and Marton, 2013; Yoo, Henfridsson and Lyytinen, 2010). Editability refers to how easily the digital content can be produced, modified or removed and reprogrammability is related to the ability of a digitalised product to “accept new sets of logic to modify its behaviors and functions” (Yoo, 2010, p.231).

To provide a better understanding of the implications of digital technologies for organisations, Yoo, Henfridsson and Lyytinen (2010) suggested a layered modular architecture that forms all digital artefacts. First, content layer facilitates the homogenisation of data through standardised formats. Second, the service layer includes an application functionality that enables users to generate, modify and consume content. Third, the network layer that allows users to disseminate contents through Wi-Fi and cellular networks. Fourth is the device layer through which the users consume digital contents. According to them, these layers are loosely coupled and due to such architecture, digital platforms are highly malleable (Yoo, Henfridsson and Lyytinen, 2010).

With these characteristics of digital platforms, Yoo (2012, p.137) has defined ‘digitalisation’ as “the encoding of analog information into a digital format and the possible subsequent reconfigurations of the socio-technical context of production and

consumption of the product and services”. Digitalisation has given rise to the discussions of digital transformation and digital innovation (Yoo, Henfridsson and Lyytinen, 2010; Yoo et al., 2012). Digital innovation has been conceptualised as “the creation of (and consequent change in) market offerings, business processes, or models that result from the use of digital technology” that includes a variety of outcomes such as “new products, platforms, and services as well as new customer experiences and other value pathways” (Nambisan et al., 2017, p.224).

Similar to the discussions of digital innovation (Yoo, Henfridsson and Lyytinen, 2010; Nambisan et al., 2017), an organisation’s digital transformation requires revisiting its organising logic and its use of such digital technologies. In a similar fashion, Hinings, Gegenhuber and Greenwood (2018, p.53) have defined digital transformation as “combined effects of several digital innovations bringing about novel actors (and actor constellations), structures, practices, values, and beliefs that change, threaten, replace or complement existing rules of the game within organizations, ecosystems, industries or fields”.

To address the diverse issues related to digital transformation, some scholars have focused on the digital business strategy (Bharadwaj et al., 2013). For example, Mithas, Tafti and Mitchell (2013) argued that organisations’ awareness and responsiveness to the digital business environment play an important part in digital business strategy in addition to optimising the processes internally. Moreover, in studying the role of digital business strategy and firm performance, Leischnig, Woelfl and Ivens (2016) found that under certain conditions, such as dealing with heterogeneous categories of customers and fast changes in technology, the organisations’ digital strategy can bring forth higher performance levels. This strategy can involve the organisations’ internal dynamics and the use of communication technologies to enhance agility in fast changing environment of digital technologies. For example, Park, El Sawy and Fiss (2017) showed that in dealing with large amounts of data and fast responses, large organisations need business intelligence and communication technologies to achieve agility in their decision making and actions.

With such changes underway, Urbach, Drews and Ross (2017, p.iv), in the introduction to their special issue on ‘Digital Business Transformation and the Changing Role of the IT Function’, have suggested that “enterprises are currently facing a major paradigm shift in business and IT management” (2017, p.iv). Mckelvey, Anderson, and Yoo (2016) also highlighted a similar shift through the rise of ‘digital platforms’ which will create new opportunities and challenges for businesses as well as bringing new innovation pathways (Nambisan et al., 2017). It has been suggested that as the organisation becomes digital, their “IT function needs to undergo a change that comprises new modes of internal organization as well as new forms of collaboration and alignment with business departments” (Urbach, Drews and Ross, 2017, p.iii). Moreover, Yoo et al. (2012) suggested that in competing in this new digitalised world, organisations need to create new jobs, develop new new organising approaches and coordination mechanisms.

As mentioned above, while digitalisation previously was about integrating and streamlining business processes, the new wave of digitalisation is about organisations’ linkages to external bodies such as customers. As Urbach, Drews and Ross (2017) indicate, whilst the themes of ‘integration’, ‘standardisation’, ‘control’, etc., continue to dominate enterprise system debates, there also appears to be the emergence of new concerns heralded in by talk of the digital organisation. These concerns as discussed above include the ways that the role of IT in organisations is shifting and new roles, structures and coordination mechanisms are emerging. Together the literature presents a picture of how digital technologies are dramatically *remaking* organisations. Yet, they do not explicitly pick out the key characteristics of what the new forms of digital work might look like, and, importantly, how we might go about researching them.

For example, social media – as one specific category of digital platforms have been transforming the nature of people’s communication, information sharing, consumption, interaction and collaboration (Wakefield and Wakefield, 2016). These technologies have had important implications for organisations in various areas such as marketing, knowledge management and new product development (Kane et al., 2014a).

To understand the role of these platforms in organisational changes, in the following sections, I first review the literature on social media in organisations. This then is followed by a review of the marketing literature on how social media have significantly altered the marketing function and how organisations relate to their customers (Aral, Dellarocas and Godes, 2013). This is because customers are said to have become highly demanding in terms of the expectation of being “well-informed, spoiled and empowered” (Granados and Gupta, 2013, p.637) and demand instant communications and interactions (Alexander and Lyytinen, 2017). Subsequently in section 2.2.3, for a better understanding of such changes over time, I review (chronologically) the literature on IT roles within organisations to explicate the early waves of digitalisation in organisations and what they involve(d).

2.2.1 Social Media Technologies

Understanding of the use of social media as a new form of IT has been proliferating in the past decade. These technologies, which provide communication and interactions among a large number of individuals have blurred the temporal and spatial barriers of communication (Aakhus et al., 2014). With their unique features, functions and affordances, social media technologies are said to be transforming organisations radically. These changes can be seen in terms of their internal relationships but also their linkages to external bodies (and most notably customers) (Aral, Dellarocas and Godes, 2013).

Regarding the internal relationships, social media are said to have rapidly changed the nature of intra-organisational communications and associated organisational processes. Due to the idiosyncratic nature of their affordances, enterprise social media have important implications for socialisation, knowledge sharing and power processes in organisations (Treem and Leonardi, 2012). Social media affordances ease knowledge sharing (Ellison, Gibbs and Weber, 2014; Gibbs, Rozaidi and Eisenberg, 2013), knowledge transfer and knowledge acquiring (Leonardi and Meyer, 2015) among employees. These affordances – such as how they produce more open communications and visibility - have both positive and negative implications for organisations. This includes more innovation (Leonardi, 2014b) or tensions among employees (Gibbs, Rozaidi and Eisenberg, 2013; Majchrzak et al., 2013).

However, this strand of research, in building on the previous tradition of organisational digitalisation, focuses predominately on the *internal* uses of social media and how the emergence of this new form of technology is changing existing inward focused processes (such as communications and knowledge sharing). However, it does not take into account the wider implications of these digital platforms for organisations such as their relationships with *external* bodies (which is a focus of this thesis).

In this regard, in relation to their customers, organisations are seen to be in a position to harness the power of social media in exploiting the unprecedented volume of information shared on these platforms to predict demand for their products (Bollen, Mao and Zeng, 2011), use the power of crowds in peer to peer marketing (Aral and Walker, 2011) or new product and service innovation (Dong and Wu, 2015). That these platforms offer new ways through which organisations relate to consumers, has been noted in the IS literature. For example, by exploring Facebook's use of a retail firm, Goh, Heng and Lin (2013) showed that engagement with customers on social media can lead to higher spending levels. Moreover, Rishika et al. (2013) studied firm social media practices and the impact of the customer participation on the strength of the relationship between the firm and its customers. They found that customers' participation in companies' social media activities resulted in a higher frequency of customers' visits.

Extant literature illustrates the potential positive outcomes of social media for firms and organisations from a customer relationship perspective. However, more recently it has been argued that the transformative potential for organisations transcends the marketing function and various aspects of consumer behaviour (Kane et al., 2014b; Quesenberry, 2016). With more attention drawn to the organisations' role, Risius and Beck (2015), focusing on Twitter, investigated social media management strategies and illustrated the positive influence of a greater investment in social media management on customers' word of mouth and loyalty. Thus, organisations can actively manage their social media (Miller and Tucker, 2013) and employ specific technologies to regulate these platforms (as part of their social media strategy) to enhance the word of mouth among associated communities and improve their relationship with them (Benthaus, Risius and Beck, 2016).

One specific area that attracted organisational efforts has been social media management practices. According to Aral, Dellarocas and Godes (2013), social media technologies exemplify ‘the most transformative impacts’ of IT on organisations, both within and beyond their boundary. Existing research has provided insight for the positive outcomes that social media can bring forth for businesses from both marketing and information systems (IS) perspectives. Such outcomes entail higher chances of customers’ product adoption, higher levels of customers’ purchase spending, and increasing customers loyalty (Thompson and Sinha, 2008; Wu, Fan and Zhao, 2017). Despite their potential benefits, the wider implications of (external) social media for organisations’ internal processes have been specified as an important research area (Kane, Alavi, et al. 2014), but are still widely unaddressed.

In order to narrow down the focus for the research on social media, Aral, Dellarocas and Godes (2013) proposed several areas of research based on ‘level of analysis’ and ‘activities’. Their aim was to frame the gaps of the literature on the implications of these technologies for organisations and wider society (The suggested areas have been illustrated as a diagram in Figure 2-1). Based on the growing organisational uses of social media, they argue that there is not sufficient understanding of the uses of social media particularly in the level of firms and industries and in terms of management and organisation of these technologies (Aakhus et al., 2014; Kane et al., 2014a).

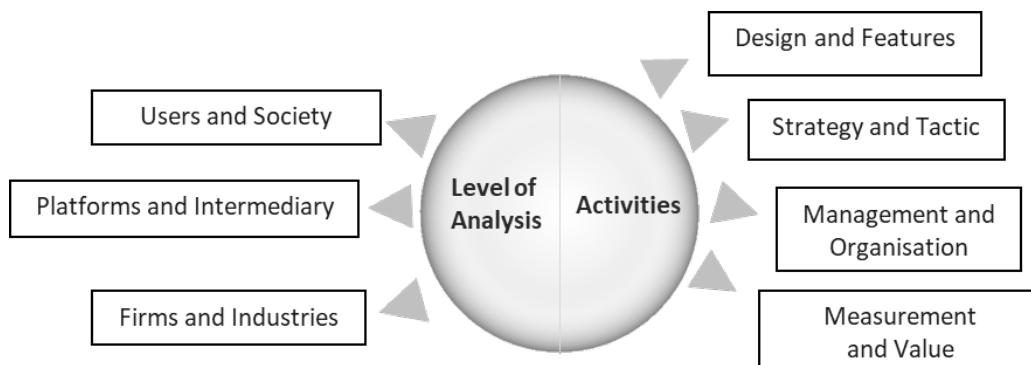


Figure 2-1 An Organising Framework for Social Media Research (Based on Aral, Dellarocas and Godes, 2013)

The body of research focusing on the organisations relationship with customers has largely ignored the role of social media management in organisations’ internal dynamics. More

specifically, the underlying dynamics of how organisations construct their knowledge and expertise, how they structure teams and functions, and organise around managing new forms of digital technologies in relation to their external stakeholders (such as customers, not employees) have largely remained unaddressed. In addition, thus far the literature has not paid much attention on the role that customers can play in the ways that organisations relate to them through social media. Moreover, while, the literature has studied how organisations can influence them through these new platforms, it is important to note that these customers as users of social media are not passive but play an active role in relation to organisations (a theme developed in Chapter 4).

One outcome of this review of the work of digital organisation is that we find the literature does not pay adequate attention to several important issues – such as the new organising approaches, the central role of consumers and how they play a role in digitalisation of organisations. To unpack some of these issues, I found it useful to turn to the marketing literature. The marketing literature has given more systematic attention to the role of customers, but it has its own weaknesses which I shall identify.

2.2.2 The Role of Digital Technologies in Organisations: A Marketing Perspective

The transforming nature of IT has changed the IS field to get involved in research with other business fields. Marketing, in particular, has attracted IS researchers' attention to engage in such interdisciplinary research (Goes, 2014). Thus, to remedy some of the weaknesses in the IS literature noted in the previous sections, I now turn to the field of marketing. It is important to understand the insights from the marketing discipline and how they can contribute to the IS literature. However, in addition to the strengths of the marketing literature, I will also note its issues that can be addressed by the IS field.

As noted by IS scholars, digital technologies such as social media platforms are externally oriented (towards customers) (Singh and Hess, 2017; Tumbas, Berente and Brocke, 2017; Haffke, Kalgovas and Benlian, 2016). Marketing scholars have drawn attention to how other departments and functions of the organisation beyond IT such as marketing are increasingly getting involved in digital initiatives (Royle and Laing, 2014). Indeed, as I

will show, marketing, in particular, has been increasingly relying on IT. For example, much of the prior literature on the organisational use of social media has focused on the use of these technologies not as information or organisational but marketing tools (Goh, Heng and Lin, 2013; Rishika et al., 2013).

2.2.2.1 Marketing Studies (Black-Boxing the Technology)

Marketing scholars have acknowledged the role of technological advances in transforming marketing communications, which have been referred to as ‘digital marketing’. The term ‘digital marketing’ has developed over time from a specific term describing the marketing of products and services to consumers utilising digital channels of communications to an umbrella term “describing the process of using digital technologies to acquire customers and build customer preferences, promote brands, retain customers and increase sales” (Kannan and Li, 2017, p.23). In a recent review of the term in the marketing literature, Kannan and Li (2017, p.23) draw upon the definition by American Marketing Association³ (AMA) as “the activity, set of institutions, and processes [facilitated by digital technologies] for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large”. Therefore, they (Kannan and Li, 2017, p.23) define ‘digital marketing’ as “an adaptive, technology-enabled process by which firms collaborate with customers and partners to jointly create, communicate, deliver, and sustain value for all stakeholders”.

The definitions illustrate the perspective of marketing on digital technologies that are neutral means, which perform as enablers of marketing activities. An example of this is the study of Weibo⁴, as a marketing tool, in which Gong et al.(2017) found that company’s tweets and retweets of influential users increase the viewing of its media content. This study provides recommendations for marketers about how they can manage microblogging platforms as a channel for marketing.

Marketing studies have also shown that digital marketing platforms such as search ads, email, social media, mobile and display ads should be used in an integrated way (Batra

³ <https://www.ama.org/AboutAMA/Pages/Definition-of-Marketing.aspx>

⁴ A microblogging platform like Twitter in China

and Keller, 2016; Xu et al., 2014). For example, the synergy between organic search and search engine advertising has been shown (Yang and Ghose, 2010). Moreover, Rutz and Bucklin (2011) illustrated the spillover effect from generic (keyword) search to branded (keyword) paid search ads.

In addition to online advertising, with powerful impact of consumer to consumer content on social media (Aral and Walker, 2011), there is burgeoning research to understand the factors that influence customers to share branded content messages on social media. Ordenes et al. (2018, p.14) studied the specific characteristics of brands' content on social media that influences consumers to share those contents. They highlighted that this finding is particularly useful for content managers to guide them what type of content and what combinations of text and image they should choose to drive consumers' sharing. This also draws attention to the specific and active role that consumers can play in organisations' dynamic relationship with them on these platforms.

I find this literature useful. However, marketing scholars tend to treat technologies as 'black-boxed' and 'tools' that work as conduits for businesses to convey their messages to customers (Batra and Keller, 2016; Gong et al., 2017). In terms of the former, it means that scholars do not enquire to the actual shaping of these technologies and thus do not have the capacity to understand how they are constructed. This black box conception of technology assumes that social science enquiry is not necessarily interested in the technical realm (MacKenzie and Wajcman, 1999). Such view of technology is much contested in other literatures such as science and technology studies that argue that scholars should take the time and develop the capacities to examine the minutiae of apparently technical features (Williams and Edge, 1996). In terms of the latter, the tool view assumes that the technologies will be implemented and used as planned with inevitable outcomes. This contrasts with the research in IS and elsewhere (e.g. science and technology studies) which shows how technologies are seldom simple tools used in the linear and direct way they were envisaged. Rather, because of the different "organisational, political, economic, and cultural" factors (Williams and Edge, 1996, p.865) surrounding technologies, they can have different outcomes in different contexts.

2.2.2.2 Impact Studies of Marketing

Marketing scholars have coined the term ‘social CRM’ (Malthouse et al., 2013) to signify how the rise of social media platforms are changing businesses’ relationship with customers. The foundation of social CRM is data compiled through these platforms in order to understand the influence of social media on customers. Along these lines, it is seen as increasingly becoming important for organisations to measure the performance of their social media activities. Kumar et al. (2016) investigated the effect of organisations’ social media content on customer purchasing behaviour. They found that the content that firms communicate to their customers on social media has a positive effect on both customer spending and also their motivation to buy other products of that brand.

With the aim to build understanding of the effects of these new technologies on businesses, an evolving stream in marketing research has emerged related to developing metrics and measurement of marketing activities and firm performance. For example, using data from social media, organisations can measure the outcomes of social media campaigns and the return on investment (ROI) (Hoffman and Fodor, 2010). Through an experimental research design, Kumar et al. (2013) investigated the influence of an individual user and their ability to spread the information on a campaign. This is based on the “influential hypothesis” (Watts and Dodds, 2007), which is about the role of influential consumers and their impact on others. ‘Influentials’, who are traditionally called ‘opinion leaders’ (Katz and Lazarsfeld, 1955 cited in Watts and Dodds 2007) in the marketing literature are defined as “a minority of individuals who influence an exceptional number of their peers” (2007, p.441). This ‘influence’, which is based on the concept of word of mouth, has been shown to have larger impacts on other people’s activities on social networking sites (Trusov, Bucklin and Pauwels, 2009).

In addition, studies have investigated the relationship between social media and firm valuation. In their study of technology firms, for instance, Luo, Zhang and Duan (2013) illustrated that social media can predict market returns. Comparing to traditional online behavioural metrics (Google searches and Web traffic), they also showed that social media metrics have a stronger and faster predictive power for market returns. In their discussions

of measuring brand equity, Moor and Lury (2011, p.446) argued that some new measures can be used in classifying CRM databases and web analytics data “to identify ‘opinion leading category promoters’”. In this regard, they referred to ‘listening platforms’ that are used in this process to discover the tone and sentiment of customer conversations on social media “in order to enable companies to address the concerns of especially vociferous critics or to reward and harness the positive contributions of others” (2011, p.446). This suggests that such developments enable organisations to measure other values and qualities related to customers and customer relationships such as ‘propensity to recommend’. This is also highlighted in Viale et al.’s (2017) study of how developments in social media analytics provide new approaches to measuring the outcome of marketing activities and tracking customers. However, due to the diverse range of metrics that marketers can use, measuring the value of marketing activities for organisations is noted to be very challenging (Hanssens and Pauwels, 2016).

Despite the insightful efforts in the marketing discipline, there are some issues that have not been addressed in this literature. Marketing research has produced what might be thought of as ‘impact studies’. For example, it has fundamentally focused on technology effects and studying how these technologies can have various behavioural ‘impacts’ on consumers (e.g. their preferences, purchasing, loyalty), which brings forth value to the businesses (e.g. revenue/sales). One reason for this is that marketing research has substantially relied on quantitative approaches and hence they do not explain the variety of outcomes that might arise during the use of technologies.

Having briefly reviewed the marketing literature, I now return to the IS literature, especially more historical work on IT roles and technologies. As I have already mentioned that to fully understand the introduction of this new wave of digital technology, it is worth recounting the recent changes in the technology-related organisational development. I show that developments today can only really be understood by looking back at the history of information systems, and how today’s changes build on previous generations of technological and organisational developments. Arguably, this helps us see how and to what extent organisations’ concerns, issues and priorities might now be different from the

former technological changes. To understand the contributions of the IS research, I look at the various shifts chronologically to see how the new developments are similar or different from what has gone before. This is presented in the following section.

2.2.3 History of IT Systems and Their Role in Organisations

Through a historical perspective towards IT in organisations, we see how IT and its implications for organisations have transformed over the past five decades. The recent history of IT is marked by a number of paradigms. Early uses of IT in the organisation (1960s-70s) were focused on the routine tasks of data processing and thus data processing departments were set up within organisations (Friedman and Cornford, 1989). Over the period between mid 1960s and mid 1970s, self-standing IS functions were set up in the organisations as most of the organisations were trying to migrate their business functions to IT (Boynton and Zmud, 1987).

Digital transformation has changed the IT function over time. During the 1970s and 1980s, IT systems became prevalent and constituted a fundamental area in organisational activities (Williams and Edge, 1996). Not only it was rhetorically believed that IT plays a vital role in organisations' survival and growth, but researchers also characterised IT as an organisational capability (Bharadwaj, 2000). Previous research illustrated that superior IT capability (owning the technology and knowledge of implementing it) was positively and significantly associated with superior organisational performance (Bharadwaj, 2000; Santhanam and Hartono, 2003). In this regard, IT capability had a positive influence on organisations' performance and was a source of competitive advantage.

Therefore, during the mid 1970s and mid-80s, the IT function was to operate as a business within the organisation, where its role was to serve as the main provider of IT products and services (Cash, McFarlan and McKenney, 1983 cited in Boynton and Zmud 1987). During this time, IT was in the form of bespoke systems designed for a specific organisation.

As the waves of digitalisation continued over time, IT became more universalised and commodified (Williams and Edge, 1996). While proprietary information systems were the

prevalent form of IT before the 1990s, more standardised forms of information systems were popularised in the 1990s and early 2000s. With the growth in the adoption of more standardised software packages, IT became more homogeneous (Chae, Koh and Prybutok, 2014). As IT became more standardised and more affordable in the 2000s, many organisations were able to develop the same IT capabilities or surpass those of their competitors (Wang, 2010). In a more recent study, Chae, Koh and Prybutok (2014) investigated the role of IT capability in the firm performance in the 2000s and found no significant association between the IT capability and firm performance. They argued that since earlier studies of relationship between the IT capability and firm performance, “IT has become more affordable—technically and economically—and universally available” (Chae, Koh and Prybutok, 2014, p.321). Thus, it was considered important to understand how organisations evolve in relation to the new forms of IT.

In the following section, I explore the research on ‘enterprise systems’ as one of the common and most widely adopted forms of IT in organisations (Matook and Brown, 2017). This is useful, I would argue, and given the similar kinds of transformational claims that were made around these technologies at the time, it allows us to see what the previous wave of digital transformation involved. With the development and changes in IT, the knowledge, expertise and occupations regarding the technology have also been changed. I will briefly review these changes in section 2.3.

2.2.3.1 ERP Systems and the Existing ‘Integration’ Paradigm

In the late 1990s and early 2000s, studies of IS and organisation centred a substantial interest and focus on enterprise systems (ES) (Matook and Brown, 2017). These often off-the-shelf software packages and brought forth new waves of digitalisation with the promise to integrate processes and information sources across various business activities (Davenport, 1998; Robey et al., 2002). Among a range of ES available are enterprise resource planning (ERP), customer relationship management (CRM), supply chain management (SCM). They were said to offer “seamless integration of all the information flowing through a company – financial and accounting information, human resource information, supply chain information, customer information” (Davenport, 1998, p.121).

Embedded in ES was the promise of ‘integration’ and much of the research sought to investigate how organisations adopted, implemented and used ES such as ERP systems (Howcroft, Newell and Wagner, 2004; Gattiker and Goodhue, 2005; Buxmann et al., 2004) for a seamless integration of information (Pollock and Williams, 2008).

It is hard to overstate the importance that ES had for (re)shaping the modern organisation and its digital remodelling. Wang (2009, p.13) defined ERP systems as “a class of enterprise software that integrates an organisation’s diverse business functions into one system”. A significant body of the literature has investigated the organisational consequences and benefits of implementing these complex systems. Not only did systems like ERP and CRM establish and push forward major technical changes, they also hailed a new information system vision. These systems were motivated by the enterprise integration imperative (Pollock and Williams, 2008; Robey, Ross and Boudreau, 2002; Dechow and Mouritsen, 2005).

The integrated data and best practice provided by ERP were seen to be leading to higher quality of data for decision making, higher efficiency in business processes and better alignment among various functions of organisations (Gattiker and Goodhue, 2005). The implementation of standardised best practices in varied organisational contexts brought forth different outcomes in spite of failure in many cases (Pollock, Williams and D’Adderio, 2007; Hendricks, Singhal and Stratman, 2007). However, organisational actors could choose different strategies to respond to such changes. For example, by investigating NASA’s ERP implementation, Berente and Yoo (2012, p.393) found that “human actors loosely couple local practices with the representation of those practices in the ERP system”. Therefore, organisations had control over such IT systems and how to implement them (Hanseth, Ciborra and Braa, 2001) and received support from their vendors (Pollock et al., 2009).

ERP software packages were highly complex (Robey, Ross and Boudreau, 2002) and required sophisticated knowledge for installation and configuration (Alvarez, 2008). On the one hand, organisations needed “a core team that is carefully selected, motivated with incentives, and empowered to act, as well as an effectively managed consulting

relationship” (Robey, Ross and Boudreau, 2002, p.40). On the other hand, as the literature showed the organisation and this core team provided significant levels of education and training for the employees. Thus, the management of ERP was within the function of IT/IS departments or units (Newman and Zhao, 2008; Sykes, Venkatesh and Johnson, 2014).

From the above discussion, we can see how organisations have gone through several phases of change in relation to different generations of IT, each presenting distinct concerns, issues, implications and outcomes. In the previous sections, I also reviewed the latest discussions, from the IS and marketing literature, around new forms of digital technologies and their role in organisations. Since these technologies are customer facing as opposed to predominately internally focused ES, new roles have been developed with different forms of skills and expertise (Horlacher and Hess, 2016). In the next section, I explore the nascent literature on the emergence of such expertise and associated roles in organisations.

2.3 IT, Organisational Roles and Expertise

2.3.1 Digital Transformations and New Organisational Roles

As I have shown, the scholars from both IS and marketing have argued that digital technologies are fundamentally reconfiguring the relationship organisations have with their customers (Aral, Dellarocas and Godes, 2013; Granados and Gupta, 2013). Given the possibilities that these technologies offer, such as predicting demand (Bollen, Mao and Zeng, 2011), peer to peer marketing (Aral and Walker, 2011) or more accurate measurements of marketing efforts (Viale, Gendron and Suddaby, 2017), this has been one area where there has been lots of development. Such initiatives comprise developing new digital business strategies (Bharadwaj et al., 2013), digital business models (Keen and Williams, 2013), digital innovation for rapid scaling (Huang et al., 2017), competency to handle ubiquitous customer engagements and interactions, and finally the capability to understand big data and analytics (Alexander and Lyytinen, 2017). To address these areas and successfully manage digital transformations, it has been suggested that organisations need “different mindsets and skill sets than previous waves of transformative technology” (Fitzgerald et al., 2013).

With such developments and the increasing involvement with customers on social media, it is suggested that IT and marketing are converging and the governance of these new forms of IT appears to be shifting: from IT experts to non-IT experts (Goes, 2014; Urbach, Drews and Ross, 2017; Nylén and Holmström, 2018). This has led to changes in the organisations' C-suite roles and for example, the increasing importance of Chief Marketing Officer (CMO) role over Chief Information Officer (CIO) in the governance of digital technologies (Deans, 2011).

In addition, the proliferation of digital technologies has given rise to the emergence of the new C-suite role of Chief Digital Officer (CDO) (Westerman, 2013; Berkman, 2013). Singh and Hess (2017, p.4) suggested that the principal elements of digital transformation that the CDOs focus are "Customer experience enhancement", "Business operations", and "New business opportunities". Recent studies have also highlighted that one primary dimension of the CDO role is related to the customer engagement and enhancing customer experience (Singh and Hess, 2017; Tumbas, Berente and Brocke, 2017).

One of the reasons for the creation of CDO role has been specified as the "increasingly external focus of the employment of digital technologies" and the need for coordination of digital initiatives (Haffke, Kalgovas and Benlian, 2016, p.14). With such emphasis on the external orientation of digital technologies (Singh and Hess, 2017; Tumbas, Berente and Brocke, 2017; Haffke, Kalgovas and Benlian, 2016), other departments and functions of organisations such as marketing are increasingly getting involved in digital initiatives (Royle and Laing, 2014). The CDO role primarily involves creating the organisation's digital vision, re-evaluating products and organisational processes, reinforcing digital possibilities throughout the organisation, and providing the necessary resources (Westerman, 2013). In doing so, they need to find expertise in the area of digital technologies (Horlacher and Hess, 2016). However, how organisations foster this knowledge and expertise around customer facing digital technologies is widely unknown.

Moreover, the rise of the CDO role has created a debate around the governance of digital technologies and the role of CIOs. Some studies have emphasised the changing nature of IT in organisations. For example, Gregory et al. (2015, p.76) pointed out that "in the era

of consumer IT and digital business, the choice between IT efficiency and IT innovation is not an either-or decision but more of a both-and decision". This has also been highlighted by other researchers as the CIO role is evolving (Chun and Mooney, 2009) to manage IT demand side (exploiting the existing competencies for creating reliability) and also the supply side (exploring new competencies for experimentation) (Chen, Preston and Xia, 2010). In this regard, some studies showed that CIO role has evolved to take responsibility of Chief Innovation Officer (closer to the traditional CIO) or Chief Technology Officer (who manages both IT supply and demand sides) (Chun and Mooney, 2009).

Therefore, the literature shows that there is an ambiguity and tension between the emerging CDO role and the evolving CIO role. Tumbas et al.'s (2018) have recently studied this tension and found that CDOs distinguish themselves from CIOs by establishing their own area of work that allows them to construct their influence zone and founding their domain beyond IT and close to marketing (explained further in Chapter 5).

They distinguish themselves in terms of their managerial focus, value creation and their role in the value chain. In this respect, they see themselves as different from CIOs. In particular, and with particular relevance for this thesis, they are externally focused towards customers and focus on creating new initiatives with respect to digital technologies. Notwithstanding the significance of insights from investigating such new roles through a jurisdictional perspective, there is a lack of understanding in current research in terms of what such new roles (or others who work in implementation of the digital initiatives) do in practice.

In the following section, I now look back at the history of the development of IT-related roles in organisations. From this we will be able to see how IT roles have moved from a decentralised state to a more centralised position in organisations. New waves of digitalisation have led to tensions between existing and new expertise. Looking at the history of this expertise allows us to see how ongoing technological changes further shape the nature of roles.

2.3.2 Former IT Roles in the Previous Paradigms

During the era when the main role of IT in organisations was data processing (in 1960s), a centralised IT function did not exist. The system development work was conducted within organisations by analysts and programmers and the computer skills of system design and programming were required in the running of data processing departments (Friedman and Cornford, 1989). During the mid-60s to mid-70s, the majority of IT efforts in medium and large organisations were focused on aligning the business functions to IT and therefore, IS functions started to appear in the organisations (Boynton and Zmud, 1987). The responsibility of IS functions then was “transformation of an organization's expected growth in business activities into transaction volumes, which in turn were converted into information processing workload levels” (Boynton and Zmud, 1987, p.60).

With the popularisation of standardised software packages over the 1990s (explained above), and as IT became more homogenous across organisations, human IT skills as one component of ‘organisational IT capability’ became more important (Bharadwaj, 2000). In addition to “managerial IT skills”, which was about capability in management of IT function, and “project management skills”, “technical IT skills” such as programming, analysis and design of systems and knowledge of new technologies constituted an important element of human IT skills (2000, p.173).

As the role of IT in organisations became more strategic (from automating tasks to driving competitive advantage), a new c-suite role, the CIO, emerged in organisations. According to Peppard et al. (2011, p.32) “[t]his shift demanded considerably more than just a focus on deploying and managing IT, which was the role of the CIO’s predecessors”. Unlike the previous IT executives, the new CIO role was responsible for utilising “business- driven approaches to exploiting information and IT” (ibid). The emergence of this new category of IT leaders points to the transformation from the ‘data processing era’ to the ‘information era’ (Applegate and Elam, 1992). One of the key elements of the CIO role has been the IT human resource development- the recruitment and development of IT skills and talent (Niederman, Brancheau and Wetherbe, 1991). According to Agarwal and Sambamurthy

(2002, p.8), this is about “identifying the know-how the IT function needs to possess, with respect to technology, business, and strategy”.

Thus far, I have reviewed current debates from both the IS and marketing concerning the role of new digital technologies in transforming organisations. One weakness of the IS literature is in predominately focusing on the technology and its transformative capacities and it has given less attention to the role of consumers as technology users. Related to this, and in turn, the literature has not yet explained just how organisations are becoming more customer-facing (e.g. changing internally in relation to digital platforms).

The marketing literature, by contrast, has focused more on the role of customers in organisations’ digital marketing efforts. This can complement the IS research in terms of offering an insight on the central role of customers in technology-driven organisational changes.

In addition, having reviewed the history of IT in organisations, I showed that, in contrast to the form of change brought in by ERP systems, digital technologies are heralding in new forms of issues. Whilst these echo earlier concerns – issues related to the control over technology, the standardisation of business processes and the centralisation of expertise - there are also important differences/nuances.

Then, I explored the body of research concerning the organisational roles in digital organisations, noted the patterns of changes from previous IT expertise, and highlighted the lack of understanding in how new forms of expertise are being developed.

Having reviewed the literature on the various changes underway with regard to digital technologies and associated expertise, I will now move to discuss in more detail the specific approach that I adopt here towards studying the digital organisation – the practice approach. I also trace its roots to the practice tradition with micro-sociology.

Part II: Foundations of Practice-oriented Approach in Studying Digital Organisations

2.4 Practice-oriented Approach

Many IS researchers have been influenced by the turn to study practices. This is because of the discipline's particular local, situated and relational focus, but also its ambition to scrutinise the relationship between the social and material (see below). Practices are defined as those “embodied, materially mediated arrays of human activity centrally organized around shared practical understanding” (Schatzki, 2001, p.11). The core of the practice perspective is the idea that ongoing human actions generate a social world which is recurrently produced. A practice lens is considered as “a specific approach to understanding of the world” (Feldman and Orlikowski, 2011, p.1240). It offers a processual approach of explaining social phenomena taking into account both the mundane everyday life and the material activities. The principles of, as Nicolini (2012) argues, what we might call a ‘practice-based view’, or ‘practice-based approach’, or ‘practice idiom’ do not originate from a homogeneous and uniform practice theory. According to Schatzki (2001, p.11), “there is no unified practice approach” which has led some scholars (Nicolini, 2012) to avoid offering a precise definition of practice.

Despite this lack of a recognised ‘theory’ of practice, there is a shared understanding of some of the primary tenets. Firstly, ongoing everyday human actions constitute the social life structure (e.g. according to strategy scholars, strategy is not a static characteristic of organisations but it is dynamic and is constituted through activities of organisational actors (Jarzabkowski, 2005)); Secondly, the Cartesian view and dualism between subject/object, actor/system, and social/material are rejected in practice theory (e.g. practice-based studies of ‘knowledge’ have rejected the dichotomy that knowledge is in routines and systems or it is embedded in human actors’ bodies and their communities (Orlikowski, 2002b)); and Thirdly, there is a mutual constitution in all the relations (Feldman and Orlikowski, 2011) (e.g. the more recent work by institutional theorists also draws attention to the role of human agency and everyday practices in constituting institutions which then configure practices (Smets, Morris and Greenwood, 2012)). These principles are reflected

in Giddens' (1984) theory of social structures, Bourdieu's (1977) concepts of field and habitus, and Schatzki's (2002) bundles of activity. A practice-oriented perspective highlights the importance of some form of productive and reproductive work in constituting what might be considered persistent properties of the world. This perspective hence transforms the way we understand the stability of the social structures and the 'social order'.

In this sense, a practice perspective helps us reconsider the role of human agents and has recently evolved to consider the role of artefacts in social engagements. In foregrounding practices as the units of analysis, this approach distances itself from more conventional approaches (e.g. structural-mechanistic or functional-systemic views) in understanding the organisational phenomena and thus generates a fresh view of organisational affairs (Nicolini, 2012).

2.4.1 Overview of Practice in Contemporary Social Studies

Although Giddens did not present any analytical investigation of practice as a concept, he defined practices as 'regularised types of acts' (Giddens, 1976, p.75). Based on Giddens' accounts of practices, we can identify three main characteristics. Firstly, practices are generated by actors who have the relevant knowledge and draw on the rules such as codes of conduct and also resources and facilities. Secondly, practices are always temporally and spatially situated and depend on possibilities and constraints of structuring mechanisms. Thirdly, all practices have a kind of reciprocal relationship and are mutually dependent. In this sense, practices produce social systems within time and space and are different from social structures that are formed essentially through the structuration processes (Nicolini, 2012).

For Bourdieu, although he also does not offer a definition of practice, establishing a theory of practice was the main output of his collected works. In this regard, Bourdieu introduced the notion of 'habitus' as "an acquired system of generative schemes" that "makes possible the free production of all the thoughts, perceptions and actions inherent in the particular conditions of its production" (Bourdieu, 1990, p.55). Despite the significance of habitus in producing practices, it is not the only element of generating practices, but it

is the encounter of habitus, capital (material and non-material sources of value) and fields (structured spaces that generate norms, social and power positions) through which practice is performed. However, Bourdieu's habitus, as one of the more comprehensive forms of practice theory, cannot resolve the objectivism and subjectivism duality (Nicolini, 2012).

Schatzki founded his theory on the premise that people do what makes sense for them to do. According to Schatzki, practices are defined as "organized, open-ended spatial-temporal manifold of actions" (2005, p.471), and also as "sets of hierarchally organized doings/sayings, tasks and projects" (2002, p.73). There are four mechanisms that link these actions that produce practice: practical understanding of how to do things and identify those doings; rules, instructions and principles of how to conduct certain actions; teleo-affective structures and normativised and hierarchically ordered tasks; and general understanding through which the activities of practice adhere together. Thus, Schatzki studied the ways that people live and interact with each other in certain settings, "meaning that who they are, what they do, and how they relate is beholden to the organisation and styles (webs of meaning) involved" (2002, p.142).

Despite the diversity of practice theories, Nicolini (2012) argues that they show 'family resemblances' in a number of ways. For instance, several of practice theorists believe that practices form the horizon that allows the material-discursive activities to occur and obtain their meaning. In addition, there seems to be a shared thinking that practices, even when associated with individuals, are social accomplishments and social actors are part of relationship networks and reciprocal connections that they both depend on them and contribute to them (2012). In this regard, he suggests that we need to use them in combination without attempting to synthesise them.

2.4.2 Practice and the Role of Technology in Organisation

The genesis of applying practice view in understanding technology use and practices in organisations originates in the ethnomethodological work of several scholars in anthropology and science and technology studies (Orlikowski, 2000; Nicolini, 2012). Such studies were concerned with the lack of sufficient sociological understanding of a range of topics classified as 'cognitive' (predominantly studies in psychology and

cognitive sciences) and initiated the claim that cognitive achievements can be better explained as ‘social interactions’. Of particular significance is Suchman’s (1987) work on plans and situated actions that criticises the perspective that considers plans as the basis of action and communication by designers of intelligent machines. Rather, she views plans as resources for interpretation and reasoning about actions. In this regard, the cognitive scientists’ attempts to codify the “knowledge about the world” are not relevant to situated action (1987, p.43).

Through detailed study of interactions between human users and a technology system of a photocopier, Suchman (1987, p.185) argues “[b]ecause of the asymmetry of user and machine, interface design is less a project of simulating human communication than of engineering alternatives to interaction’s situated properties”. She further suggests that “the significance of actions, and their intelligibility, resides... in a contingently constructed relationship between observable behaviour, embedding circumstances and intent” (1987, p.125). Therefore, according to Suchman (1987), actions are always situated in specific social and material conditions and that particular situation is fundamental to interpretation of the action.

In addition to Suchman’s seminal work, the other important study in this category of critical studies of practice and technical discourses is the research on the issues regarding training of service technicians. This, according to cognitive scientists, was a problem of bridging the divide between novice and expert technicians by changing the mental models of novices to those of experts. Through his ethnographic study, Orr (1996) found that technicians exchanged stories of their former diagnosis and problems in machines; such stories appeared everywhere in their practice and thus, he concluded that ‘narrative’ is the underlying element in practice of those technicians. Such narratives are shared among the colleagues, forming the accounts of diagnosis that move through discourses of technicians and “distributing the technicians’ experiential knowledge throughout the community” (Suchman, Orr and Trigg, 1999, p.396). Therefore, such accounts are fundamental part of technicians’ practice and their community.

The founding premise of critical studies by Suchman and Orr was that it is necessary to locate the artefacts within the specific sites and settings of their everyday use to be able to understand them in an ethnographic approach (Suchman, Orr and Trigg, 1999). This led to the emergence of studies to explore the constitution of a technology-intensive working environment to identify new approaches of theorising the social and material shaping of day to day practice. These studies aimed at exploring technologies-in-use such as Suchman's (1997) study of artefacts in airports' operating rooms. The study brought forth a fundamental reconceptualisation of information systems. This involved a shift in viewing information systems as a network of workstations to a cluster of fragmentary and heterogenous machines that formed coherent assemblages on specific work situations. Thus, these machines work in relation to each other and also to the arising situation. According to this perspective, technologies "are constituted through and inseparable from the specifically situated practices of their use" (Suchman, Orr and Trigg, 1999, p.399).

This view of technology in IS and practice perspective was subsequently widely used in organisation studies in exploring the role of technology in organisations. The initial utilisation of a practice lens in such studies dates back two decades when Orlikowski (1996), based on Giddens' structuration theory, examined how new forms of IT change work practices in organisations. Moving away from dichotomous accounts viewing technology and actors separately, the structural perspectives basing on Giddens' structuration theory became prevalent in the 1990s. In the beginning of 2000s, the practice perspective gained more popularity as a theoretical lens in studies of IT and organisation. Highlighting the inadequacy of existing approaches to study the continuous changes in the technologies and their use, Orlikowski (2000) proposed a practice-oriented perspective to study this phenomenon.

Orlikowski (2000), in particular, noted the insufficiency of previous approaches to explain newer forms of IT such as internet-based technologies and their reconfigurable nature. In this regard, she proffered the notion of 'technology-in-practice' to "[focus] on emergent technology structures enacted in practice rather than embodied structures fixed in technologies" (2000, p.408). According to Orlikowski, the ongoing use of technology in

the workplace leads to enactment of structures that form the specific situated use of the technology.

Adopting a practice perspective (Orlikowski, 2010), the concept of technology-in-practice has been employed to study how the recurrent use of IT produces technology-in-practice structures that shape people's actions. The focus of such studies has been on the implications of the technology on existing established organisational work practices (Orlikowski, 2000; Schultze and Orlikowski, 2004) that can result in no change in work practices, an improvement in how current work practices are done, or transformation of existing work practices (Leonardi, 2015).

2.4.3 Practice and Studies of Work and Organisation

Because of the theoretical affordances they offer, practice theories gained popularity among organisation scholars. This particular interest in practice approach is because it “consider[s] organizations both as the site and the results of work practices; a view that connotes organizations as bundles of practices, and management as a particular form of activity aimed at ensuring that these social and material activities work more or less in the same direction” (Nicolini, 2012, p.2). According to Feldman and Orlikowski (2011), practices have been studied in three different ways: an empirical approach, a theoretical focus, and a philosophical approach. The first approach acknowledges human's activities as the core of organisation's outcome and significance in the organisations' operations. The theoretical approach considers practice theory an ‘apparatus’ to explain the dynamics of human activities, i.e. how they emerge and are performed. The philosophical approach considers practices constituents of social worlds and is the underlying ontological stance of practice theory studies (Feldman and Orlikowski, 2011).

In addition, Corradi, Gherardi and Verzelloni (2010, p.268) argue that practice based studies use practice in two ways: “practice as an ‘empirical object’” and “practice as ‘a way of seeing’”. The former stream of research highlights the focus on particular empirical objects, while the latter uses practice as “a way of seeing a context”. They adopt the metaphor of ‘bandwagon’ to show how the concept of practice, with a history and tradition

in philosophy and sociology, has gained interest and how it has been reproduced and modified.

One way that the discussions of practice entered organisation studies was through the concept of ‘community of practice’ (CoP), originally introduced by Lave and Wenger (1991), to argue that learning is beyond cognitive models and interactions but social and situated. According to Corradi, Gherardi and Verzelloni (2010), this body of work has turned into something of a ‘bandwagon’. They suggest that the genesis of the existing bandwagon of practice-based studies can be found through studies of three different research streams: the studies of learning and knowing as practice, the study of technology as practice, and the study of strategy as practice. However, these studies diverge based on how they have adopted ‘practice’, either as ‘empirical object’ or as ‘a way of seeing’.

Due to its heterogeneity and variety of ways it has been used in organisation studies, Nicolini (2012) has proposed a toolkit approach in using practice in studies of work and organisation. In this toolkit approach, which he calls a package of theory and methods, he introduces metaphors of ‘zooming in’ and ‘zooming out’ to give researchers a method of using practice approach that is ontologically and methodologically compatible and coherent.

2.4.4 Practice Perspective and Turn to Sociomateriality

As discussed above, scholars who study technology-in-use employ a practice lens that considers technology is shaped by and shapes social structures, and this enables them to understand how different users in different sites and settings use the technology in distinct ways that result in different outcomes. Therefore, the emphasis of a practice lens is to foreground human agency, neglecting the role of material practices and material artefacts (Leonardi, 2013, 2012). One of the critiques of practice theory has been its attribution of agency to humans whose use of material artefacts are shaped by their social relations. While human actions are the central focus of a practice approach, the role of artefacts and materiality has been backgrounded in most practice-focused theorisations. This is, for example, one of the limitations of Giddens’s theory of structuration as it did not offer an

explanation about the role of material configuration in structuration. Other practice theoreticians such as Schatzki (2001), although recognising the agency of material artefacts, posit that practices are conducted by only human actors.

These concerns have given rise to change of perspective in the more human-focused studies to a view that, as Suchman (2007, p.261) argues, portrays “human agency [as] only understandable once it is reentangled in the sociomaterial relations”. Actor-network Theory (ANT) allowed a more symmetrical view of material things and social actors’ agency. ANT theorists note that material things are essential and actively play a role in human practice. According to Latour (1996, p.373), an actor is an actant that is something that has the capacity to act or to which the action is granted by another actant. This perspective towards practice reconstructs ‘capacities for action’ from intrinsic capabilities to possibilities produced through particular ‘sociomaterial assemblages and enactments’. These assemblages “shift the frame of reference from the autonomous human individual to arrangements that produce effective forms of agency within ramifying networks of social and material relations” (2007, p.241).

In this regard, this approach to practice also helps to overcome an ‘ontology of separateness’ (Suchman, 2007) that humans and technology are separate realities. Pickering (1993, p.566) suggests that “human agency is, just like material agency, temporally emergent. We can say more about the intentional structure of the former, but in the end it, too, simply emerges in the real time of practice”. In this regard, human and material agencies are mutually constitutive through “a dialectic of resistance and accommodation” (1993, p.567).

Thus, the ontological view of practice lens helps in understanding the dynamics of constitutive entanglement between the social and material in organisational practice (Orlikowski, 2010, 2007). Therefore, “all practices are always and everywhere sociomaterial, and that this sociomateriality is constitutive, shaping the contours and possibilities of everyday organizing” (Orlikowski, 2007, p.1444).

Since explaining and conceptualising the relationship between the social and the material has been the central concern for IS researchers, ‘sociomateriality’ has been proposed as a

useful approach in explaining how the social and material are entangled (Orlikowski, 2007) or imbricated (Leonardi, 2011) in practice: “material is not understood as mediating or supporting some pre-existing practice but rather as constituting the practice. These practices don’t just mediate work, they perform organizational realities” (Orlikowski and Scott, 2008, p.467). The popularisation of a sociomaterial perspective within IS (Orlikowski and Scott, 2008; Orlikowski, 2007, 2009) created a debate on the ontological basis of the perspective (Cecez-Kecmanovic et al., 2014). While the original discussion of sociomateriality grounds it on the relational ontology of inseparability of meaning and matter, some scholars question this relational basis of sociomateriality and suggest an ontology of agential cut (e.g. Faulkner and Jochen Runde, 2012; Leonardi, 2013). Others such as Mutch (2013) criticise a sociomaterial view as it does not allow for exploring the nature of material properties or explaining how they might impact social structures.

Despite this ontological debate, this ‘material turn’ in organisation studies and social sciences emphasises the materiality of technology and how it is entwined in social practices and specifically organising processes. Materiality also has been referred to as ‘materialisation’ that is a process “through which everything that exists ultimately acquires material status” (Leonardi, Nardi and Kallinikos, 2012, p.5). Thus, thinking materiality as materialisation is about understanding technologies through the consequences they bring forth. In clarifying the role of materiality in sociomateriality discussions, Leonardi (2012, p.25) asserts that “materiality might be viewed as a concept that refers to properties of a technology that transcend space and time, while sociomateriality may be used to refer to the collective spaces in which people come into contact with the materiality of an artifact and produce various functions”.

A close look at the insightful stream of research in this field (technology and organisation) reveals the nature of technology that has been the focal point of attention. Whether focusing on IT (Orlikowski, 1996) or other technical artefacts (e.g. Barley’s (1986) study on CT scanners or Suchman’s (2007) research on Xerox photocopiers), research has focused on the interactions of individual users (e.g. employees) with a new type of technology (e.g. a groupware technology in an organisation) and how situated enactments

by individual users would impact the existing (and established) work practices. Thus, we need further investigation about how new work practices might emerge in response to new forms of technologies and about the nature of these new work practices.

2.5 Conclusion

There is little doubt that digital technologies are transforming the ways that organisations operate, and that they do this in different ways. Nascent discussions on digital transformation phenomenon argue that these new forms of technologies are re-defining organisations in ways that resemble but also are different from traditional IT paradigms. In this chapter, I have explored the literature on this phenomenon to understand the state-of-the-art debate about the role of these technologies in organisations' digitisation in two streams of research: IS studies and marketing studies. I have also presented a historical overview of IT in organisations to facilitate the comparison between today's digital transformation and organisational changes in the previous IT paradigms. The two strands of research are similar in that they highlight the important consequences of the customer-facing digital technologies for organisations, yet, they are distinctively different in their approach to understand the phenomenon and thus, their findings are different in a number of ways.

The majority of studies in marketing literature are quantitative, focusing on the consumers' use of the technologies and the behavioural outcomes of these users' interactions with organisation on digital platforms. Although much of this literature highlights the impact of the organisations' marketing activities on digital platforms (impact studies) on their customers, it does not explain how these occur. Thus, there is a need for more qualitative work on how these new behaviours are leading to changes internally within the organisations serving these customers and responding to these new (delegated) behaviours). In this regard, I argue that this literature is inadequate in several aspects. First, it treats the organisation as an entity, ignoring the processes, activities, and resources required in transforming towards digital marketing. Second, marketing studies provide a simplistic view of digital technologies treating them as black boxes that have effects on organisations. This is problematic because they provide a misleading view of

technology as they do not sufficiently draw attention to the materiality of the technology and how it is constituted in practice.

In addition, this black-boxing of the technology and viewing it as a conduit through which organisations communicate their marketing messages to the consumers (a ‘tool-view’ of the technology) offers a partial understanding of the phenomenon- the digital transformation. This view has a tendency to show the outcomes or impacts of using digital technologies in terms of consumers’ behaviour towards the organisation leaving aside other expert actors involved within the organisation and what they do to realise those outcomes. Therefore, the questions remain unanswered as how the organisation shifts to handle digital work practices and how the expertise for such work practices are emerged and fostered.

Notwithstanding these problems, the marketing literature has progressed our understanding (more so than IS perhaps) in terms of their emphasis on the customers as users of digital platforms. Thus, it has produced significant insight about the central role of customers in digitisation of marketing practice (e.g. user generated content, the level of customers engagement with organisation’s social media content and its effect on customers’ loyalty or purchase spending). In other words, digital marketing scholarship, because of centring its attention on customers, has provided some of the analytical tools that help build our understanding of the customer as being at the forefront of IT systems.

The issue in IS literature is that it does not pay much attention to the consumer users and focuses instead on the technology itself (and its wider transformational capacities). However, the general view of the technology user in the IS literature tends to think of the user as ‘configured’ (Woolgar, 1990) or still, ‘passive’ (Agre, 1995), and not as somebody who is able to dictate and lead. This means the IS literature whilst underscoring the emergence of a new paradigm, falls short in explaining how organisations are changing and mobilising internally in a new direction or orientation towards their customers. More specifically, IS research has failed thus far to identify significant differences in the way new waves of digital technology are transforming organisations (in the way previous scholars could identify how enterprise systems heralded in a new mode of organising).

In addition, I showed that organisations are developing new expertise towards the directions identified above. This includes some changes in existing CIO and CMO roles. There is also, the emergence of the new CDO role which has as its primary mission the governance of customer-facing digital technologies.

Notwithstanding their insights, current studies have drawn attention to broad brush changes and studied these actors and their jurisdictional battles. But the question of how new occupational expertise is emerging in the organisation and what mechanisms organisations use to facilitate their emergence and development remains unanswered.

In this research, I use the practice-based approach in three ways suggested by Orlikowski (2010) as these modes of studying practice are not mutually exclusive. First, the engagement of practice in this research is ontological, as “the commitment to an ontology that posits practice as constitutive of all social reality, including organizational reality” (Orlikowski, 2010, p.33) and these practices are sociomaterial. Second, I consider practices as the object of this study by looking at activities of actors as units of analysis. Third, it is used as a lens and way of viewing (theoretical approach) to understand the dynamics of a particular practice (practice of digital marketing in organisations). However, the lens that practice approach presents has not shown how we can study the changing nature of digital work and organisation.

In chapters four, five and six, these streams of literature will be complemented with more details from the relevant bodies of research to show how they will address the associated research questions.

3 Chapter Three: Designing and Conducting an Exemplary Case Study

3.1 Introduction

In this chapter, I present the epistemological position of the research, the research design of this study, and describe the methodological approaches that are applied throughout the thesis. Aligned with the Information Systems (IS) research tradition, this study is founded on an interpretive epistemology to focus on the shared meanings in the construction of knowledge. The study comprises a two-stage design of a pilot study which is followed by an in-depth single case study that sheds light on this thesis' research objective: to explore the dynamics of organisations' work practices, new emerging expertise, and changing organising approaches.

In this chapter, I will first present an overview of the research questions that the study aims to address. Then, I discuss the ontological and epistemological underpinning of the research in section 3.3. In this section, I will explain why an interpretive approach has been adopted as part of a larger tradition in IS community. This will be followed by section 3.4, which explicates the design of this research as a case study. Here, I elaborate on the pilot study as the initial step of this research that led to refining of the research questions and the choice of a single case study that was selected as an exemplary case based on purposive sampling strategy. This was to have access to a context that I can examine the digital transformation of the organisation's marketing practice in an in-depth way and how such changes have evolved over time.

After presenting a brief overview of the fieldwork context, I provide a detailed explanation of data collection and analysis in how the data from a variety of primary and secondary sources have been triangulated to enhance the internal and external validity of the research. Finally, the chapter concludes with a discussion of the steps and procedures I have taken to meet the quality criteria and ethical standards in this study.

3.2 Research Questions

In Chapter one, I discussed the aim of this research as understanding the dynamics of changing organising approaches, new emerging expertise and work practices as organisations are becoming more digital particularly with regard to the customer-centred digital platforms. Table 3-1 shows the research questions I outlined and discussed in Chapter one that will be addressed in the empirical chapters utilising the methods and approaches that are discussed in this chapter.

Table 3-1 The Outline of Research Questions

Research Question	Addressed in
1. <i>What new practices are emerging to handle the current wave of digital technologies and how do external individual users play a role in shaping these work practices?</i>	Chapter 4
2. <i>How does new occupational expertise emerge in the organisation and what mechanisms are put in place within the organisation to facilitate its emergence and development?</i>	Chapter 5
3. <i>How are the organisations being transformed as they reorganise around digital technologies and how might we go about studying such re-organisations through digital transformation?</i>	Chapter 6

3.3 Research Philosophy and Epistemological View

Clarifying and defining ontological and epistemological assumptions is an essential step in the outset of any social research (Guba and Lincoln, 1994). These philosophical clarifications are important as they are the foundation of a valid research study (Myers and Avison, 2002) and ensure the consistency of research design and methods (Blaikie, 2010). Ontological assumptions deal with the nature of the world and the social reality and make claims about the types of social phenomena that exist and how they relate to each other (Blaikie, 2010, p.92). In clarifying my ontological assumptions in this study, I draw on the sociomateriality paradigm (e.g. the inseparability of social and material) (Orlikowski, 2007, 2009), which is grounded on the contributions of science and technology studies (Latour, 2005; Pickering, 1995; Barad, 2007) and ethnomethodology researchers (e.g. Suchman, 2007). The post-humanist perspective of sociomateriality

regards the symmetry between of social and material agency (Latour, 1996) and is premised on the idea that social and material are mutually constitutive (Orlikowski, 2009). This recent turn to sociomateriality allows this research to explain the sociomaterial practices of digital organisation (Cecez-Kecmanovic et al., 2014) utilising a practice oriented approach explained in the previous chapter.

Epistemological assumptions are concerned with knowledge, how it can be obtained, and the ways that researchers make sense and perceive the reality or the phenomena of interest (Crotty, 1998; Guba and Lincoln, 1994). Among the three epistemological perspectives (in IS research) discussed by Orlikowski and Baroudi (1991), this thesis adopts an interpretivist perspective. This perspective acknowledges that “understanding social reality requires understanding how practices and meanings are formed and informed by the language and tacit norms shared by humans working towards some shared goal” (Orlikowski and Baroudi, 1991, p.14). To show why I have adopted this position for this research project, I present an overview of the three perspectives.

First, from a positivist epistemological perspective, social phenomena consist of fixed relationships that can be studied quantitatively through measuring certain variables and testing hypotheses. Descriptive studies such as descriptive case studies are also a category of positivist studies, where researchers provide “straightforward, “objective,” “factual,” accounts of events” without making interpretations of the phenomena or any theoretical grounding (Orlikowski and Baroudi, 1991, p.5). Thus, the underlying assumption of positivist research is that “reality is objectively given and can be described by measurable properties which are independent of the observer (researcher) and his or her instruments” (Myers, 1997, p.241).

Second, from a critical epistemological perspective, the social world is seen as historically constituted and created and recreated by people. (Myers and Avison, 2002, p.7). Hence, critical researchers believe that social reality is not fixed, and people can change the social and economic conditions, although their ability in creating such changes is constrained by other social, cultural and political factors. The main goal of critical research is to improve human conditions by breaking the conventional deductive approaches of positivist studies

that aimed at maintaining or gradually changing the existing conditions of human life (Ngwenyama, 2002). Therefore, “the critical perspective is concerned with critiquing existing social systems and revealing any contradictions and conflicts that may inhere within their structures” (Orlikowski and Baroudi, 1991, p.19).

Third, the underlying assumption of interpretivism is that we can understand reality “only through social constructions such as language, consciousness and shared meanings” (Myers and Avison, 2002, p.6). The primary difference between the interpretivism and positivism is related to the previous foundational presumption of social constructionism. Based on the interpretivist perspective, reality and the way we know it are social products and thus, “incapable of being understood independent of the social actors (including the researchers) that construct and make sense of that reality” (Orlikowski and Baroudi, 2002, p.64). The interpretive research provides the understanding of phenomena through the meanings assigned to them by people and thus, according to Walsham (Walsham, 1993, pp.4–5), the objective of an interpretive research approach in IS is “producing an understanding of the context of the information system, and the process whereby the information system influences and is influenced by the context”. Therefore, consistent with my ontological assumption, as an interpretivist information systems researcher, I believe that the social phenomena are not given (Orlikowski and Baroudi, 1991, p.14) but are generated and constituted through sociomaterial entanglements of social and material (Mueller et al., 2012; Introna et al., 2016).

Walsham (2006) noted that the interpretive research in IS field gained much attention when in their review of IS journals, Orlikowski and Baroudi (1991) noted that the majority of IS studies are grounded on the positivist assumptions. Due to increasing demand for the use of interpretive perspective in IS, he emphasised the need for careful design and set up of field work in interpretive case studies (Walsham, 1995) and also other types of interpretive studies (ethnographies, action research, etc.). Therefore, I explicate the choice of case study method in my qualitative study as the research design and method in this thesis.

3.4 Research Design

This research has adopted a qualitative approach in providing an in-depth understanding of the dynamics of organisations' work practices, new emerging expertise, and changing organising approaches in managing dynamic digital platforms and algorithmic phenomena. Qualitative research methods allow the researchers to explore the meanings and interpretations of social actors and provide descriptions and explanations of a social phenomenon (Blaikie, 2010). Unlike quantitative methods that deal with numbers to measure certain variables, use statistical models, and test hypotheses, qualitative methods are associated with interpretation of social realities without using numbers (Bauer, Gaskell and Allum, 2000; Patton, 2015). The lack of empirical research on the organisations' internal changes with regard to the customer facing digital technologies motivated the use of an abductive qualitative strategy for this research.

In addition to the need for interpretations in this research, that quantitative approaches lack (Bauer, Gaskell and Allum, 2000; Flick, 2009), it has been suggested that "the goal of understanding a phenomenon from the point of view of the participants and its particular social and institutional context is largely lost when textual data are quantified" (Kaplan and Maxwell, 1994 in Myers, 1997, p.3). Moreover, qualitative methods have been increasingly adopted in organisation and management scholarship (Cunliffe, 2010) and by IS researchers (Sarker, Xiao and Beaulieu, 2013) as they offer more flexibility for researchers with plurality of methods for data elicitation and data analysis. Such methods include case studies, ethnographies, grounded theory, phenomenology or a combination of two or more of them.

In quantitative methods, the researcher follows a standardised and prescribed procedure to build the measurement instrument to measure what is intended to be measured so that the validity is ensured. Since qualitative data describes and tells a story, quality assurance in qualitative research is different (from validity and reliability criteria in quantitative research) and depends on quality indications such as data triangulation, thick descriptions and communicative validation (Gaskell and Bauer, 2000; Miles and Huberman, 1994; Flick, 2009).

To ensure such quality, this study follows the strategy of using several methods to collect data across two phases: an initial pilot study; and an in-depth case study. The aim of the first is to explore the phenomena of interest (organising practices in managing digital technologies) and to refine the research questions and delineate the criteria for conducting the second phase of the study. This leads to a single case study in the second phase to provide an in-depth understanding of what characterises the organisation's digital transformation in relation to externally focused digital technologies. Table 3-2 summarises the choices of methods in pilot phase and the case study phase.

Table 3-2 Research Design

Research Design	Exploratory Phase: Pilot Study	Single Case Study: An Exemplary Digital Organisation
<i>Stage of Research</i>	Pilot study	Single case study of a technology company as a digital business
<i>Data Collection</i>	Semi-structured interviews; Observations of business training sessions, seminars and networking events; Public documents and blogs of technology companies (Facebook, Twitter, etc.), analyst firms and business press	Semi-structured interviews; Documents (company's brand guidelines, websites, blogs, and knowledge-sharing blogs, conference presentation videos and slides, and LinkedIn profiles); Netnography of company's social media accounts
<i>Sampling method</i>	Purposive and snowball sampling	Purposive sampling
<i>Duration</i>	July-November 2015	July 2016-December 2017
<i>Data Analysis</i>	Thematic analysis	Grounded Theory Method of coding and Narrative analysis
<i>Results</i>	Themes to form the basis of the case study	The empirical findings in Chapters 4, 5 and 6
<i>Quality Check</i>	Validation with participants in the events and post-interview, data triangulation	Data triangulation, validation with participants, expert interviews

3.4.1 Testing the Field: A Pilot Study

As I stated in the previous section, the field work for this thesis started with a pilot study with a broader focus than the primary case study. According to Yin (2013, p.97), the pilot study can assume “the role of a ‘laboratory’ in detailing your protocol, allowing you to observe different phenomena from many different angles or to try different approaches on a trial basis”. The pilot data was gathered from multiple sources (interviews, observations, and documents) to gain a broader view of the ways that organisations build their knowledge of digital technologies, develop particular strategies and try to engage in certain practices. I conducted 10 interviews with professionals in organisations or as independent consultants working in some areas of managing digital technologies and specifically digital marketing. The participants were selected purposively because of their expertise in digital marketing and advertising, their particular roles in their organisation and different sectors they represented (Gaskell, 2000; Flick, 2009). In terms of the interview protocol, all participants were informed that my research was at its early stage and there was not a defined and structured agenda (Yin, 2013). Table 3-3 lists the interviewees’ details in this pilot study.

In addition, I collected data from 18 hours of observations of business training sessions about digital technologies, seminars and networking events. I attended six three-hour sessions, out of which four were training sessions and two were networking events. The sessions were organised and run by a local government’s economic development agency [Scottish Enterprise] and were aimed at empowering businesses in different sectors and different scales of operations in their digital initiatives. These include social media practical guides about different platforms such as Instagram or Google Plus, sessions about different approaches of content creation such as textual and visual content, and sessions on how to measure the outcomes of social and digital media activities. The interview and observation data were complemented with public documents such as research and blogs by analysis firms such as Gartner and Forrester, technology companies’ blogs (Facebook, Twitter, etc.) and business press.

Table 3-3 Pilot Study Interviewees

Participants	Title	Sector	Experience (years)
Participant1	Digital business consultant	Consulting	18
Participant2	Head of marketing	Retail	6
Participant3	Sales and marketing manager	Hospitality	5
Participant4	Director of digital marketing	Hospitality	4
Participant5	Marketing consultant	Consulting	15
Participant6	Digital marketing Consultant	Consulting	13
Participant7	Digital marketing manager	Technology	6
Participant8	Head of marketing	Creative	10
Participant9	Digital marketing officer	Creative	4
Participant10	Digital marketing manager	Public	5

The data from interview and observation notes were analysed using descriptive and thematic coding and analysis approach (Flick, 2009). The documents were used to triangulate the themes that emerged from the analysis. This pilot phase played an important role in this research in several ways. First, it provided significant insight into the existing and emerging issues, challenges and opportunities that organisations were experiencing in dealing with digital technologies. This helped in refining the research questions, adjusting the research design, and shaping the fieldwork questions for the case study phase as Yin (2013, p.98) also notes that pilot studies can “provide information about relevant field questions and about the logistics of field inquiry”. Second, it led to the decision to conduct a single case rather than multiple-case study and also the choice of the company.

In this regard, the pilot phase of the research was formative (Yin, 2013) in the way that it helped in shifting the focus from adoption of social and digital media technologies, technology fashion and affordances of these technologies, to the current practical challenges the organisations were dealing with. Based on the themes drawn from the pilot data (Appendix 1), these include: ‘Experimental orientation to digital platforms’, ‘Ambiguity over the responsibility of digital platforms’, and ‘Challenge of measurements and data’. According to the first theme, ‘experimental orientation to digital platforms’, it appeared that the majority of businesses were trying to learn how to manage social and

digital media platforms and how to allocate their resources to such efforts. The second theme, ‘ambiguity over the responsibility of digital platforms’, showed that while marketing departments initially held the responsibility of digital platforms, firstly, they were initiating new jobs with new titles such as social media officers or digital marketing manager, besides traditional roles of marketing manager and PR managers, and secondly, they needed to work with other departments such as sales. The third theme, ‘challenge of measurements and data’, revealed organisations’ lack of knowledge in measuring the outcomes of their digital marketing initiatives and their effects on their business.

In summary, the pilot study played a key role in the research design in refining the research questions, the choice of the single case study approach and developing the case study.

3.4.2 Being in the Field: A Case Study Approach

This research adopted a case study approach as the most appropriate method to investigate the dynamics of changing organising approaches, new emerging expertise and work practices as the organisations are becoming more digital with regard to their external stakeholders (e.g. customers). Case study method has been a popular approach in social research and this popularity has given rise to a plethora of descriptions, definitions and ways of conducting case studies (Scholz and Tietje, 2002b). For example, as an empirical inquiry, Yin (2013, p.16) defines a case study as a method that “investigates a contemporary phenomenon (the “case”) within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident”. In a similar vein, Creswell (2013, p.14) defines case study research as “a design of inquiry found in many fields, especially evaluation, in which the researcher develops an in-depth analysis of a case, often a program, event, activity, process, or one or more individuals”.

According to Eisenhardt (1989), case studies can be used for different research purposes including testing theories, building theories, or supporting theories through providing descriptions. In addition to the particular purpose that they serve, case studies can be conducted in a variety of ways in terms of their design, for example holistic versus embedded, or single versus multiple case (Scholz and Tietje, 2002b; Mabry, 2008; Yin, 2013). Similar classifications have been presented by others. For instance, Eriksson and

Kovalainen (2008), citing Stoecker (1991), differentiated between ‘intensive and extensive case study research’, which have also been referred to as a single case study or multiple case study design. The former aims at “understanding a unique case from the inside by providing a thick, holistic and contextualized description”, while the latter is used to map common patterns across different cases to generate or test theories (2008, p.118). Therefore, single case study approach enables the researcher to understand how a specific and unique case works and provides ‘thick descriptions’, which are interpretations to shape the underlying reasons or dynamics of details of the case. Adopting a case study approach using a single case or multiple cases depends on a number of factors such as the aim of research in terms of offering depth or breadth, the role of theory in terms of offering an understanding or developing a theory to test, research outcomes in the form of thick descriptions or comparisons and pattern mapping, the importance of context as high or low (Fletcher and Plakoyiannaki, 2011; Eriksson and Kovalainen, 2008; Mabry, 2008).

Case studies have been used differently across different disciplines (Scholz and Tietje, 2002a). Within the IS community, the case study approach has also been widely adopted by scholars in their qualitative studies (Myers, 1997; Orlikowski and Baroudi, 2002; Sarker, Xiao and Beaulieu, 2013; Benbasat, 1987) since the main objective of the field is to study information systems in organisations and “interest has shifted to organizational rather than technical issues” (Myers and Avison, 2002, p.7). While the philosophical underpinning in Eisenhardt (1989) and Yin’s (2013) case study approach is positivist, this study follows the interpretivist perspective in conducting case studies in IS (Walsham, 1995). Walsham (1995, p.74) asserts that interpretive case studies became important in IS as scholars started to focusing on ‘human interpretations and meanings’ and “[t]he vehicle for such 'interpretive' investigations is often the in-depth case study, where research involves frequent visits to the field site over an extended period of time”.

Although following distinct epistemological worldviews, researchers adopting different traditions of the case study method agree on the aim of using case studies to address mainly ‘how’ and ‘why’ research questions and that researchers can use a variety of methods in data collection and analysis (Walsham, 1995). ‘Thick descriptions’ are of

significance in interpretive case studies in IS as they assist the researcher in understanding what is happening in relation to a sophisticated information system and “[a]n IS researcher can only access these subtleties of changing interpretation by the use of approaches based on 'thick' description” (Walsham, 1995, p.75). In this regard, a single case study approach has been chosen as the best method to address this study’s aim in understanding what happens in the organisations when they are increasingly becoming digital and in managing digital technologies that directly face their customers and to provide an in-depth understanding of the digital transformation phenomenon.

3.4.2.1 Rationale for Case Selection

The case selection is one of the most crucial steps of case study research as it forms the foundation of the qualitative inquiry (Eisenhardt, 1989). While the researchers are not always clear about their choices of cases (Sarker, Xiao and Beaulieu, 2013), case selection should follow a clear logic to show that the chosen cases are of “substantive significance” or “theoretical relevance” (Dubé and Paré, 2003). Purposeful (or purposive) sampling has been suggested as one of the most credible approaches of case selection as it “focuses on selecting information-rich cases whose study will illuminate the questions under study” (Patton, 2015, p.264). Patton (2015, p.265) also emphasises that purposeful sampling is a strategic act of “selecting information-rich cases to study, cases that by their nature and substance will illuminate the inquiry question being investigated”. There are a variety of techniques for purposeful sampling, of which some of the most widely adopted ones include critical case sampling, exemplar sampling, outlier sampling, typical case sampling, homogenous sampling and key informant sampling (Fletcher and Plakoyiannaki, 2011; Patton, 2015).

The purposeful sampling for this research has employed a strategy of an exemplar case sampling as it can show the important dimensions of the organisational digital transformation in marketing practices as the main phenomenon under investigation. As the pilot study revealed the organisations’ changes toward digital technologies have been experimental, challenging, and of ambiguity about what should be done, who should do it and how it should be done. Therefore, the pilot study showed that the case should have

particular characteristics including the advanced level of organisational digital practices, the significance of digital technologies and their management for the business of the organisation, and the large scale of the organisation's business operations across different regions and countries to see how the organisation orchestrates such practices. Therefore, based on these three criteria, the advanced level of the case's digital practices should be identified through its history and other measures, the case should be a digital business or digital business should form major part of its business and it should also be a large company operating in more than one region and beyond a few countries.

Unlike theoretical sampling which uses the theoretical concepts of the literature (Yin, 2013; Eisenhardt, 1989) as the base criteria for case selection, the exemplar case offers a unique opportunity that provides access to a distinct context for examining such changes in an intensive way. The selected case for this research is a travel search engine (which is referred to as TSE in this thesis for anonymity) and thus is offering travel search services which are inherently digital and thus, managing digital technologies and digital initiatives is crucial for the business of TSE. TSE is a multinational company that is at the forefront of digital transformations in their marketing and customer relationship practices in the ways that they have been restructuring the organisation and changing their processes to proactively create new growth opportunities. A detailed description of the case and its business is given in the following section (section 3.4.2.2).

Another advantage of choosing an exemplar case is the ability to see how the phenomenon evolves over time (Patton, 2015). Choosing TSE as exemplar of digital transformation phenomenon provided me a unique opportunity not only to observe its changes and developments over an 18-month period, but to also see the historical changes through its publicly available documents, blogs, videos and presentations. Therefore, the case is an ideal fit for the purpose of this inquiry of how the organisation is being transformed internally toward externally oriented digital platforms.

3.4.2.2 Single Case Study: An Exemplary Digital Organisation

To address the research questions, I have selected an exemplar digital business as the single case in this research to understand how the contemporary organisational computing

is shifting as the organisations are developing new approaches, new emerging expertise and work practices in managing digital technologies. As stated in the previous section, I use the pseudonym TSE, to keep the identity of the company and interview participants anonymous.

TSE is a UK-based leading technology company that offers digital travel services such as online travel search services to both consumers and businesses. The company, established over a decade ago, is a multinational organisation that has recruited approximately 1000 employees in ten countries including UK, US, Spain, Singapore, and China. The internet-based and digital nature of the company's services makes the use and management of digital and social media platforms significant for the company's growth. TSE actively maintains its presence on the major social media platforms such as Facebook, Twitter, Instagram, YouTube, Google Plus⁵, Pinterest and several country specific platforms such as VKontakte (VK) and Odnoklassniki (OK) in Russia and Weibo in China.

An indication of this active presence is reflected in the number of likes or followers on the platforms, the frequency of sharing content and also quick response time to users which has led TSE to gain former 'very responsive to messages' and current 'typically replies instantly' badges on Facebook⁶. This presence is widely managed across countries and regions, for instance, with about 10 million users on TSE's Facebook page, it is accessible in 80 countries. TSE has also been a success story on Facebook for its mobile application (app) downloads in using Facebook's advertising platform⁷.

A historical overview of TSE's social media presence and associated activities shows that the company adopted social media by launching a blog in 2007, a Facebook page in 2008, a Twitter account in 2009, a YouTube channel in 2010 and, Google Plus and Instagram

⁵ Google announced Google Plus shutdown in October 2018 and decided to expedite its shutdown in December due to two data breach incidents (<https://www.blog.google/technology/safety-security/expediting-changes-google-plus/>).

⁶ In order to earn this badge, the page must have achieved two criteria over the past seven days: a response rate of 90% and a response time of 15 minutes (Facebook Help Centre).

⁷ Facebook enables businesses to advertise their products and services by finding the right audience (among 1.7 billion users), attracting their attention (using a variety of advert types) and getting the results (using its advanced analytics functions) (Facebook Business).

accounts in 2012. In addition to these, TSE launched specific accounts in different languages and adopted country specific platforms as the company was growing in international markets. However, the initial use of social media was not based on a particular strategy and was not integrated into the core of TSE's practices. Rather, in the outset, social media were positioned in the marketing and communications department in order to maintain the organisation's social media presence.

Since 2010, depending on the level of TSE's growth in different markets, new organisational members were recruited to manage different functions. Apart from the marketing and public relations (PR) functions, the new functions of 'social', 'content', and 'paid media' emerged in the organisational structure of TSE. This was because of adopting social media platforms in different languages and country specific platforms and using more advanced forms of digital media advertising. The function of 'social' encompasses social media managers who are involved in a range of activities related to social media, while the function of 'content' is constituted by content managers who manage the production of content (in the form of articles) for the news section of the company's website and for publishing on social media platforms.

The social media management roles are structured at three levels: the global head of social media, the regional level senior social media managers covering Asia Pacific (APAC), Europe, Middle East and Africa (EMEA), and the Americas (North and South America), and the market level social media managers (UK, Italy, China, US, etc.).

In 2015, TSE went through a restructuration, shifting from a functional structure to a team-based structure of tribes and squads to facilitate the growth objective of the company (TSE calls this change, a shift from marketing to growth hacking). In this new structure, the functional roles have been brought together in squads (teams of four to maximum eight people) for different areas and each market in which the company is operating. The squads operate as part of four larger groups called tribes as depicted in Figure 3-1. There is one central tribe for centralised activities and three regional tribes for activities that require expertise and knowledge of the local markets).

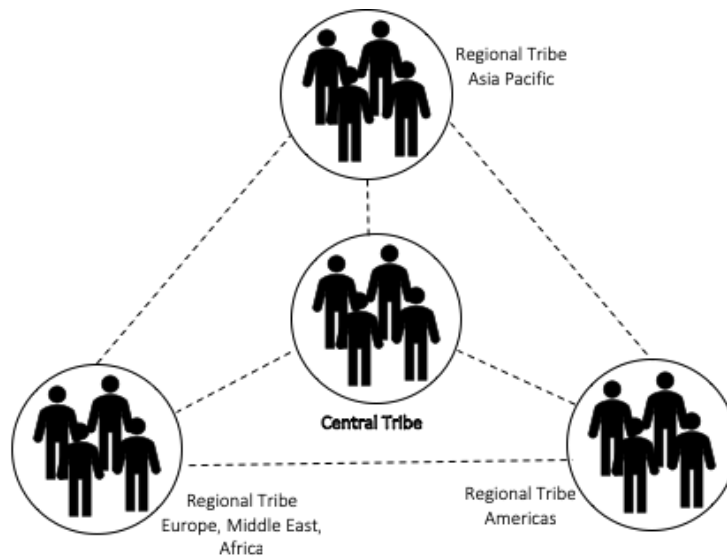


Figure 3-1 TSE's Organisational Structure

The underlying rationale for this restructuring was inefficiency in the functional structure and lack of sufficient communication and collaboration between several functions that were required to work very closely with each other, such as social and PR and or paid social and paid digital media. Moreover, it became evident that a central strategy and the enforcement of one solution for all markets would not lead to the outcomes they expected and as a result the level of resource waste was high. Therefore, the decision was made to apply the same approach in the engineering and software development part of the organisation and to be 'squadified' in order to embed the cultural and language expertise in local practices, or in other/their words, to be 'locally optimised'. Thus, they needed a new structure and new methods of working. Figure 3-2 illustrates the evolution of organisational structure at TSE.



Figure 3-2 The Changes in TSE's Organisational Structure

In this new configuration, employees work based on lean and agile principles and Scrum and Kanban frameworks (Rehkopf, n.d.; Schwaber and Sutherland, 2016). Originating in the practice of software development, these principles have been adopted in other areas and practices such as marketing. According to one of the Growth Directors (TSE’s documents), there is a tribe lead in each tribe who drives the tribe’s vision. Each squad has a product owner (PO) who represents the team at tribe meetings and makes sure that the squad’s practice is aligned with the tribe they belong to and its vision. The ongoing changes in the organisation’s goals and structure is discussed in tribe meetings and POs share the updates to the squads.

3.5 Data Collection

In this section, I discuss the main methods for gathering data and the process of gaining access to the case organisation. I will also explain why specific methods of data collection such as interviews, expert interviews, documents and netnography have been used in this research. Figure 3-3 shows the process of empirical field work that indicates that data collection was conducted over an 18-month period following a pilot study phase and the data collection and analysis were iterative were conducted concurrently (Walsham, 1995). This is similar to what has been suggested by Dubois and Gadde (2002, p.554) as ‘systematic combining’ which is “a process where theoretical framework, empirical fieldwork, and case analysis evolve simultaneously, and it is particularly useful for development of new theories”. In this process, the researcher moves back and forth between the data collection and analysis and the literature to widen the understanding of the phenomenon and the literature (Strauss and Corbin, 1990).

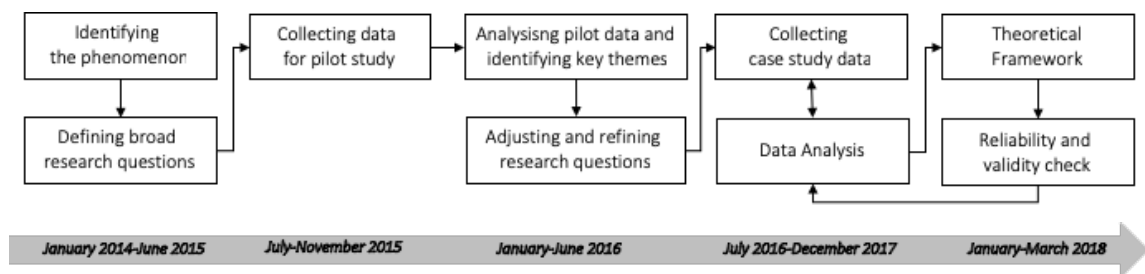


Figure 3-3 The Research Process

3.5.1 Gaining Access

Access to the case organisation was facilitated as a result of the pilot study. In fact, I met one of the TSE's managers in one of the networking events I attended as an observer during the pilot study and I gained their contact information through the list of delegates in the event. Subsequent to the pilot study, the first contact was made with the organisation in July 2016 through this manager. As a result of this initial contact I was able to gain primary access to the company's headquarter for interviews through a within-case sampling (Patton, 2015).

During these initial interviews, I kept a note of names and roles every time an interviewee referred to a colleague whose role was related to some aspects of digital and social media technologies. I then asked them if they could connect me with these colleagues. This snowballing strategy was only partially successful. In addition, I used the professional social networking site, LinkedIn, to identify further TSE's managers in other regions and countries. Therefore, my access strategy was a combination of snowballing and serendipity (Miles and Huberman, 1994).

3.5.2 Data Sources

Case studies typically use combinations of methods such as interviews, observations and documents for data gathering (Eisenhardt, 1989). My study is no different in this respect. The sources and methods of data collection have been shown in Table 3-4. Interviews have been used as a valuable and versatile approach in many social scientific studies in general (Gaskell, 2000) and as a widely adopted approach in interpretive studies (Walsham, 2006). In addition to interviews, I have conducted netnography (Kozinets, 2010) or virtual ethnography (Hine, 2000) to observe the organisation's activities and interactions with users on social media platforms. Documents and archival data have also been used to provide a richer insight into the organisation's digital transformations regarding its practice of marketing. Using a combination of different primary and secondary methods allows triangulation of data and ensures the accuracy of the evidence and internal validity of the findings (Dubé and Paré, 2003; Yin, 2013; Dubois and Gadde, 2002).

Table 3-4 Overview of the Collected Data

Data Type	Method	Description	Time Dimension
Primary	Semi-structured interviews	25 interviews with 19 managers in TSE's digital and social media team 10 interviews with 9 independent experts (not in TSE)	Real-time and Retrospective
	Netnography (Virtual ethnography)	53 hours of observations of TSE's ongoing social media activities across different social media platforms	Real-time
Secondary	Documents	TSE's company information TSE's Brand guidelines TSE's Consumer blogs TSE's Knowledge-sharing blog TSE's Engineering blog LinkedIn profiles of those interviewed along with 54 more actors working in similar roles at TSE 13 presentation slides of TSE's presentations in conferences from SlideShare	Retrospective and Real-time
	Archival data	History of TSE's of social media activities	Retrospective

3.5.2.1 Primary data sources: Interviews and Netnography

The primary source of data for this case study is based on in-depth, semi-structured interviews as the most common data collection technique in qualitative studies in IS (Sarker, Xiao and Beaulieu, 2013). It is believed that qualitative interviewing is one of the most significant and most widely used techniques of data collection among qualitative researchers (Myers and Newman, 2007). According to Rubin and Rubin (2005, p.vii), qualitative interviewing performs like night goggles, “permitting us to see that which is

not ordinarily on view and examine that which is looked at but seldom seen”. Interviews allow the generation of ‘thick descriptions’ using verbatim quotations providing rich insight into the phenomenon of inquiry.

Interviews allow researchers to understand and describe people’s experiences “as it is lived, felt, undergone, made sense of and accomplished by human beings” (Schwandt, 2001, p.84). Because a large part of such experience cannot be seen as they are invisible to others, interviews provide a unique apparatus to “generate deeply contextual, nuanced and authentic accounts of participants' outer and inner worlds, that is, their experiences and how they interpret them” (Schultze and Avital, 2011, p.1). Therefore, I adopted an interview approach as the main primary data collection method because many aspects of the organisation’s digital transformation, knowledge and expertise and work practices were not visible through observations.

I carried out 35 interviews with both the experts within TSE and a number of the independent experts. I conducted 25 semi-structured interviews with those at TSE including the social media managers, the content managers, the social media advertising managers, the digital media managers, the influencer marketing managers, and the data analytics and marketing automation analysts (the interview guide is presented in Appendix 2). These include interviewing eight social media managers, three content managers, three social media advertising managers, one data analyst, one marketing automation analyst, the global head of influencer marketing, and two digital media managers. I have also conducted follow up interviews with two social media managers, one of the content managers, one of the social media advertising managers, one of the digital media managers and the global head of influencer marketing. The interviewee details are presented in Table 3-5. The interviews, ranging from 33 to 92 minutes with an average length of 65 minutes, were all audio recorded and transcribed.

Table 3-5 Interview Participants at TSE

Role	Education	Areas of experience prior joining TSE	Previous experience (Years)	Years at TSE	No. of Interviews
Social media manager1	BSc Audio-visual Communications; MSc Interactive Media	Online marketing, social media, content marketing	10	2.5	2
Social media manager2	MA English, American, German Literature and Culture	Offline marketing, online marketing, copywriting	3	4.5	1
Social media manager3	BA Communication of Arts artefacts MSc marketing management for wine industry	Web marketing, content, social media, web analytics	3	2.5	1
Social media manager4	BA Journalism	Journalism, copywriting, social media	4	4.5	1
Social media manager5	HND Fashion Design BSc Textiles and Fashion Design Management	Customer service, social media, copywriting, community management, online advertising	7	2.5	1
Social media manager6	BA marketing and tourism management MSc Marketing management	Sales, offline marketing, online marketing	3.5	4	1
Social media manager7	BSc Communications and Media MSc Marketing management	Copywriting, graphic designing, web analytics, social media	7	3.5	1
Social media manager8	BA Economics	Communications and PR, copywriting, offline marketing, online marketing	5	7.5	2

Content manager1	BA Journalism, MSc Corporate Communications	Journalism, Copywriting, creative writing, Communications and PR, Online marketing, Social media	9	4	2
Content manager2	BSc International Business	Journalism, copywriting, online marketing, creative writing	6	4	1
Content manager3	BA English Literature	Copywriting, Editorials	12	3	1
Social media advertising manager1	MSc History	Offline marketing, Online marketing	3	4	2
Social media advertising manager2	BSc Political Science, MSC International Business	Online Marketing	0.5	4	1
Social media advertising manager3	BSc Business Management	Communications and PR, online marketing, social media	2	3	1
Global head of Influencer marketing	BA French Language, MSc Linguistics	Web design, Offline marketing, Online marketing, Web analytics, social media, influencer marketing	3	5	2
Digital media manager1	BSc Business Management	Offline marketing, social media	1	3	2
Digital media manager2	BA Media Studies	Online Marketing	1	2	1
Marketing automation analyst	MSc Economics	Quantitative methods of analysis	3	2.5	1
Data Analyst	BSc Software engineering	Python, JavaScript, R, SPSS	5	3	1

The interviews conducted with organisational actors at TSE were partially in narrative form (i.e. questions were formulated to invoke a narrative response). This was because narrative forms of interviewing, which are mainly used in biographical research (Bornat, 2008), enable the researcher to get close to the interviewees' experiential world in a comprehensive way. A narrative is specified in three stages: "first the initial situation is outlined ('how everything started'), then the events relevant to the narrative are selected from the whole host of experiences and presented as a coherent progression of events (how things developed'), and finally the situation at the end of the development is presented ('what became')" (Hermanns 1995: 183 cited in Flick, 2009). In narrative interviews, the interviewees are asked to provide a historical account of the area of interest or tell a story of the topic of investigation including all relevant events.

According to Flick (2009, p.191) "narratives can be used in interviews to elicit a more comprehensive and contextualized account of events and experiences". Such comprehensive accounts can be obtained through two approaches of narrative interviewing: life histories or biographical narratives (Bornat, 2008) and situation oriented narratives. Moreover, narrative approach can be used as a stand-alone method or be combined and embedded in other types of questions in interviews (Flick, 2009). I used this narrative approach of interviewing in an embedded form in the way that I organised the interview questions. The narrative form of questions allowed me to gain access to the interviewees' professional career path and the development of their professional expertise.

In addition to interviews with TSE's organisational members, I have also conducted 10 expert interviews, in order to gain more insight into the prevalent organisational digital operations. Expert interviews are particular types of interviews with a group of people who are considered experts in an area. In this type of interview, "the interviewees are of less interest as a (whole) person than their capacities as experts for a certain field of activity" (Flick, 2009, p.165) and they are called experts as they have specific competency and authority on certain areas. According to Bonger and Menz (2002, p 46, cited in Flick, 2009, p.166), such expertise involves both technical knowledge and interpretive knowledge in a particular domain. Therefore, the expert knowledge is about both the

established and organised knowledge as well as practical knowledge. Expert interviews can be used for different purposes: for exploring the field of study to present a thematic structure to the field and produce hypotheses (which can also be applied to designing the main instrument of the research to be used for other target participants), for collecting context data to complement data from other interview approaches, for generating a theory or typology about a subject to reconstruct the expertise knowledge about it.

Expert interviews can also be used differently, either as a stand-alone or complementary approach depending on the objective of the study. Flick (2009) states that if expert interviews are used to complement other approaches, they can be used before the main interviews to design the principal instrument for the study or in parallel to them to round up the data from other approaches (interviews). Moreover, expert interviews can also be used as an approach for validation of findings from other approaches and “can be seen as an example of triangulation of different perspectives on an issue under study” (Flick, 2009, p.168).

I conducted ten interviews with nine⁸ experts in order to make more sense of the interview data from the case study and more generally digital marketing practices. I used expert interviews as a complementary approach and also for validating the findings from the interviews within the case organisation. The questions for the purpose of these expert interviews were informed by the TSE case interviews (the interview guide for expert interviews is presented in Appendix 3). This group of participants are specialists in social media, digital media, digital marketing, influencer marketing, and data analytics. Table 3-6 shows the details of these interviewees.

⁸ The Sprinklr senior insights analyst manager was interviewed twice.

Table 3-6 Expert Interview Participants

Interviewee	Title	Area of expertise	Market, Region	Experience (years)	Location
Expert 1	Independent consultant	Social and digital media	Europe	13	Germany
Expert 2	Independent consultant	Influencer marketing and growth hacking	APAC and Australia	5	Australia
Expert 3	Senior Strategy and Analytics manager at Sprinklr	Social media management and analytics	UK and Europe	5	UK
Expert 4	Independent consultant	Social media and digital marketing	USA	7	US
Expert 5	CEO of a social media consultancy agency	Social media and digital marketing	Global	15	UK
Expert 6	Head of digital marketing (a global investment company)	Digital marketing	UK	8	UK
Expert 7	Independent consultant	Content and social media marketing	US	6	US
Expert 8	Independent consultant	Social Media and Influencer Marketing	US	8	US
Expert 9	Senior social media manager (a global technology company)	Social media and digital content marketing	US	7	US

The interview data has been supplemented with the data from netnography (Kozinets, 2010) as the other form of primary data. Netnography data was collected from TSE's search platforms (web and mobile application) and its social media profiles (such as Facebook, Twitter, Google plus, Pinterest and Instagram, in different countries and languages) provided more detail to the interview data because such online sources of data have been considered 'very valuable' (Walsham, 2006).

Netnography or as Kozinets (2002, p.62) calls it “ethnography on the Internet”, is “participant-observational research based in online fieldwork” (Kozinets, 2010, p.60). This qualitative research methodology is an adaptation of ethnographic research techniques that utilises computer-mediated communications to provide an “understanding and representation of a cultural or communal phenomenon” (Kozinets, 2010, p.60). Based on the work of Hine (2000), Kozinets (2010) draws attention to the distinction between two strands of online research: research on “online communities” and “communities online”. For the purpose of this research, the latter form of approach is intended because the phenomena of digital transformation extend beyond the data and interactions on social media platforms although such online interactions constitute an important part of customer engagement.

Thus, netnography is used in this research to supplement other sources of data beyond what is only observable through social media profiles of the organisation. The focus of this virtual type of observations was on the ‘structure’ of the social media (how organisational actors are making use of distinct functions of each social media platforms) and ‘content’ (that are created and shared on the organisations social media profiles, the users’ comments and activities and their interactions with the organisation), similar to the study of TripAdvisor and customers’ reviews by Scott and Orlikowski (2009). These observations were conducted on a weekly basis over a period of data collection, which accounted for 53 hours, and notes were taken during the observations.

Unlike what has been suggested in studying practices to conduct ethnographic observations of people doing their jobs (Nicolini, 2012), such observations could not offer much insight in this study. This is because much work is conducted on platforms and even the meetings at TSE were kept to minimum, while much of the communications and knowledge sharing occurred through platforms. In addition, such level of access was not a possibility for me as a researcher. Thus, such virtual observations provided an important source of data to complement the practitioners’ accounts in the interviews.

3.5.2.2 Secondary data sources: Documents

Documents have been suggested as supplementary data to interviews in case studies (Yin, 2013; Walsham, 1995) as they can allow more in-depth understanding of the topic, processes and events over the course of data collection. The documents used in this study consisted of TSE's company information (available on its main website), TSE's Brand guideline document (available online), TSE's Consumer blogs over 50 entries, TSE's Knowledge-sharing blog with 105 entries, TSE's Engineering blog with 85 entries, LinkedIn profiles of those interviewed along with 54 more actors working in similar roles at TSE (73 profiles in total), 15 presentation slides of TSE's presentations in conferences from SlideShare. Other documents accessed were descriptions of TSE's job advertisements, case studies on TSE's joint projects or experiments with other companies such as Facebook or third-party marketing platforms, and news articles about TSE. These documents were analysed along with other data sources focusing on their content (Prior, 2008).

In addition, the history of TSE's social media profiles was retrieved and stored through NVivo's NCapture as archival data. This included all shared content (both textual and visual-mostly photos) and users' interactions such as their likes, comments, and posts and enabled me to see the evolution and development of the organisation's social media practices manifested through these platforms.

3.5.2.3 Data Triangulation

Data triangulation is a process that aims at addressing the concerns regarding the internal validity of empirical studies. Denzin (1978, p.291) defined 'triangulation' as "the process of combining methodologies while studying the same phenomenon". The most common and most widely used approach of data triangulation is the use of more than one or several methods for data gathering (Bryman, 2011). As I explained in the sections above, I have used a variety of methods in collecting empirical evidence including semi-structured interviews with organisational members and independent experts, netnography of the organisation's social media profiles, documents, and archival data. This has also been called between-method triangulation (Denzin, 1978). Triangulation can also be achieved

through within-method triangulation, which is the use of the same method in different ways as I used the same interview approach for interviewing experts beyond the case organisation. This is also called ‘synchronic primary data source triangulation’, which is suggested by Pauwels and Matthyssens (2004) along with ‘diachronic primary data source triangulation’ that is collecting data (e.g. interviewing) from the same participants more than once (e.g. interviewing several of TSE’s managers more than once).

3.6 Data Analysis and Presentation

Myers and Avison (2002) argue that although it is common, the distinction that has been made between data collection and analysis in majority of qualitative research studies is problematic. This is because of researchers’ presuppositions that impact data collection and the potential findings of the study. In this respect, they suggest using ‘modes of analysis’, which are about various approaches in collecting, analysing and interpreting data. As the researcher, my role continuously was shifting between these modes of analysis as the data gathering and analysis was iterative. Since the fieldwork generated a large volume of data, I have applied two strategies in data analysis: a grounded theory approach for coding as the main method, and a narrative analysis approach.

3.6.1 Data Coding Using Grounded Theory Approach

For analysing qualitative data, I have employed the grounded theory coding approach. Grounded theory method (GTM) is a procedure of qualitative data analysis to generate a grounded theory introduced by Glaser and Strauss (1967). The method has been widely used in qualitative studies (Urquhart, 2013) and also by IS researchers (Birks et al., 2013). Although since its introduction in 1967, several variants of GTM were developed (e.g. Strauss and Corbin, 1990). Birks et al. (2013) suggest that understanding the foundation and ‘philosophical concepts’ of the method is more important than the debates about different branches of GTM. In this regard, they recommend early-career researchers to use the method “depending on their study’s needs” (2013, p.4).

This thesis has broadly adopted a GTM approach in the coding of the qualitative data. The process of grounded theory coding begins with ‘open coding’ (Glaser and Strauss, 1967), which is labelling pieces of data with initial codes. This is similar to what Charmaz (2006)

has called ‘initial coding’ as the starting point of coding process. Following the open coding stage, the researcher engages in the second stage of coding that is called ‘selective coding’ (Glaser, 1978) or ‘focused coding’ (Charmaz, 2006). In this stage, the open codes are grouped into categories. Through this process, the selective codes offer richer dimensions of the research problem (Urquhart, 2013). In the final stage of theoretical coding, then, the categories and their relationships are turned into a more abstract level.

In this research, the data from interviews, documents, and netnography notes were coded based on GTM open coding. The codes were mainly descriptive, and I used the in vivo codes. The use of ‘constant comparison’ technique also assisted in further data collection. In this regard, I was conducting interviews, coding the data, comparing them with already coded data to create new codes or label them in previous codes and to develop further interview questions. This coding process was not based on word-by-word, or line-by-line coding, rather by considering the context of the transcript, I coded them on a case-by-case basis depending on the interviewee’s area of work. Table 3-1 shows a sample of coding for an excerpt from interview transcript.

Table 3-7 Sample of Open Coding for Interview Transcript

Description of Data:	
Type: Interview Transcript	
Interviewee: TSE’s global head of influencer marketing	
Date: 15/02/2017	
Duration: 82 minutes	
Interview No.: 1 (out of 2)	
Quote	Open (Descriptive) Code
<i>“Word of mouth is a still very important. So, back then we had what we used to call buzzers, I think we’re still call them Buzzers”</i>	Importance of word of mouth in social media
<i>“Indonesia is one of the biggest Twitter countries in the world, so Jakarta and Bandung are two of the top cities, two of the top Twitter cities in the world”</i>	large Twitter user base in Indonesia
<i>“So, knowing that for sure I decided to sort of focus most of my attention into Twitter, assuming that it would bring more value than the other channels that weren’t as big back then”</i>	Focusing on Twitter

<p><i>“So, I started to do a few things with some of the buzzers, so we ran some educational campaigns, so working with like Twitter celebrities, or Twitter influencers, we never really called them influencers back then”</i></p>	<p>Initiation of working with social media influencers</p>
<p><i>“We did like you know things exclusive competitions or we had this educational thing that was going on for 10 days trying to get people to download the app, so and that was all through Twitter”</i></p>	<p>Different types of collaborations with influencers</p> <p>First experimentation with influencers for app download</p>
<p><i>“So, we started from there and then I saw that it was very ROI positive in terms of all the things that we were doing with these buzzers and then at the same time, we were able to use their influence to tap onto their audience and get their audience to eventually follow us”</i></p>	<p>Highly positive outcome of working with influencers</p> <p>Ability to measure ROI of the projects</p>

Following the process of open coding, I started categorising the open codes based on three main categories related to the research questions: What do the organisational actors do? How do they do this work/role? How do they learn or develop the expertise to do them? This stage led to the emergence of selective codes that represent ‘the dimensions of technology-in-practice structures in digital work practices’ (Table 3-8), ‘mechanisms through which new expertise emerges and develops’ in (Table 3-9), and dimension of ‘search as the logic of digital organisation’ (Table 3-10), which will be the topic of Chapter 4, 5 and 6 respectively. In this second phase of coding, I compared the emerging categories with the existing literature, and this helped in generating the main themes. For example, in Chapter 6, this consultation with the literature led to the idea of ‘search’ and therefore, it assisted in further abstracting of the categories. Then, the relationships between the categories developed and I was able to group them into the more abstract themes of to show how search occurs in the organisations.

Data collection and analysis were conducted concurrently, and our codes were developed through different iterations and the process of constant comparison and data collection continued until data saturation. NVivo 11 software package was used for coding the data

and also storing the data in a database. In addition, as I mentioned in section 3.4, one of the methods I used for data validation was through discussing the emerged codes with the interviewees and in this regard, I shared the codes with the interviewees either in a second interview or through email.

Table 3-8 Analysis Codes for Chapter 4

First order codes	Second order codes	Themes
'particular features and capabilities of each platform'; 'How advanced platforms advertising are'; 'distinct use of each platform'; 'limitations of platforms';	Understanding capabilities and constraints of digital platforms	Knowledge and Assumptions in managing digital technologies
'Using multiple platforms'; 'Different configurations of platforms in different markets'; 'interdependence of digital platforms'; 'puzzle of how mix of platforms work together';	Manoeuvring configurations of multiple digital platforms	
'Understanding of the users' culture and language'; 'Users' needs on different platforms'; 'Users' distinct use of each platform'; 'consumers as technology users';	Knowledge of consumers' behaviour on digital platforms	
'team-based structure'; 'breaking the silos between the teams'; 'restructuring and regrouping for more efficiency'; '';	Collaborating	Norms of practice in managing digital technologies
'lean start-up'; 'agile approach'; 'small tests with minimum viable products'; 'validated learning'; 'iterative development of campaigns';	Experimenting and learning	
'Start-up culture'; 'customisation'; 'Flexible and adaptive planning'; 'autonomous teams'; 'know who is doing what on plarforms';	Flexible controlling	
'Trello', 'Jira'; 'Slack'; 'Skype for Business'; 'visibility of projects'; 'automated project management';	Collaborative technologies (for collaboration,	The infrastructure of managing

	communication and knowledge sharing)	digital technologies
'Sprinklr'; 'platform's analytics managers'; 'Smartly'; 'AppsFlyer'; 'Tableau'; 'Google Analytics'; 'merging various data sources'; 'creating dashboards';	Social media management, advertising platforms, and data analytics technologies	

Table 3-9 Analysis Codes for Chapter 5

First order codes	Second order codes	Themes
'social media'; 'social media advertising'; 'digital media'; 'SEO'; 'content management'; 'influencer marketing'; 'community management'; 'monitoring the trends'; 'self-learning'; 'knowledge sharing'; 'learning by doing';	Building on the core knowledge	Hybridisation
'T-shaped marketers'; 'growth hacker'; 'upskilling'; 'training programme'; 'multi-faceted expertise'; 'growth mentality'; 'minimising dependencies';	Extending the expertise boundary	
'data science'; 'programming/coding'; 'product-driven'; 'databases'; 'analytical skills'; 'relating product design and marketing';	Becoming more technical	
'bots for messaging apps'; 'voice search assistants'; 'customised data dashboards'; 'Tableau'; 'Google Analytics'; 'enabling faster data analysis'; 'sending real-time customer feedback to relevant teams'	Automating data analytics	Data-Driven logic
'state machine'; 'calculating user/customer life-time value'; 'measurement metrics'; 'adjusting marketing message to the user's state'; 'changing metrics'; 'predicting future values';	Measuring every state of customer journey	
'measuring the value to users'; '(re)evaluating the metrics'; 'measuring users' value to the business'; 'analysing the changes'; 'proving the value of their expertise';	Redefining what's valuable	
'growth hacking techniques'; 'lean start up'; 'minimum	Optimising	

viable campaign'; 'lean and agile process'; 'pivoting the idea'; 'iterative process'; 'experimenting'; 'validating the idea'; 'removing waste';	marketing campaigns	Experimentation
'failing forward'; 'failing fast'; 'celebrating failure'; 'sharing lessons'; 'small-scale testing'; 'learning and changing'; 're-testing'; 'hack days'; 'A/B tests'; 'feedback loops';	Creating rapid learning	

Table 3-10 Analysis Codes for Chapter 6

First order codes	Second order codes	Themes
'Looking for products'; 'searching categories of products'; 'Google'; 'Baidu'; 'Yandex'; 'Naver'; 'Bing'; 'YouTube'; 'seeking information'; 'finding a product or service'; 'finding an inspiration of where to go'; 'understanding what consumers search'; 'knowledge of how consumers look for information'; 'how the users are consuming their content'; 'how customers find their information'; 'understanding of travellers is very important';	Comprehending customer search	(Re)-making the relationship with customers
'democratisation of content creation' 'platform of content for everyone'; 'power of users' content'; 'Highly positive outcome of working with influencers'; 'to use their influence on their audience'; 'influencer marketing equals having mini TSEs'; 'create content and distribution', 'they engage with their audience';	Developing relationship with influential customers	
'listening to the conversations social media'; 'what people are looking for'; 'what people are interested in'; 'creating content based on listening'; 'Sprinklr'; 'Buzzsumo'; 'to check trending topics'; 'Reddit';	Acting pre-emptively	
'fluid nature of social media'; 'tremendous developments of platforms'; 'you have to stay on your toes'; 'not able to rely on previous activities and strategies'; 'changes in Facebook algorithm'; 'platforms' algorithms'; 'changing	Reacting to platform changes	Responding to platform dynamics

measurements and metrics’;		
‘more searches via the bot or via voice search’; ‘being at front of that curve’; ‘comfort as key criteria in software’; ‘people are used to texting’; ‘comfort in conversation search’; ‘search through a conversation’; ‘conversation, the core of text and voice search’; ‘conversation search is quicker and easier’;	Reshaping the interface	
‘social media managers’; ‘content managers’; ‘influencer marketing manager’ ‘digital media managers’; ‘social advertising managers’; ‘marketing automation analyst’; ‘there’s a lot of learnings that you can’t actually just Google and find’;	Creating new discovery agents	(Re)-defining the organisation internally
‘creating constructive disruption’; ‘questioning assumptions and best practices’; ‘the goal of experimentation is to learn’; ‘predicting things in advance’; ‘A/B tests’; ‘failing fast and forward’;	Disrupting current routines	
‘restructuring for more efficiency and agility’; ‘adapt and change’; ‘pivot and learn’; ‘iterate’; ‘test’; ‘data-driven’; ‘hypothesise’; ‘validate’;	Adapting and Changing	

3.6.2 Identifying the Case Stories Using a Biographical Approach

I used a biographical approach to develop a chronological account of interviewees’ professional career prior joining TSE and the major events occurred at TSE to understand how their expertise and the associated practices were emerged. Biographical methods such as narrative analysis are used to reconstruct the stories and biographical processes within interviews (narrated by study participants) (Flick, 2009). The individuals’ accounts are the centre of biographical methods and they examine the stories from interviewees data based on elements of time, place and meanings (Bornat, 2008). Narrative analysis has also been used by IS researchers in studying technology and organisations (Bartis and Mitev, 2008; Alvarez and Urla, 2002).

In narrative analysis, the researcher analyses the narrative data and reconstructs the stories in conjunction with research aims to present the sequential themes from non-chronological data. For this aim, I employed the data from semi-structured interviews and documents as the main sources of data and used netnography notes as complementary and when further elaboration on some parts of interviews and documents were needed. I used narrative analysis, particularly in Chapter 5 to understand the role of the individual experts' background in shaping of their expertise in their specialised field in marketing. This is what Gibbs (2007, p.59) considers as the most common aim of using narrative analysis “to convey news and information as in stories of personal experience”.

Based on suggestions from biographical narrative analysis scholars (Gibbs, 2007; Bornat, 2008), in the first stage, I familiarised myself with the text in terms of how the interviewees approached the question of explaining their background. This led to the second stage of coding such experiences from their formal education to the early stage of their career based on their accounts and explanations (example shown in Table 3-11). In the third stage, comparisons were made to establish the similarities and differences between the interviewees background in gaining their professional knowledge and shaping their career at TSE.

Table 3-11 Example of Narrative Codes

Narrative Sample	Data Source	Narrative Code
<p>“I did an HND in fashion design and then went on to do my degree in fashion and textiles design management. I didn't really know where to go from there... I knew of Schuh and I knew that I really wanted to get into their head office. So, I got a full-time job as a sales adviser. I'm quite fickle with a few things... they tried to lead me into store management, but I thought that wasn't for me and then I also noted there was also a social media coordinator position came up which is like a brand-new role in the company... that was purely almost by chance”.</p>	Interview	<p>Formal Education in fields other than marketing</p> <p>Lack of planning in getting first relevant work experience</p>
<p>“[once at Schuh] a social media coordinator position came up which is like a brand new role in the company and I was like that sounds good it's what I do when I go home. I used to be on MSN chat and I used to be a member of Neopets from back of the day, I</p>	Interview	Emergence of social media related roles

<p>used to do a lot of moderations and I was doing technically community management without knowing it. So, that was kind of strange that my hobby turned into the job. So, that's kind of how that happened, that was purely almost by chance and a lot of luck, which worked in my favour quite dramatically, because if you said to me back then this is what you are going to be doing in a couple of years' time, I would be uhh, are you sure?"</p>		<p>Personal user experience in internet forums</p> <p>Extension of a hobby to a professional role</p>
<p>"I built my own e-commerce website and that's how I learnt about the whole what is behind the website and I got into how we do push the website to the public and that's how I got into doing more social media stuff, paid and unpaid ads, and I learnt quite a bit and then I started working in Accor Hotels doing marketing and e-commerce. Then, I started managing the hotels websites, we started to do proper e-commerce platforms, started to look into proper ROI trackings and so that's how I started to learn more about Google Analytics and stuff like that. So, Accor hotels have their main Accor website, then the hotel itself had, well management and owners wanted to have their own websites so not like under Accor, so that's what we try to build. So we build websites for MICE- meetings, incentives, conferences and events. It was a different product for each website and then using one social media account to push the different products. So, that's what we were doing and then trying to build the tracking between the websites that we had and with the whole Accor Global reporting dashboard. So, what I did was to create individual tracking so that when take we take the regional and global report, then everything we do on our websites count within the, so you could actually see the ROI".</p>	<p>Interview</p>	<p>Initial experience in web design</p> <p>Learning different ways of advertising websites</p> <p>Learning about social media within the marketing role</p> <p>Learning about measurements, tracking and analytics</p>

3.7 Research Methodology Limitation

Qualitative research and specifically case studies have often been criticised for the issue of generalisability of their findings (Lee and Baskerville, 2003; Yin, 2013; Walsham, 1995). In addition, single case studies have been traditionally criticised for their limitation in generalising their findings as a sample to a population. However, a case is not a sample which represents a population, rather it facilitates the analytical generalisations from empirical findings to theoretical arguments. Siggelkow (2007, p.22) also argues that

“research involving case data can usually get much closer to theoretical constructs and provide a much more persuasive argument about causal forces than broad empirical research can”. Walsham (1995), building on Yin’s concept of generalising to theory, introduces four types of generalisations from rich empirical descriptions to a form of theoretical statement (concepts, theories, specific implications, and rich insight).

In addition, Lee and Baskerville (2003, p.233) introduced four types of generalisations from qualitative IS research: from empirical statements to empirical statements, from empirical statements to theoretical statements, from theoretical statements to empirical statements, and from theoretical statements to theoretical statements. This research provides generalisations from rich empirical descriptions to theory or rich insight. Other practices I conducted for theoretical generalisability of this research findings were validation checks with participants, the use of case study protocol, and use of vignettes as suggested by Yin (2013).

3.8 Rigorous Research Practice

While traditional critiques of qualitative research as subjective and biased is no longer legitimate critiques, qualitative researchers must follow certain steps to ensure the quality and rigor in their studies. In this section, I explain the steps and procedures I have taken to meet the quality criteria in this research. As I explained in section 3.5.2.3 on data triangulation and section 3.7 about generalisability of research findings, careful data collection and analysis and transparency in reporting them is one way of ensuring quality in qualitative research (Lee and Baskerville, 2003).

To ensure rigor and quality, it has been recommended that the traditional quality criteria should be applied. These include validity (construct validity, internal and external validity) and reliability checks (internal and external validity, construct validity, reliability, self-reflection, transparency), as well as ethical considerations in the research process (Tracy, 2010). Similarly Lincoln and Guba (1985) have noted four quality criteria for ensuring the trustworthiness and credibility of qualitative research findings. These criteria entail credibility, transferability, dependability, and confirmability as explored by Marton (2013).

'*Credibility*', which is the functional equivalent to internal validity (Marton, 2013), is shown by presenting documentation of data gathering (various data sources) and analysis. To ensure internal validity or credibility, I collected data from a variety of sources (section 3.5.2) and utilised tools such as case protocol (Yin, 2013), interview guides, case study database (using an excel spreadsheet and storing all files in NVivo) to monitor data collection process, links between the gathered data, the protocol and emerging analysis. Not only did this help in fulfilling credibility criteria, but it also enhanced the triangulation process to collect further required data from other sources. '*Transferability*', which is the functional equivalent to external validity (Marton, 2013), is demonstrated by extensive evidence from data (thick descriptions) presented in empirical chapters 4, 5, and 6.

Marton (2013) considers 'dependability' as functional equivalent to 'reliability'. To ensure reliability, in addition to detailed descriptions of data collection and analysis process, I used interviewees' feedback on the interpretations and analysis of the data. Also, I collected data from a variety of sources such as interviews and documents. 'Confirmability' or objectivity is "checking preliminary findings through communicative validation" (Marton, 2013, p.5). Because unlike quantitative studies, researchers are instruments of their research in qualitative studies in the data collection and analysis, it is important to conduct the data analysis in an iterative way for in-depth understanding of the data (Sarker, Xiao and Beaulieu, 2013). Besides following an iterative process of data collection and analysis, I did crosschecks with the interviewees to ensure the objectivity and reliability of theoretical findings.

3.9 Conducting an Ethical Research Study

Research ethics is concerned with the ways that a research is conducted and reported and it applies to the whole research process and impacts the credibility of the research (Eriksson and Kovalainen, 2008). According to Maylor, Blackmon, and Huemann (2017), researchers should apply ethical principles, which are essentially about caring for privacy of participants, and honest reporting of data and analysis. Bryman and Bell (2011) have also outlined ethical principles in conducting social research. Based on their principles, researchers must consider that there should be no physical and mental harm or risk for the

study participants. Moreover, all participants should be provided a consent form detailing how the researcher would use the data and ensuring no violation of their privacy.

These principles including information sheets and consent forms, respecting privacy of the participants, avoiding any risk or harm to them, guided this research's process. All participants (organisational and expert interviewees) were given full information about the research and how the data would be used. They all participated completely voluntarily with the knowledge that they can withdraw from participation at any time. Initially the participants were informed about the details of the study through e-mail and subsequently I explained the research to them before starting the interview when they were also asked to sign the consent form. The confidentiality of their information was highlighted in the consent form and an electronic copy of it along with the interview transcript were sent to them.

In addition, I presented all the participants the opportunity to raise their concern about any of the topics or questions of the interview. For example, one of the social media advertising managers shared her concern in response to the question that came up about the allocation of the company's marketing budget. Since it was important to know how the company assigned the advertising budgets to social media advertising compared to other advertising platforms but not the actual figures, I assured her there is not a need to share any information she might consider strictly confidential. Furthermore, I kept the name of the case organisation and all participants confidential and to ensure this confidentiality when using data from the company's public documents, I paraphrased them instead of directly using them as quotes.

Furthermore, there have been concerns regarding the use of social media data that is publicly available (Markham and Buchanan, 2015). However, this data has already been used in academic research (e.g. Feldman and Lowe, 2015) and the guidelines have been developed for ethical use of such public data (Markham and Buchanan, 2012). In accordance to these guidelines, the data collected through netnography of social media platforms (primarily Facebook, Twitter and Instagram) is low-risk, as no names or information about individual users was captured. The focus was specifically on the nature

of interactions on each platform, its structure and content being shared. Moreover, I have strictly followed the University of Edinburgh Business School's checklist for level 1 and level 2 ethical review.

3.10 Conclusion

This chapter has discussed about the research design and methodology of this research in addressing the outlined research questions. Based on its ontological and epistemological underpinnings, and the results of a pilot study, it has adopted a case study approach to investigate the dynamics of changing organising approaches, new emerging expertise and work practices as the organisations are becoming more digital with regard to their external stakeholders (e.g. customers). I selected a single case study design to present an in-depth understanding of the phenomenon within one exemplary case based on purposive sampling strategy. Having gained access to the case organisation, I gathered the data from semi-structured interviews, documents and netnography, where interviews and documents were used as the main sources of data and netnography as a complementary source.

The case study data was analysed based on the coding approach in grounded theory method. Following the initial descriptive codes, selective coding was conducted focusing on the research questions. In this stage, the literature was also consulted to focus the analysis toward further abstraction of the codes, which subsequently led to the main themes. In addition to this coding process, the data was also partly analysed based on biographical approach of narrative analysis to understand how the interviewees' backgrounds played a role in shaping their expertise. The data collection and analysis were conducted iteratively, and I used between-method triangulation (using three methods of data collection) and within-method triangulation (using interviews to ask experts' views in addition to organisational experts) to ensure the internal validity.

4 Chapter Four: Emergence and Mutability of Digital Work Practices: The Changing Role of the ‘User’ in the Digital Organisation

4.1 Introduction

As discussed in Chapter 2, organisations are more increasingly undergoing transformations as new forms of IT are continuously emerging and evolving. It is suggested that adopting organisations need to address this shift by developing new strategies and learning how to organise and manage these technologies (Risius and Beck, 2015; Benthaus, Risius and Beck, 2016). One widely held assumption is that enterprises are increasingly engaging with and managing their customers from within externally-oriented digital platforms. However, as yet, much of the literature has only discussed the ‘potential’ outcomes of these technologies (Rishika et al., 2013; Goh, Heng and Lin, 2013) and has had much less to say on their practical realisation.

There are a number of aspects to this shift to the so called ‘digital organisation’ that need to be considered. This includes understanding what responding to the potential of these new technologies actually means. For instance, scholars point to how these new forms of technologies offer unique opportunities to organisations (Kallinikos, Aaltonen and Marton, 2013, 2010), based on their distinctive characteristics that are different from previous generations of IT. We can note two differences of importance for the discussion below.

Firstly, while changes like ‘upgrades’ in enterprise systems were timetabled and structured according to the user organisation (Staehr, Shanks and Seddon, 2012), today, with the new digital technologies, the organisation has much less control. Indeed, changes and updates are imposed according to the timetable and needs of the platform owner. The upshot of this, as some have argued, is that ‘everybody’ is always subject to uncontrolled changes in the ways they interact with and use these technologies (Yoo, 2010). Secondly, developing on this, it is argued by scholars that prior to the era of social media where

organisations were accustomed to communicating their messages to consumers through conventional channels of communications, “they have now become mere nodes in complex networks where messages are propagated, attenuated, and amplified by users themselves” (Aral, Dellarocas and Godes, 2013). Thus, in the context of digital technologies, the individual users are gaining more prominence as they are continuously participating in changing the content of these platforms (Kallinikos, Aaltonen and Marton, 2013; Levina and Arriaga, 2014).

Empirically, what I aim to do in this chapter is to show how organisations are responding to these new technological enabled characteristics. I describe the new work practices created to manage new forms of highly malleable digital technologies and networked users. In this respect, this responds to the call by Aral et al. (2013) to investigate the firm level use of social media and digital technologies in terms of their ‘management and organisation’ to understand the nature and dynamics of organisational work practices (which they argue is the most under-researched area regarding these new technologies).

More theoretically, I am interested in understanding whether these technologies – which are no longer wholly under the control of organisations but are continuously being reconfigured – are a conception of how technologies are used. It is well-documented by scholars of IT and organisation that the recurrent use of technologies- through drawing on their material properties, norms, knowledge and experiences, brings forth the structures of technology use (rules and resources) that act as a template that also shapes the technology use (Orlikowski, 2000). However, in these new circumstances, we need to understand whether there are different kinds of dynamics and the potential difference this makes to how technology is ‘used’.

In order to fully understand how and why organisations are responding in the way they are, I first need to review discussions surrounding digital platforms, show the level of change they potentially propose, and the direction in which that change is moving. I also need to reflect briefly on the discussions about how the notion of ‘user’ is changing in the context of these new technologies. This discussion is followed by narrating the theoretical perspective that is used in this chapter to throw light on the current changes.

4.2 What Kind of Changes Organisations Respond to?

4.2.1 Digital Platforms Characterised

New digital platforms such as blogs, social networking sites and search engines are described as the new generations of IT with distinctive properties that distinguish them from previous non-digital forms (Ekbia, 2009; Kallinikos, Aaltonen and Marton, 2010). To understand how these technologies are developing it is useful to draw on what Zitttrain (2006), calls ‘generative technologies’, defined as the “technology’s overall capacity to produce unprompted change driven by large, varied, and uncoordinated audiences” (Zitttrain, 2006, p.1980). What the term highlights is how digital technologies lack stability and are constantly changing (Zitttrain, 2008). The highly dynamic and changing character of digital platforms is leading to unprecedented changes in organisational functioning (Yoo et al., 2012). Some scholars have called for research to understand how exactly these platforms are changing organisations, which has been described as a paradigm shift (Mckelvey, Anderson and Yoo, 2016).

Understanding this is important as practice-informed studies of IT in organisations have mainly focused on the particular types of technology that are used within the boundary of organisations (Ellison, Gibbs and Weber, 2014; Leonardi and Meyer, 2015; Orlikowski et al., 1995), and their role in existing work practices that the organisational actors are performing. Moreover, according to Markus and Silver (2008, p.627), “[the] continual emergence of new technologies inevitably requires ongoing conceptual development”. Therefore, we need to understand how the changes brought forth by these new technologies are different from previous generations of IT.

4.2.2 The New Forms of Users the Digital Organisation Deals with

With the proliferation of digital artefacts, organisations are said to be dealing with increasingly more endowed consumers who, through their ubiquitous access to internet and mobile devices, are assumed to be well-informed and empowered (Granados and Gupta, 2013). The embedding of digital technologies in individuals’ everyday lives, what Yoo (2010) calls ‘experiential computing’, is changing the conventional view of technology users as organisational members. Yoo (2010) suggests that these computing

capabilities and artefacts (digital and non-digital) are, today, used for purposes beyond the users' information needs (in organisational contexts) and for mundane daily activities (e.g. running or driving). These users employ computers but also any other mundane artefacts that have some forms of computing capabilities, which are incorporated into assemblages of other artefacts in quotidian life. Thus, Yoo (2010) suggest a redirection of focus from performing tasks and processing information by users in organisational domain to any other daily activity that is digitalised.

To understand the nature and level of change, I contrast this new understanding with the previous perspectives towards conceptions of the user in IS literature. One of the well-established views of the user is the notion of the 'social actor'. Lamb and Kling (2003) introduced this concept in opposition to the more traditional views of users as 'atomistic' individuals narrowly defined according to the tasks they performed when using information systems. Here the user was seen as an actor that had been 'managed' (Agre, 1995) or 'configured' (Woolgar, 1990). Lamb and Kling (2003) instead argued that one must consider the social and institutional context in which the user is embedded as they play a part in their interactions with technology. According to Lamb and Kling (2003, p.218), a social actor is not merely the user of a technology, but "an organizational entity whose interactions are simultaneously enabled and constrained by the socio-technical affiliations and environments of the firm, its members, and its industry".

This view has been extended by IS researchers to show how social actors might play different roles. For instance, Pollock and Hyysalo (2014) discussed the idea of 'reference actors' as a category of actor concerned not just with the narrow task of using a system but in enhancing their organisations and the vendor organisations processes of technology development and innovation. Millerand and Baker (2010) also pointed to the various roles that users might play and suggested the ideation of 'web of users' to highlight the multi-faceted nature of use as opposed to the discussions of user and designer/developer.

4.3 Technology-in-practice Perspective

Theoretically, this thesis draws on the practice-oriented studies of technology and organisation (Orlikowski, 2010, 2000; Leonardi, 2015) to investigate how dimensions of

technology use- knowledge and assumptions, norms and facilities emerge with regard to digital technologies. Highlighting the inadequacy of existing structural perspectives to technology, that they consider technologies as stabilised and also embodying structures, Orlikowski (2000) proposed a practice-oriented perspective to study this phenomenon. In this regard, Orlikowski (2000, p.408) proffered the notion of ‘technology-in-practice’ to “[focus] on emergent technology structures enacted in practice rather than embodied structures fixed in technologies”.

Orlikowski (2000) explains three elements that users draw on in the process of ongoing technology use (Figure 4-1) that shape ‘technology-in-practice’ structures: ‘facilities’, ‘norms’ and ‘interpretive schemes’. Facilities refer to technological resources such as hardware and software and data sources. While ‘norms’ refer to social and cultural conventions of the setting and the institutional context, ‘interpretive schemes’ are related to knowledge and expertise of the technology and its use that can be affected by prior experience, training and other communications. In this regard, “people’s use of technology becomes structured by these experiences, knowledge, meanings, habits, power relations, norms, and the technological artifacts at hand” (2000, p.410). Based on the practice perspective (Orlikowski, 2010), the concept of technology-in-practice can be used to explain how the use of technology becomes structured through the knowledge, norms, experiences and the technological artefacts, that then guides the future use.

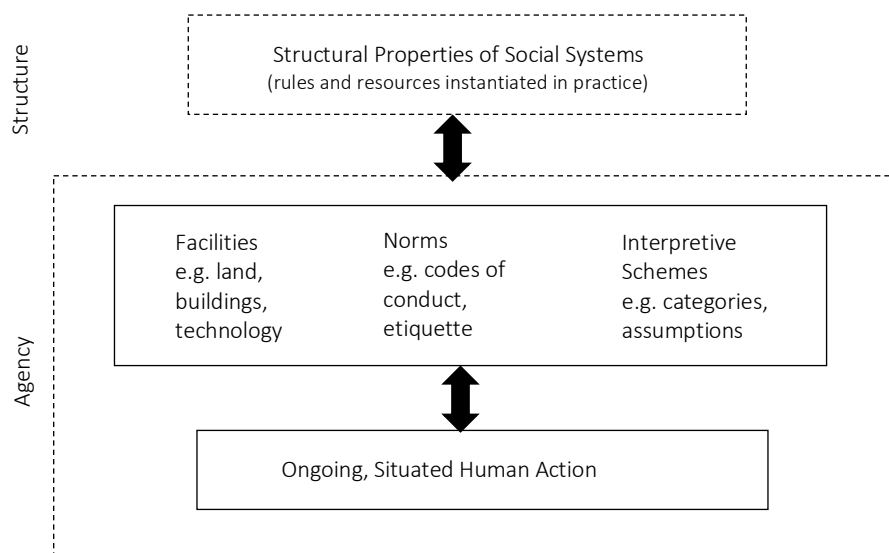


Figure 4-1 Technology-in-Practice (Orlikowski, 2000, based on Giddens (1984))

The benefit of using a practice-based lens in studying the use of technologies is that it allows us to focus on what individuals actually do when they use technologies in their situated activities. Because technology use is not predetermined but is constituted through situated and recursive activities. In the use, people draw on the material properties of technological artefacts, the meanings, expectations, assumptions and also on their knowledge, experience and socio-cultural conventions (Orlikowski, 2000). The focus of these previous studies of technology-in-practice has been on the implications of the technology for the existing and established organisational work practices (Orlikowski, 2000; Schultze and Orlikowski, 2004) that can result in no change in work practices, an improvement in how current work practices are done, or transformation of the work practices. However, with unique characteristics of digital platforms noted above, it's important to revisit how these dynamics relations are constituted in practice.

In what follows, I now turn to look at how some of these ideas described above are visible in the empirical data based on the exemplary case study of a digital organisation (detailed in Chapter 3). I first explain how the work practices were developed in addressing the malleable digital platforms and users' practices. Then I go into the details of this by showing how the knowledge about technology and new digitalised users is formed, how the work is organised and what other technologies the organisation has adopted in supporting the work practices.

4.4 Enactment of Managing Digital Technologies in Practice

During the period of fieldwork, TSE was embarking upon a period of dramatic change. They were responding to the factors mentioned above (generative platforms, empowered users). I joined the story during the initial change where staff and managers were learning about just how the new technology might reshape their practices. There were also beset with entrenched problems. This new wave of change promised to change all that.

Looking at the origins of using digital technologies at TSE (from 2007) reveals that their initial use was not based on a particular strategy and was not integrated into TSE's core practices. As the quote below by social media manager 8 shows, in the outset, social media were positioned in the marketing and communications department for the aim of just maintaining a presence:

About 6 years ago [in 2010]...there were about four of us at that point in marketing comms [communications]...We had a small core team, and then we had maybe 10 or 12 marketing managers for European markets...In the very beginning, we were there [on social media]...we didn't measure what we did, we were just there talking to people, we knew it was valuable in some way but we couldn't measure it (social media manager 8, interviewed 13th July 2016)

However, unlike the initial practice, the current practice of managing social media and other digital platforms (search, email, etc.) is very advanced and integrated into the organisational operations. These work practices, which are categorised as paid or non-paid by TSE (as a form of advertising or not), play a crucial role in the business of TSE. The significant role of social media (for both paid and non-paid work practices) was described by social media manager 8:

One of the main roles is definitely acquiring new users or keeping existing users, engaging them with our content or our product, reminding them that we exist...creating a community of travellers is super important...So, that's the main goal and it's also around re-engaging people and retargeting. So, we do a lot of advanced advertising mainly on Facebook but on other channels as well, on VK in Russia, Twitter ads (social media manager 8, interviewed 13th July 2016)

This major role of Facebook in advertising, for example, has been highlighted by the TSE's then-director of growth (current vice-president of growth) at Facebook F8⁹ 2016. By referring to two types of Facebook advertising functionality, linked ads and mobile app install ads, she explained how the extensive use of Facebook helped them grow their mobile traffic by 60%. She elaborated that the significance of Facebook is not only because of access to millions of external users for acquisition but also the cost-effectiveness of Facebook ads performance. Due to widespread opportunities that these

⁹ Facebook's annual developer conference

platforms are offering for TSE, I present how the new work practices regarding such platforms have emerged within the organisation.

Through TSE's paid and non-paid social media activities, I have observed the emergence of new work practices in the organisation that did not exist before: social media community management, social media data analytics, content management, social media advertising, and influencer marketing management. Various experts are involved in the ongoing use of the technology, based on particular knowledge and assumptions, are structured in specific teams and work based on the specific organising arrangements and norms that constitute these practices. In addition, new technologies have been adopted and configured to support these work practices and the associated activities.

4.4.1 Forming the Knowledge and Assumptions Towards Digital Platforms and Their Users

One category of expert working with new forms of digital technologies are social media managers. At the market/country level, these individuals, who work with freelancers, are responsible for developing the social media strategy for that market, generating and sharing the content that informs, educates and inspires users, communicating and interacting with users, and measuring the effectiveness of each stage in the process. These individuals are native speakers of that country with knowledge of its language and culture, and extensive experience in digital marketing. The social media manager 2 explained her responsibilities:

As a social media manager at [TSE], you are mainly responsible for the content that is going out on our social channels for each market. With the content meaning both imagery as well as readable content or as for visual, recently video, but you are also responsible for coordinating all the advertising with the paid social media team, and, of course, responsible for the analysis of everything that we do (social media manager 2, interviewed 25th July 2016)

At the regional and global levels, the roles become more strategic in terms of developing and implementing the regional and global strategy of social media, coordinating the social media managers, developing analytics reports and working with marketing and advertising roles towards revenue-driven goals. For example, the main responsibility of

the global head of social media is to develop both the global strategy and advertising strategy of social media and coordinating a team of over 30 individuals across the globe. At the regional level, for example, Europe, Middle East, and Africa (EMEA), social media manager 8 notes that “my main responsibility is managing a team of about eight people who are full time social media managers for the key markets and the remaining four for the [other] 12 markets, we have agencies and freelancers that we manage as well” (interviewed 13th July 2016).

Besides the defined set of responsibilities, social media managers have certain key characteristics. Not only do they understand digital technology and its capabilities, they also are highly creative, and vigilant about responding to external users on social media. The following case is an example of how these skills manifest in practice, when one of social media managers responded to a user on Facebook about a fundamental error in TSE’s search platform:

The user posted an error (with a screenshot of TSE’s platform) in the suggested booking and asked about this on TSE’s Facebook page. The social media manager 5 (UK and Ireland) responded to this post in a creatively humorous manner via a lengthy comment turning the situation to entertain the user while appreciating the information and informing the team to rectify the problem. The comment was sufficient to go viral, the post got over 22000 likes and over 3500 comments with about 9000 likes to the social media manager’s comment. The story was published by all the major tech and non-tech news websites such as Mashable, BuzzFeed and Huffington Post as a case of excellent social media community management (virtual observation notes, August and September 2016)

Alongside social media managers, content managers work with a team of up to six freelancers in each market in production of mainly textual content. The main responsibility of content managers is to develop the content strategy for the market, plan and manage the whole process from generating ideas to assigning tasks to the freelancers, monitoring the progress of their work, editing and finalising the pieces and publishing them on the content management system to be available on the company’s news website. When the content is produced, the content manager informs the social media manager (by tagging them in the internal workflow management system), so that they can use the

content accordingly for sharing on social media platforms. Content manager 2 outlined this process:

I am responsible for everything content-related you see on the website but focused towards inspirational content...everything that you see on social as well, especially if it's linked back to the news site, to the article. In a way the whole content strategy ties in quite a lot with the social media strategy and with other strategies of the business. So, there is no real border or...there is no real definition, technically content can be anything but at the moment, the focus is on social media content (Content manager 2, interviewed 10th August 2016)

In addition to the social media and content management, there are new paid advertising activities on social platforms being conducted by certain roles such as social media advertising managers in each region. Their responsibilities include optimising spends for advertising across social media platforms such as Facebook, Instagram, Twitter, and VK, managing the production of advertisements (ads), and analysing the results in order to measure social media advertising return on investment (ROI). The contents of ads are produced in collaboration with market level social media managers and content managers.

The enactment of work practices through ongoing activities is not limited to the mentioned organisational roles. There are several other sources and individuals involved particularly in the production of visual or audio-visual content. TSE utilises the creativity of the in-house design team, graphic designers, photographers and a videographer who exclusively work for the production of these types of content that are being shared on social media platforms. There are also data scientists and marketing automation analysts involved to support those roles with data analytics and measurements of outcomes.

The emergence and development of such forms of knowledge and expertise will be extensively discussed in the next chapter (Chapter 5). These experts work based on certain emerging assumptions, which are about how they interpret the technologies and also the ways they are being used by external users that are explained in the following sections.

4.4.1.1 Understanding Capabilities and Constrains of Digital Platforms

One set of assumptions that organisational experts work is based on (which have been changing as the platforms have been changing) is to understand capabilities and

constraints of the platforms. According to Expert 9, this understanding has evolved since the rise of social media:

It was probably the biggest shift I've seen, people said 'ok, we have to do social media' and so they would hire interns to manage their social media, because it was new and it was kind of downgraded in importance and also because interns were in college and college students understood social media better than almost any one at that point. As the platforms matured and people kind of understood all of the ways that social media presence could affect their brand, it was going much higher up the chain (Expert 9, interviewed 11th April 2017)

This shows that organisations were initially unaware of just how these platforms would play a role in their business and that they would require individuals who were familiar with the functions of the platforms. However, the link between the use and outcomes were unclear and the difference between the personal use and business use of the platforms were not understood. This was also the case at TSE (as I mentioned above) that there was a lack of knowledge of what to do on the platforms and how to do it. Nevertheless, this changed as the platforms were growing and they became integrated into the core of business strategy, as social media manager 8 points out that: "It's [social media] not just about publishing what we have; it's more integrated in the whole strategy" (interviewed 13th July 2016).

With the growing importance of digital platforms in businesses, the organisation needed to understand how different platforms work, how different they are, and what capabilities and constraints they have. In this regard, social media manager 1 provides an example of how they use Twitter for specific purposes:

In Twitter, the relationship with the users is quite different, it's more like a conversation, so we try to focus in Twitter more on the relationships with influencers and with the people who are relevant in travel sector in our case. Also [in Twitter] the interaction is quite smaller and it's more focused but it's also very valuable for us to make contact with other partners or influencers, etc., which is also useful to create campaigns in Facebook, Twitter and Instagram (social media manager 1, interviewed 18th July 2016)

As he pointed out, various social media platforms allow connections and relationships with the users in different ways. This is why for TSE (for example in the case of the

Spanish market), Twitter is used to stay connected with influencers rather than a platform of community engagement, which can also lead to influencer collaborations on other platforms such as Facebook and Instagram. Related to this, social media manager 3 explains how she makes less use of some Twitter functions:

There are loads of tools from Twitter which I use but very sporadically, because it's not so relevant because we are quite small (in France), so as an example doing polls which is something that is quite popular when you have big audience, but with our current status on Twitter, I don't use them that often (social media manager 3, interviewed 27th July 2016)

This shows the organisational experts need to understand what the platforms offer and decide how they would use or not use those offerings. In addition, she comments on the importance of using Pinterest, compared to Instagram, as it allows the users to click on the URL links and ultimately visit TSE's search platform. She explains that "the main reason for using Pinterest is that it hosts very rich content and content with links which is not the case for Instagram, so because there are links, it means that there is potential traffic coming from it" (interviewed 27th July 2016).

Other social media managers have also noted the limitation of Instagram in adding links and its lack of potential for driving users to TSE's web or app platform or to an article on its news website. Because Instagram only allows users to add one link in the bio (description) of their profiles and the links inserted into the post descriptions or comments are not clickable¹⁰. Thus, social media managers at TSE use Instagram mainly for community management and engaging with their users. The TSE's global head of influencer marketing also comments about Instagram:

A lot of people think Instagram is obviously the big influencer platform, for us it's not. Instagram, it's only images, people just scroll it, they don't go to the link in bio unless there is a really good incentive. So, Instagram works really well when you're doing competitions and because there is a good incentive behind it, so you're gonna click the

¹⁰ This was the possibility at the time of interview in October 2016. However, Instagram introduced links to stories in early 2017 for verified and business accounts (<https://instagram-press.com/blog/2016/11/10/new-to-instagram-stories-boomerang-mentions-and-links/> Accessed August 2017), and based on observations of TSE's main Instagram accounts, they have been using the links on stories to lead the users to deals pages or specific destination articles on their website.

bio...But if there is no incentive for the audience, we wouldn't see that many good results (global head of influencer marketing, interviewed 15th February 2017)

In addition to the necessity of growing knowledge on subtle characteristics of the platforms, understanding the functionalities and limitations of the platforms in their advertising power also plays an important role in TSE's practice. Social media advertising manager 1 notes the differences between platforms from the perspective of advertising management:

Twitter is not as developed as Facebook and Pinterest is still very immature as an advertising platform. Instagram right now doesn't have their bespoke ads platform, you basically build and serve the ads from Facebook tools and Instagram is one of the ad placements (Social media advertising manager 1, interviewed 27th October 2016)

This indicates that the organisational experts need to have an updated knowledge of what platforms allow and do not allow them to do and how they proactively create configurations of platforms for best use of platforms capabilities and minimising the effects of their limitations. Observations of TSE's social media profiles also support this as TSE's experts start using new features of platforms as they are released and then they incorporate such new ways of content sharing into their plans. For example, observations of TSE's Facebook default page (in English) and also several other pages show that they started using polls, videos, pinned messages, live videos, and 360-degree videos following the introduction of these functions by Facebook.

4.4.1.2 Manoeuvring Configurations of Multiple Digital platforms

As explained in the previous section, organisations face several different platforms that they need to understand and recognise which set of platforms to manage. Therefore, the organisational experts make use of configurations of social and digital media platforms. In this regard, social media manager 8 asserts that using a mix of different platforms is a norm at TSE, although this mix is not fixed, and different teams flexibly recognise how to configure different platforms. Moreover, an understanding how these platforms work together is crucial at TSE. According to him:

One of the most important things is understanding all the channels and how they work together. I think that's the most important thing, not working too much in a kind of

independent way, where you just go off and do stuff and don't understand how the channels work together (social media manager 8, interviewed 9th September 2016)

He also provides examples of using various platforms in marketing and advertising activities and how they are inter-related and social media platforms have a key role in each of them. For example, he states that “we do a lot of PR and media relations, we do e-mail, we do push [notifications] on the app, we do display advertising, partnership with other brands, with other influencers, all of that stuff might have kind of social media touch points”.

This is also acknowledged in expert interviews in the ways that different digital platforms do not work independently and in isolation, rather in integration with other platforms such as social media. For example, Expert 9 notes:

They kind of work together in that way, when search engines and all of the digital platforms kind of starting to balance off each other...it's kind of a more holistic view, you have a digital presence versus just a social presence and a web presence, it's kind of more holistic and integrated now (Expert 9, interviewed 11th April 2017)

As explained in the above quote, there has been a shift of focus by businesses from a web presence and social presence to a digital presence, which is about having a holistic perspective toward digital platforms, how they are configured and integrated together and how the organisations recognise this in their practices. This is highlighted by social media manager 1 in ways that organisational experts work together:

We work all together when we create campaigns in Spanish team, we are at the moment four persons, one is for content, and one for PR, and other one social, and then the marketing manager and we complement our knowledge of all these fields...every campaign we launch is totally integrated with social media and the rest of the channels, so, for us it's key in our projects (social media manager 1, interviewed 18th July 2016)

In addition, it should be noted that such integration and configurations of digital platforms are not uniform across the organisation, but they are decided at the level of each individual market that TSE operates. For example, social media manager 4 explains what mix of platforms they use in Russian market:

The main platforms for us are Facebook, Twitter, Instagram, Odnoklassniki (OK), and VKontakte (VK), one of the most popular social networks in Russia. Our strategy varies from platform to platform and we try to utilise the opportunities that are given by every platform. For example, VK allows you to manage forums more easily (social media manager 4, interviewed 11th August 2016)

Another example is provided by social media manager 7 as he explains the social media platforms that are used in his team. He states that “we are focused on Facebook, Twitter and Instagram, we are still doing some things with Google+ but it's not like a really important channel”.

Therefore, as shown in above quotes, there are a variety of flexible configurations that are in place in different market level teams. Managing such configurations requires utilising other platforms to enable organisational experts to conduct their work practices such as content management or community management. These platforms include social media management suites, data visualisation, and data analytics platforms, which will be explained in section 4.4.3.2.

4.4.1.3 Knowledge of New Forms of Digitalised Users

Managing digital platforms and the associated work practices are not only about the platforms' materiality but also managing new forms of users emerged through these platforms. To recognise what configurations of digital platforms the organisation should focus on, it is important that organisational experts are able to understand the behaviour of their target users on those platforms. Social media manager 8 explains that understanding different cultures and their use of the platforms is crucial: “what certainly is important is an understanding of different cultures and the needs of users in each market, because they are very very different as an example, we definitely tailor what we do in each channel to the market”.

Therefore, he adds to his comments by explaining that even if different teams at TSE use the same platforms, the way they use them across different markets is unique due to the variety of ways that external users might be using them:

In each of those markets, typically in Europe we are on all the main channels, we use them very differently. For example, Twitter is not a major channel in Scandinavia and

is not as widely used by consumers in the same way in France or Germany either, but in Spain and Italy, it is more heavily used. So, as an example, we definitely tailor what we do in each channel to the market (social media manager 8, interviewed 13th July 2016)

Through his example of Twitter, he emphasises that the consumers (external users) use the same platforms differently in different markets and this recognition is essential in ways that the organisational experts manage and use these platforms. Similarly, social media manager 6 shares insight about how they might organise their work practices differently across different markets:

At the whole user journey, we are always researching how people use the channels, which new channels they are using, etc. The key thing is that every market has a very different strategy because the problems are different and the behaviours are different, but we make sure we customise our activities for each market (social media manager 6, interviewed 6th March 2017)

Social media manager 4 also comments on the significance of knowing the specific users of each platform in the ways that they use the platforms, their demographic characteristics, and their interest and needs:

It varies very much from market to market, to channels as well, so for example, in Twitter in Russia, the audience is primarily male users who have a very big interest in technology while Facebook and VK, one of the most popular social networks in Russia, are primarily female audience from the age of 25 to 34 (social media manager 4, interviewed 11th August 2016)

In a similar way, social media manager 3 characterises the Twitter users in France, how they use Twitter compared to UK users, and how this influences her practice on Twitter. She explains that “Twitter is a bit of a more difficult platform for France, it's a lot used to communicate with people and not so much as you would see in the UK to follow brands and see news, the demography is quite young, it's a bit harder for us to reach the right audience” (interviewed 27th July 2016).

As specified in the above quotes, because of this diversity of user activity and behaviour across different platforms and different markets, the organisational experts need to customise their actions in different ways. In this regard, social media manager 1 asserts

that such customisation also applies to even the experimentations in exploring adoption of new platforms. He states that “when we want to test a platform, we don’t simply use content from other platforms, we try to create a specific language for a specific channel and if we see value in it after the test, we explore it further”.

Creating this specific language for each platform is also key in content managers’ job. This is also associated with various ways that the consumers (individuals) use these platforms and interact with organisations. Thus, content manager 3 asserts how building this understanding is important:

You need to know the market and know the users quite well, so, I know which type of content is going to work and which type is not going to work. This type of post [engagement post] goes with a copy, so the link between the picture and the copy is really important and to understand what is going to work and what is not going to work, you need to know the market and know the users quite well, and that's a lot about building your eyes (content manager 3, 29th September 2016)

Thus, as highlighted in the above quotes, the organisational actors are using a particular type of technology that are also in use by other digitalised users and they are all associated through the networked structures of these technologies. Therefore, understanding the technology itself, its capabilities and limitations, and how different platforms can be used in configuration with each other, is not enough as they need to recognise and understand how other categories of external users are using the platforms as well.

4.4.2 New Organising Arrangements and Norms in Managing Digital Platforms and Users

As I explained in the previous section, the activities that are involved in digital work practices are of a diverse range being conducted by several different organisational experts who are building their assumptions and knowledge of the platforms and digitalised users. Thus, it is crucial to understand how these organisational experts are positioned in the organisation and how they work with each other in an effective and efficient way. As stated in Chapter 3, TSE experienced a major restructuring in transiting to a growth-oriented organisation. The new structure is in a matrix form, in which different functions are working in teams (squads).

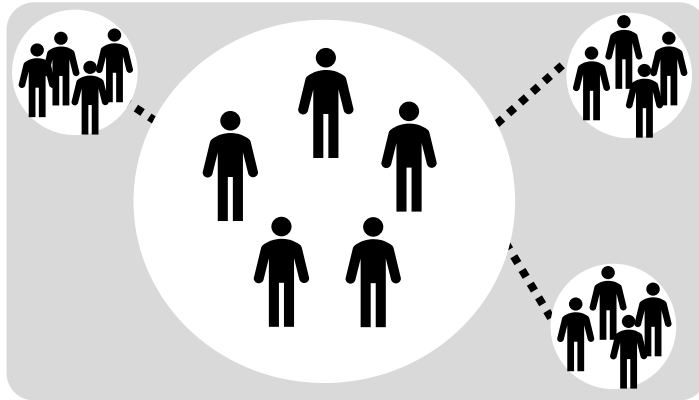


Figure 4-2 TSE's Cross-functional Teams (Squads) [Based on TSE's documents]

Figure 4-2 shows, a cross-functional team is formed by individuals of different functions as portrayed in Figure 4-3.



Figure 4-3 An Example of a Cross-functional Squad [Based on TSE's documents]

Each country squad usually consists of a social media manager, a content manager, a marketing manager and a PR manager working together as a self-organising autonomous team to strategise and realise the vision of the company in that market. The existence of a content manager depends on the level of TSE's growth in that market. For example, in France squad, the responsibilities of the content manager have been distributed among the three other roles. The experts' views also indicated that social media have become more embedded into the structure of organisations. For example, expert 1 notes that "although some organisations are still unsure and they have several departments dealing with social media, there seems to be more structural thinking in more socially mature organisations to arrange human resources for social media" (interviewed 25th October 2016).

Similarly, other experts pointed out that organisations are trying to find better structures as the nature of digital work practices is becoming more collaborative and some of the

new technologies such as social media management suites (e.g. Sprinklr) can help them in that regard. As explained in Chapter 3, in the new structure, the organisational experts work based on lean and agile principles and new organisational norms that are described in the following.

4.4.2.1 Collaborating

The collaboration and knowledge sharing are key in the new working system in order to be able to respond to platforms and the new forms of users. As I mentioned above, each squad consists of a team of experts and managers who are working across different specialism areas (and are ‘T-shaped’: see Chapter 5). This structure has led to the separation of issues and concerns among specialist teams, within which the experts are collaborating with each other. It means that organisational experts do not work only on their functional responsibilities separately, rather they would spend a lot of their time working together towards the squad’s goals. Social media manager 8 comments on this collaborative method of working:

Day to day, they [squad members] all work together, they don't work separately all the time, they won't necessarily only do their functional things, for example, our social managers do lot of content, they create blogs, partnerships, might do keyword research for SEO, etc. (social media manager 8, interviewed 9th September 2016)

In working together, they also decide on their goals and strategies for achieving those goals and therefore what they should do in terms of what project or campaign to work on. Social media manager 8 continues by explaining that “each squad has 4 or 5 people and they all kind of work together to figure out the goals they want to achieve in that market and so, it might be targeting a segment of travellers, it might be just retaining our existing users, so we do bigger push on email, etc.”.

When the squad decides on what goals they want to achieve, then the process of how they want to achieve those goals initiates with idea generation that also is done collaboratively as social media manager 7 states that “we all work together [in our squad] in finding ideas for campaigns or running experiments” (interviewed 27th March 2017).

Achieving this collaborative method of working has been important in making a connection between organisational experts and functions working on paid (advertising) digital work practices and non-paid digital work practices. Because although they work on similar or the same platforms, their benchmarks and measurement criteria are different. As social media advertising manager 2 states, “it's been very hard to break the silos between those [paid and non-paid] channels”. However, digital media manager 2 thinks that “[TSE] has become very very efficient in regrouping and restructuring to make it easier to work... and they would make an active effort to try and break the silos between the teams” (interviewed 10th January 2017).

This indicates that the major restructuration and the ongoing adjustments to TSE's organisational structure have built bridges in connecting teams that essentially need to work together to achieve better results. Besides the collaborative work within squads or squads working on paid and non-paid areas of digital, collaborations extend to other squads as well. For instance, social media manager 5 highlights how their squad work with commercial squad or app squad:

We do work with the commercial squads. If they have any big partnerships or anything that they'd like us to work with, we can come up with plans for them and they can then go back to the tourist board or whoever with that. So, we work quite closely with them. The same is with app squads, if they've launched new apps or any new updates, we tend to have quite close working relationships with them. Everyone almost works with everyone (social media manager 5, interviewed 2nd February 2017)

In addition, there exist several mechanisms to facilitate this approach of collaborative work which occurs both offline and online. The former is in the form of daily stand-up meetings among the squad members and weekly functional meetings among the functional roles (called ‘chapters’). In stand-up meetings, the squad members discuss their ongoing projects, the existing issues in their day to day activities and ideas on how to overcome those issues, while in the weekly chapter meetings, the functional roles share ideas about new technologies, experiments and learnings more focused on their core area of expertise. Social media manager 1 explains such weekly chapter meetings:

All social media managers from all the countries get together in a weekly meeting every week. We can share all the experiments we have done and also the news from this channel or this platform or this new technology that maybe is useful etc. So, we can keep ourselves updated with everything that is happening (social media manager 1, interviewed 18th July 2016)

The latter is through utilising the workflow management technologies such as Jira and Trello for project management, and also collaborative technologies such as Slack for collaboration and knowledge sharing and other communication technologies such as Skype for Business that will be described in section 4.4.3.

4.4.2.2 Experimenting and Learning

To manage the constant change in the platforms and diverse needs of external users, continuous experimenting is essential. According to the new principles, all decisions should be data-driven and associated actions should be supported with sufficient data to be implemented in large scale in order to reduce costs and achieve results more efficiently (this will be discussed in more detail in Chapter 5). In this regard, one of the members of Growth Factory team explains that:

TSE does not run any marketing campaign in its traditional form of spending large budgets on global integrated campaigns particularly for the purpose of brand awareness. Rather, in this transformation to be growth-oriented, ideas are tested frequently and the decisions for scaling them up are made based on a lot of analysis in the tests (TSE's documents)

Therefore, as a company that operates based on lean and agile principles, TSE's goal is to accelerate the pace of experimentations and thus, they facilitate this by streamlining the processes and providing tools for running experiments. According to one of the members of experimentation services team:

Short-cycle experimentations are encouraged at TSE and the squads conduct their experimentations by creating minimum viable products (MVP) to provide quick learnings. In this approach, the agile implementation is ensured because MVPs require limited resources and provide valuable insights (TSE's documents)

To gain such insights, data analysis is an important part of experimentation, and sometimes even before the start of a new experiment. For instance, to generate an idea for

experimentation, the marketing manager in Australia and New Zealand squad decided to identify their growth factors in those two markets (based on TSE's documents). This involved a lot of data analysis across different platforms compared to UK data as TSE's most established market, which led to constructing a map of strengths in growth and areas that required more attention. Therefore, the squad was also able to create ideas for experimentations and also set the benchmarks and measurement criteria.

One of the areas in which this becomes important is the process of adopting a new social media platform. Because of the nature of social media technologies and their characteristics of having multiple types of users who actuate their diverse functions in different ways, the adoption of a new platform is accompanied by uncertainty and risk. Therefore, the social media managers follow a process of experimentation based on these principles to collect data and analyse the results and subsequently decide to invest on it or not. In this regard, social media manager 1 explains the process in adoption of a new social media platform such as Snapchat:

Everything [TSE] follows in processes is what we call the lean methodology...In everything we do, we start just providing a hypothesis...and we create what we call a minimum viable product [MVP], it is basically just the least we can do to validate this idea. For example, if we want to do this with Snapchat for example, we create just an account and we try to create some content for it and see how it goes in the cheapest possible way and the fastest possible way, so we can validate the idea...that's the process, we never just dive into a huge channel before testing it (social media manager 1, interviewed 23rd November 2016)

According to this new approach, all of the activities are tested before implementation in order to achieve the goals or to fail and create learning with minimum resource waste. In fact, the social media managers have the flexibility of assigning a percentage of their time to learn about new platforms and run tests and experiments, because the learning outcome is vital even if the process is considered as a failure. Social media manager 1 continues:

Social media is quite complex because usually you need a long time to give a value but at least you can get the first conclusions, you can get the first learning and you could say, ok, maybe it is not big enough yet, but it has the potential because of these, and it's gonna be valuable for us and for our users...and maybe you fail and it's actually something very important in [TSE] that failing is ok...For example, in

WhatsApp, maybe it is a couple of months trying to create some newsletters and you don't find something interesting, you just stop (social media manager 1, interviewed 23rd November 2016)

This portrays the high level of uncertainty in the process of defining the experimentation and its implementation for a meaningful period of time through the example of WhatsApp. Notwithstanding the indispensability of this process in the adoption of new platforms, the challenge is not limited to this stage. It also applies to the content that is produced and shared on the platforms and the ways external users interact with those contents significantly affect the practice.

4.4.2.3 Flexible Controlling

The transformation that TSE has gone through attempted to enable this large organisation (about 1000 employees in 10 offices) to work in an agile and lean approach (similar to a small start-up). The new structure of tribes and squads (explained above) is a cross-functional structure that has brought forth higher levels of flexibility and empowerment as the teams work as individual start-ups. One of the growth directors explains how this influences the ways that teams work at TSE:

In this structure, the teams have gained the ownership of their work that considerably reduces bureaucracy in the organisation. The squads are autonomous teams that work towards their tribe's mission and there are clear and defined criteria to measure their success. They also have clear mission that is set within the squad itself. The purpose of such mission is to keep them concentrated on the overall tribe mission, however, they have flexibility to adapt with any changes within the organisation (TSE's documents)

As she explains, this approach and way of working enables them to continuously re-evaluate the goals and strategies and adapt to any changes in the platforms or the ways that the external users are behaving (interacting with each other, the company or different ways of actuating platforms' functions). Social media manager 8 adds to this:

They [squad members] sit together and they are almost like a little start-up themselves, obviously within a larger organisation but they are very free to adapt what they do, in that squad, they are working together. We like to think about squads as little kind of stat-ups, because it allows us to move more quickly and ultimately understand what

travellers need in that market and then move faster (social media manager 8, interviewed 9th September 2016)

The new working system at TSE gives the teams (squads) the freedom to decide on their goals and strategies without enforcing a single centralised strategy. As TSE experienced before such transformation, the diversity of choices in different markets particularly regarding digital platforms are infinite and the risk of failure in an integrated and holistic approach proved to be high. Social media manager 2 also adds to this by pointing out that “there is a centralised strategy but regionally we are very free as well to kind of tailor how we use those, so we [within the squad] are very free to adapt what we do” (interviewed 25th July 2016).

Therefore, the new working method offers a kind of balance between planning and flexibility so that failures can happen as quickly as possible and learning can be achieved for better results. Social media manager 8 also states:

We try to have some kind of planning but also flexibility, so we can move things. So, we set best practice centrally and some strategy to an extent, but it has to be something that works in the market and therefore, country squads are free to develop their own strategies based on what works (Social media manager 8, interviewed 9th September 2016)

In addition, in streamlining the processes and accelerating the decision-making cycles, one of the growth directors (based on TSE’s documents) highlights the changes in the reporting methods as well. He explains that ‘our structure is very flat, it’s not hierarchical structure, obviously we do have management structures in place, but it’s more about all understanding the data, all using the same dashboards, the same metrics and being able to kind of move more quickly’.

With this cross-functional structure, the teams are not obliged to send regular reports to the senior managers. For example, the country squads are analysing the data from their activities, projects and campaigns on a daily basis, but they are not required to spend their time preparing regular reports. Because as a rule, everyone from the squad level to senior regional managers are responsible for the data and understanding it and they have access to the dashboards in different analytics platforms (that is discussed below).

4.4.3 Adoption of New Technologies: Building Facilities

TSE has adopted a range of technologies that are configured to form the facilities that support the work practices in managing configurations of digital platforms and variety of their users. Such facilities include a variety of the specialised technologies for paid and non-paid digital work practices and also collaborative technologies to facilitate and support performing the activities.

4.4.3.1 Collaborative Technologies

As I explained in the previous sections, TSE went through a major change in its structure and working methods towards a more flexible structure that operates based on collaborations among individuals of different expertise and teams. To assist in realising this approach of working, TSE adopted a number of collaborative technologies that are used across the organisation and are intertwined with the organisation's work practices. One group of such technologies are workflow management technologies such as Trello and Jira, which are used mainly for the purpose of collaborative brainstorming and management of workflows and projects. Social media manager 8 explains how differently they use these two platforms:

Trello is more like a kind of online collaborative board for us. We use it for ideas and brainstorming. But Jira is more the workflow, we might use Trello to kind of brainstorm on ideas to promote our new app or planning content for a partnership etc. Jira would be where we manage the workflow, we create the tasks, we add reports and literally move stuff through from planning to the end (social media manager 8, interviewed 9th September 2016)

The way both Trello and Jira are used are complementary as they use Trello for idea generation and discussions on that, but Jira is used when an idea becomes live and they start a project based on that. Besides, as digital media manager 1 explains in the following quote, Trello is used in the retrospective meetings¹¹ at the end of each sprint:

We use it for retro meetings. We do a two-week sprint in Jira and move the cards along and we track our progress and at the end of that sprint, we close the sprint and we have retro meeting and when we are doing that, we use Trello to see what was really good,

¹¹ A meeting that is held at the end of an agile iteration (sprint) to discuss about the sprint and create a plan for improvements in the next sprints (based on Scrum.org last accessed 20/02/2018)

what was bad and what can be changed. So, the squad would get together just to put cards and then get to vote on the cards and the one with three votes or more, so we take those specific ones and discuss about them (digital media manager 1, interviewed 20th October 2016)

Thus, Trello is used for pre-planning and also post-sprint reflections to discuss about problems that team members had in previous sprints and ensure a continuous improvement. In that way, Jira also performs as a project management platform as social media manager 8 continues:

I monitor a lot of what my team are doing on Jira tickets, you can easily follow tickets and get updates, so it's very automated from that perspective. I don't have to go and find stuff, I just get notified. So, I can see when the work is progressing, I can monitor and advise on things, but the teams are kind of self-sufficient and they have to own their own projects and move stuff through (social media manager 8, interviewed 9th September 2016)

As indicated, Jira offers the possibility of monitoring the projects by senior managers by tracking tickets and following them on Jira. Jira is also used to manage the work of freelancers who also work for country squads particularly for content creation for the website and social media. Content manager 1 shares her experience:

We have all the freelancers on Jira. I create as many cards as the number of articles that we are gonna be publishing the next month. I assign each card to a Freelancer with the deadlines. They receive an email, and as long as they are working on them, they move the cards along the timeline, so I know what stage they are. They also use Jira to share the articles with me, and that's where we keep track of our whole conversation. It's quite useful in managing this process compared to sending them lots of emails (content manager 1, interviewed 20th October 2016)

In addition to monitoring and managing projects, Jira fosters visibility and transparency as it allows the projects to be available and visible to everyone in the organisation. This provides everyone the opportunity to learn about other experts and teams' work, as social media manager 5 explains. She states that "we use Jira, so if you want to know about something you just search for it and it's normally a ticket there and you can see what's going on and we are encouraged to search about different projects within the company to know what's going on" (social media manager 5, interviewed 2nd February 2017).

The other group of collaborative technologies are communication and knowledge sharing platforms such as Slack, Sharepoint, and Skype for Business. For example, Slack, an enterprise social media platform for internal communications, plays a significant role in knowledge sharing particularly among functional roles (chapters). As the social media managers have explained, they have assigned two Slack channels for the social media chapter, so that they can share the activities that have performed well in one market to be adapted by other markets and also the trends and new technologies to develop their learning. For example, some of the social media managers referred to the case of social media manager in Netherlands squad in sharing about an article in the Slack channel that went viral in that market, that they could customise and use it for their markets.

Using Slack appears to be key in learning new developments in different areas and learning about other experts or teams' projects and experimentations. Content manager 1 explains her experience of using Slack:

I use Slack in the same way I use Skype, if I want to talk to someone, I use Slack. I'm part of several slack groups for content managers where we share ideas and what we've been working on or our experiments. I'm in SEO channels on Slack and social where basically people share what they have been working on or some ideas they may want to test (content manager 1, interviewed 20th October 2016)

In addition to learning and knowledge sharing, Slack is key in communicating customer (digital users) inquiries or complaints to the user satisfaction team (the TSE's customer support team) as it helps in instant resolutions of customers' problems, which is a top priority at TSE. Social media manager 5 describes her experience of using Slack:

I use Slack a lot. If you can't find someone, we've got one channel specifically for asking questions, and they put you in the right direction. For any kind of user enquiries which they need customer service support, we've got user satisfaction team, and I'm really close with. So, it's usually really really fast. In terms of any sort of PR disasters, we have PR guy that we just speak to them straight away through Slack or any other kind of communication (social media manager 5, interviewed 2nd February 2017)

However, not all of TSE's experts use these technologies in the same way. As some of them use Slack more often for the communication and knowledge sharing purposes, others might use Jira for that purpose. For example, social media advertising manager 1:

We use Slack and also Jira. Jira helps a great deal in the terms of project management and following the tasks, and everything works around what's happening around the campaign or any type of activity. So, we would mostly communicate on Jira, and random questions would happen more on Slack (social media advertising manager 1, interviewed 27th October 2016)

Moreover, SharePoint is also used for knowledge sharing among teams. But to facilitate the communication of teams across different offices, Skype for Business is used for meetings and video calls.

4.4.3.2 Social Media Management, Advertising Platforms, and Data Analytics Technologies

Sprinklr, Tableau and Google Analytics are the platforms used primarily by the social media managers to plan, run and analyse the activities on the social media platforms. Social media manager 3 explains using various functionalities that platforms such as Facebook offer in addition to the third-party social media management technologies:

You have data from the platforms, Facebook has an analytics tool, Twitter has an analytics tool, Instagram doesn't anymore, and Pinterest does that as well...you have all the traffic data that we get, so we use Google Analytics. We use Tableau that helps us measure the traffic. And the reporting tool we have for social media platforms is Sprinklr, that's what we use as well for scheduling the content, it's quite big and comprehensive (social media manager 3, interviewed 27th July 2016)

Although social media platforms have the capability for providing data analytics and insights, due to their limitations, they do not provide a comprehensive solution for the purpose of social media analytics work for both native (non-paid) and advertising (paid) work practices. Therefore, the specialised third-party technologies have been adopted to assist in conducting these activities. Social media manager 4 in Russia and Poland squad also noted the limitations of the social media platforms as the reason for the adoption of more comprehensive technologies such as Sprinklr:

We use native Facebook opportunities, such as Facebook Insights manager and we have other platforms. Because the interface of Facebook is not sometimes very user friendly, so we have some tools that help us to navigate through users' needs more quickly. For example, Sprinklr allows you to basically schedule content...also,

reporting insights, so we have a lot of dashboards [in Sprinklr] where we can see a lot of different metrics (social media manager 4, interviewed 11th August 2016)

This observation is related to not only the interconnectedness of these technologies that can be accessed and adapted by other digital artefacts, but also the necessity of measuring all the activities of social media work practices in a comprehensive and integrated manner. Moreover, there are a range of technologies adopted for the paid social media work practices in addition to Facebook ads platform including Smartly, AppsFlyer, and Tableau. The use of these technologies is illustrated in the following comment by the social media advertising manager 1:

On Facebook, I would use native ads platform to cross-reference things, also, Facebook has preferred marketing developers...we use is Smartly, and I use Google Analytics. I would use AppsFlyer for app monitoring...I also would use Tableau a lot that aggregates data from different sources like from Smartly, Facebook, Google Analytics, AppsFlyer, all that...Also, when it comes to other social platforms like Pinterest and Twitter, they are not so developed yet...so you would need to learn and use their own advertising platforms (social media advertising manager 1, interviewed 27th October 2016)

As noted above, there is heterogeneity in the activities of social media advertising work practices based on the development stage of each social media platform, which creates challenges for the social media advertising managers and the organisation. Facebook's open Application Programming Interface (API) allows developers to create new platforms for data manipulations and analysis while other platforms such as Twitter and Pinterest do not afford such actions¹².

The underlying reason for using various analytics platforms at TSE is to enable the organisational experts and the teams to integrate various data sources from different platforms and different projects and campaigns, both native and advertising. Social media advertising manager 1 also adds:

In Tableau, I'm able to build easy to use reports and dashboards that show filtered performance for one specific campaign for example or every ad that is happening around the campaign in one place, and I'm able to share that with the squad. So,

¹² At the time of the interviews

Tableau is a data visualisation tool that merges data from different sources, for example, we can combine data from Facebook with data from Google Analytics or we can combine data from Facebook with data from our mobile measurement partner, AppsFlyer (social media advertising manager 1, interviewed 27th October 2016)

This data integration is vital in accurately measuring the effectiveness of any experiment, project, or campaign. For example, several interviewees including social media managers and social media advertising managers pointed out that a lot of then-existing projects and campaigns that they were running were geared towards TSE's app installs. Using a variety of different analytics platforms enables them to collect the data from different platforms (e.g. Facebook native and Facebook ads, Twitter ads, etc.) and integrate them into one platform for comparing the number of installs that are logged into one data partner and another one. Social media advertising manager 3 notes the difference between Facebook's analytics platform and what Smartly enables them to see:

In Smartly, we are able to see directly the data from Facebook merged with data from Google Analytics. So, this is very important, for example, when you want to see the number of sessions, Facebook would never show you that. But because of the capabilities of Smartly, we are able to see what happens after the click, the same stands for AppsFlyer, so they also provide this sort of integration (social media advertising manager 3, interviewed 18th January 2017)

In addition to these technologies, the marketing automation squad works to create dashboards and templates for the organisational experts in their analytics and measurement practices. One of the squad's data analysts states:

We work to automate most of the paid growth squads work. We tend not to work directly with country squads, however we do work on projects that affect all of the country squads. For example, we did a piece of work on getting analytics for content, this was done with the content platform squad but the biggest userbase of this data are the country squads. Technology wise, we work with Python, platforms' API's, and SQL (data analyst, interviewed 3rd April 2017)

4.4.4 Mutability of the new work practices

In the previous section, I explained how the use of new digital platforms such as social media technologies has led to the emergence of new work practices at TSE. This involves the ways that the organisation has been developing new knowledge and assumptions,

norms and facilities in the managing of these platforms. Figure 4-4 below shows these assumptions, norms and facilities that are being configured and reconfigured in shaping the digital work practices.

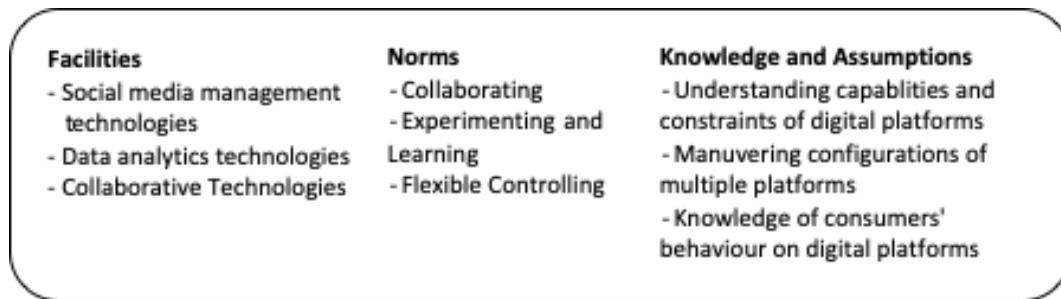


Figure 4-4 The Underlying Dimensions that Drive Digital Work Practices

However, the ongoing use of digital technologies and the recurrent enactment of these work practices are neither fixed nor stabilised. These work practices are constantly changing in response to transformations in the technology or external users' behaviours and practices (they are mutable). For example, social media manager 4 highlights how dynamics the digital environment, particularly because of the social media platforms, is:

Social media is a very very fast changing environment, it is always evolving, always changing, new channels appear, or other channels disappear, like Telegram appeared recently and it's gaining popularity...So, we are looking into launching our presence on Telegram (social media manager 4, interviewed 11th August 2016)

In addition, social media manager 8 notes day-to-day changes in social media work practices, not just because of platforms' characteristics but also how external users approach them as well:

Things change all the time, that could be a change in Facebook algorithm or other factors...But social media activity is changing every day and there is a new app that comes out and you might want to try it or not, but still it's good to be aware of what's there...And certainly, in this company, an understanding of different cultures and the needs of users in each market, because they are very very different (social media manager 8, interviewed 9th September 2016)

As he explains, not only the activities change as a result of changes in the technology or external factors, but the necessity of understanding the varying consumers' digital uses in different platforms and markets contradicts the uniform system of actions to guide the

activities that constitute the work practices of social media managers and other organisational experts. As I described in above sections, they need to understand the external users' language and culture and their behaviours, interests and needs on different platforms.

According to social media manager 4, one of their important responsibilities is "listening to the users to understand what they want and then creating content based on their interests and their needs". Therefore, social media managers are constantly innovating and improvising particularly when responding to individual external users (community management work practice). As the social media manager 3 notes, "we have to be quite vigilant because mostly there are positive comments but sometimes, they are negative comments...So, you just have to sort of have a close eye on what people are saying because you don't wanna go viral for the wrong reason" (interviewed 27th July 2016).

This innovation and improvisation are of great importance, because the improvisation of social media managers in such cases can turn the situation to a substantially important opportunity that can go viral (e.g. the case of social media manager 5 (the UK and Ireland) in responding to a user's complaint) or provide an interesting source of content. According to social media manager 8:

Even if you are complaining about a very bad experience with a booking further down with an airline, if you come to us and we help you, then it's a great opportunity for our brand to kind of turn the opinion around and get you back on site and make you believe that we want to help you (social media manager 8, interviewed 9th September 2016)

In addition to the behaviour of external users, the dynamics of social media technologies play a crucial role in social media managers' work practices. In the non-paid social media work practices, the social media managers have referred to the challenges of continuous changes in the technology (social media platforms) and how these affect their work. These changes include the emergence of new platforms and changes in the features and functions of existing platforms. Social media manager 5 describes these changes as their main challenge:

The biggest challenge I think is keeping up with platforms trends and being relevant, because with the platforms changing all the time and algorithms, if you are not going to grow and develop and turn into new things, it means that you become irrelevant to the users and quite stagnant in what you do (social media manager 5, interviewed 2nd February 2017)

Also, the social media managers noted platforms' changing algorithms and how the dynamic nature of the algorithms influences the outcome of their work practices and the necessity for constant re-evaluating and re-thinking of the associated activities. Social media manager 3 explains her concern about Instagram's changing algorithm and how she established different approaches for overcoming the implications of its changing algorithm:

We have so much pressure from every platform [to] pay to get reached. Instagram is becoming more difficult to make it grow. So, we devised a few strategies: we re-post the content when people tag us. The second way is to do a 'themed week'. So, if you have an article as an example which is 10 best destinations...we will do it in 10 posts... tagging a few influencers...the third activity is take-overs [by influencers] that we have a lot (social media manager 3, interviewed 27th July 2016)

Another factor that affects social media managers' work practices is when the social media platforms release a new function or feature and they give more weight to it in their algorithm. This can significantly influence the nature of social media managers' work practices and the outcome of such work practices. This is highlighted in social media manager 4's account about the Facebook algorithm and how the number of their Facebook's posts can affect the measurement of their activities:

I did a research to compare what happens if on Facebook instead of sharing three or four times, we start to post twice every day. The result was that we had exactly the same rates. But we are still posting three or four times because we'd rather to have more chances to shape our average engagement rate because it impacts the reach and the quality of what we provide the Facebook algorithm, so the more you post, the more it gets closer to your average (social media manager 4, interviewed 11th August 2016)

By referring to the then-recent major change in Facebook's newsfeed algorithm¹³, he explains that they have shifted their focus from measuring 'reach' and 'engagement rate'

¹³ <https://newsroom.fb.com/news/2016/06/building-a-better-news-feed-for-you/>

to measuring their 'sharing rate'. By measuring 'sharing rate', the social media manager is able to analyse the level of 'reach' more accurately because based on the Facebook algorithm, the friends and family of a user are more likely to see that piece of content if it has been shared by that user. Therefore, in responding to such changes, particularly platforms' algorithms, the social media managers are constantly analysing the outcomes of their practices to devise strategies or solutions to be able to adapt to those changes.

In addition to the algorithms that play a large role in constant changing of work practices at TSE, the launch of new functions also plays a role in how they modify what they do. Social media manager 4 explains how they can utilise a new function on Instagram to share content or information about different dimensions of the company:

We started experimenting with new Instagram feature, Instagram stories, which is like Snapchat feature, and we hope that this feature would allow us to be more authentic and more friendly [sic], because it would disappear and also it occurred to me that we can use this feature to promote our deals page (social media manger 4, interviewed 11th August 2016)

Moreover, in the paid social media work practices, the social advertising manager 1 explained about the recent changes in their squad that led to merging of two squads (social media advertising and paid digital media) to one as a result of re-evaluating the effectiveness of advertising activities on social media platforms:

We're doing a lot of activities around the brand awareness but around June-July [2016], the company discovered that actually these types of activities do not give us a direct return because of how social works is not that it's not beneficial, but it is also difficult to measure. Because different partners own their data which are not necessarily comparable with other data sources, and my role previously was to really focus on those activities...whereas right now we kind of scaled it back a little bit (social advertising manager 1, interviewed 5th December 2016)

This has also been highlighted by digital media manager 2 in the central growth tribe. She explained that TSE is evaluating the investments on paid social media activities and alternative ways of achieving the same results without spending on social media advertising because of difficulty in accurately measuring the return on advertising activities.

There is a real push in our squad [unpaid media] to find new ways of moving the company forward through unpaid media, so instead of spending on advertising through social, are there other ways that we can look at where we can still get that traffic without actually paying for it? And we are kind of exploring it just now (digital media manager 2, interviewed 25th January 2017)

As particular types of digital artefacts, social media technologies and their unique characteristics bring forth constant changes in the associated work practices in the organisations. These recurrent changes in technology and the way that consumers use the platforms counter the regularisation and routinisation of these work practice as the organisational actors are continuously innovating and reflecting on their actions to adapt to the new conditions. Therefore, work practices live in a state of instability that renders them mutable.

4.5 Discussion

The purpose of this chapter was to understand the underlying dynamics of managing new forms of digital technologies and individual user practices by explaining how new work practices emerge in the organisation and what characteristics those work practices have. Based on the empirical data from the in-depth qualitative case study, I have shown that new work practices emerge in the organisation as the organisational actors create new knowledge and assumptions, the organisation establishes new working arrangements and norms, and it builds new facilities. This has addressed the recent call by Aral et al. (2013) for in-depth investigation of ‘social media management’ practice by firms and also builds on the more recent studies on the importance of corporate investments in social media management practices such as adoption of social media management technologies (Benthaus, Risius and Beck, 2016; Risius and Beck, 2015).

It has been argued that these new digital technologies are different from the previous forms of information technologies, particularly since they have brought digitalisation beyond the context of organisations to people’s everyday experiences (Yoo, 2010).

I have sought to throw light on these changes through deploying the notion of ‘social actor’ (Lamb and Kling, 2003) and what Yoo (2010) has described as ‘experiential computing’. To date, discussions of the technology users as social actors have not been

extended to the context of digital platforms or to situations where information systems are marked by the characteristics identified above (experiential computing). This chapter has developed on the idea of social actor by considering recent scholarship on the digitalisation of individuals.

In this regard, as noted by Yoo (2010), experiential computing requires a redirection of researchers' attention from the use of technology in information processing and performing tasks *within* organisations to individuals' daily activities that have been digitalised and now extend outwith organisations and across various spheres (that includes their working and private life). To unpack this, Yoo writes how "[t]he computing experiences are created, stored, actuated, and experienced through conventional computing tools as well as through actors, everyday artifacts, and places" (2010, p.220) and such experiences are not seen as something external but they are *lived* by individuals.

The digitalisation of individuals has already occurred through the propagation of social networking sites, through which the individuals' relationships have been digitalised in the forms of networks observable through Facebook for example. Such transformations have consequences for the notion of 'the user'. They suggest that the scope of digital artefacts extends well beyond the organisational domain. Therefore, Yoo (2010) suggested that the nature and consequences of digitalisation of day-to-day experiences and how they might influence the IT-enabled work practices within organisation requires researchers' attention. The malleable nature of digital platforms allows infinite possibilities for individual users (Yoo, 2010; Yoo et al., 2012) to participate in creating real-time changes to the platforms (e.g. user-generated content) (Susarla, Oh and Tan, 2012; Levina and Arriaga, 2014). Since these users are in large networks that organisations are also part of (Aral, Dellarocas and Godes, 2013), this digitalisation beyond the organisational realm engenders implications for organisations.

Thus, as shown through the empirical descriptions above, the organisational use of digital technologies such as social media platforms creates new work practices in the organisation. This chapter provides evidence about the significant role of individual users in organisations' work practices as the organisational experts should monitor and

understand the myriads of ways that these users approach such platforms as the digitalisation of individuals' activities and relationships has individuated the users (Yoo, 2010; Bygstad, 2015). This shows that, contrary to the IS discussion of users as social actors (Lamb and Kling, 2003), the notion of user has been extended beyond the boundary of organisations. Thus, there is a shift in ideation of users as social actors in previous regime of information technologies to individuated or extended users because of experiential computing. In this regard, I employ the term '*extended users*' to refer to individuals who use these platforms and their use brings forth implications for organisations through platforms and their algorithms.

The chapter also shows that the work practices in the organisation are mutable because of the malleable and dynamic nature of digital platforms (algorithmic basis and continuous changes in the composition of the platforms) (Faraj, Pachidi and Sayegh, 2018; Kallinikos, Aaltonen and Marton, 2013) and the extended user practices. Such work practices live in a state of fluidity, as persistent platform dynamics and the extended user practices bring forth the ongoing reconfigurations of the assumptions and norms of the organisation.

This is also in contrast with the previous forms of IT that hold some level of configurability. With respect to those forms of IT such as enterprise systems, it was suggested that they are not fixed but malleable with updates presented by vendors or organisational users (Pollock, Williams and Procter, 2003; Gosain, 2004). For example, Orlikowski (2000) argues that people might change the way they use a technology by modifying some of its features. She gives the example of how "they may override the parameters of a new scheduling system to replicate the operation of a previous system" (2000, p.411). Despite such updates and changes, the ways organisational users approach those forms of IT become structured and institutionalised (Orlikowski, 2000; Vaast and Walsham, 2005). However, the use and management of digital platforms extends well beyond the organisational boundary and is (re)configured through sociomaterial practices of extended users of these platforms (as depicted in Figure 4-5).

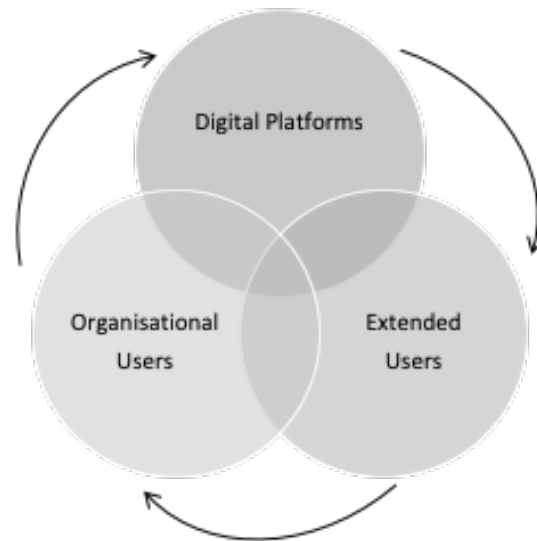


Figure 4-5 Dynamic (re)configuring of Digital Work Practices

4.5.1 Knowledge and Assumptions in Managing Digital Technologies and Extended Users

According to practice-based tradition in studying technology and organisation (Vaast and Walsham, 2005; Orlikowski, 2002a), knowledge and assumptions are related to how the actors interpret the technologies and use them. With regard to previous generations of IT, the changes in the technology use occurred in discrete fashion as the changes in the technologies were only temporary (Orlikowski, 2000) and such these changes became re-structured and re-institutionalised. However, the unstable state of traditional IT is fundamentally different from the dynamic state of digital technologies. As in the latter, the organisations are only part of large networks, within which extended users are creating changes into the content of the platforms and the platform themselves are also constantly changing (e.g. introducing new functions or their algorithms generating different patterns) (Kallinikos, Aaltonen and Marton, 2013). Such changes are ‘generative’ (Zittrain, 2008) and not always based on the designers’ intentions as these platforms are run by learning algorithms produce different results as their input data changes (Faraj, Pachidi and Sayegh, 2018). Therefore, knowledge and understanding of such dynamic changes is essential for the organisation because the organisation uses and manages configurations of different platforms. The organisational actors need to understand, and gain knowledge

of how different platforms work together and what (re)configurations of platforms they use. In addition, as digital technologies are interactive and extended users actualise different functions of the technology, the organisation must understand the extended user's various ways of actualisations.

4.5.2 Norms of Practice in Managing Digital Technologies

The changes in the role of extended users in organisational use of digital platforms and these platforms' particular characteristics that described above also requires particular ways of working to enable the organisation to manage mutable work practices. Similar to discussions of digital innovation (Nambisan et al., 2017; Huang et al., 2017) or lean startups (Ries, 2011a), the work of managing digital platforms is grounded on rapid experimentation cycles (I will return to discuss this in Chapter 5). This means that the organisational experts are rapidly testing new ideas that change what they are doing (e.g. stopping the use of Google Plus, adopting Snapchat in the UK, posting different types of content on Facebook, using Instagram live and stories in influencer works, or using Twitter to share country/region news updates, etc.).

Such work practices, grounded on experimentations and trial and error, require involvement and collaboration of different groups of experts. For example, to generate content for social media (e.g. Facebook), social media managers and content managers work together, social media advertising managers also work with them to produce and run ads on that platform, influencer marketing manager assist and oversee their projects with the platforms' influencers and they all also collaborate with digital media managers in optimising search engine ads or newsletters. As these work practices require collaborations of different groups of experts, the organisation offers them more autonomy to make quick decisions to facilitate this multi-sided collaboration. This shows that dealing with digital platforms extends beyond the immediate work practices to other levels of the organisation in terms of structuring and organising mechanisms.

4.5.3 Building Facilities

The multiplicity of digital platforms that the organisation uses and various ways that the extended users are accessing such platforms, their algorithms and how their characteristics

are changing, make the practice of managing them highly complex. Therefore, the organisation adopts or develops (e.g. in the case of influencer relationship management) other new technologies to facilitate the associated work practices. One group of such technologies are social media management suites that enable the organisational experts to access and manage different social media platforms in one place in an integrated way. The other group of technologies are platforms for data analytics that are either part of social media management suites, or other platforms for advertising practices such as Smartly. In addition, the collaborative work of organisational experts requires instant communications and knowledge sharing among squad (team) and chapter (functional) members and thus, the use of such collaborative platforms reinforces the collaborative norms of their work.

As shown in this chapter, organisations develop new work practices to manage new forms of digital technologies and individual user practices. These work practices as shown are mutable as the organisation reconfigures its assumptions and knowledge and also norms of working. This is to respond to the malleable and generative nature of digital platforms and the extended user practices. This chapter pointed to a number of new roles/experts in the organisation conducting these work practices. But we still do not know who these experts are, how they develop their expertise, and how the organisation supports this development. These are some of the questions that shape the focus of next chapter.

5 Chapter Five: The Rise of New Expertise Around Digital Technologies: The ‘Doing’ of Expert Knowledge and the Role of the Organisation

5.1 Introduction

The ever-increasing developments of digital technologies have accelerated organisations’ transformations. One burgeoning area of research is on the rise of organisational roles responsible for the governance of the digital technologies and implementation of digital initiatives. Such studies suggest that organisations are creating a new category of actor, the chief digital officer (CDO) (Singh and Hess, 2017; Tumbas, Berente and Brocke, 2017) to provide overall strategy and oversight for the organisations in managing social media and other digital technologies (Berkman, 2013). This has created a tension with/in the established role of chief information officers (CIOs) who have been traditionally leading the organisation’s IT function (Chun and Mooney, 2009). However, with the onset of the digital organisation, the nascent research on the role of CDOs argues that as organisations transition to become digital, they require new skills and competencies (Singh and Hess, 2017).

In a recent study, Tumbas, Berente and Brocke (2018) explored this tension between the CDO and CIO role to understand how the former establishes their domain of practice with digital technologies in competition *with* the established role of the latter regarding IT. They draw their attention to the rise of the CDO role from a jurisdictional perspective of professions and that CDOs construct a new logic of action and contrast it with that of CIO roles (Tumbas, Berente and Brocke, 2018). Moreover, in understanding how CDOs establish themselves, Tumbas et al. (2018, p.11) highlighted that CDOs inhabit “a space between IT and Marketing as their unique jurisdiction” and use different approaches in differentiating their activities and navigating jurisdictional tensions with CIOs.

Although studies of IT and organisation highlight the changing nature of IT and the CIO role to manage the IT demand-side (IT exploration for innovation and transformation)

(Chun and Mooney, 2009), the stream of research on organisational digital transformation suggests the need for new roles in managing customer-facing digital technologies (which involves the space between IT and marketing). Organisations historically experienced challenges in creating value from their IT investments and while IT capability had a positive impact on organisations' performance, it has been pointed out that it is no longer a source of competitive advantage (Chae, Koh and Prybutok, 2014). In this regard, several studies highlighted the implication of digital transformation initiatives for the organisations' IT function (Drnevich and Croson, 2013) and the increasing importance of changes in the organisation's IT function to manage exploitation and exploration in responding to efficiency and innovation (Gregory et al., 2015). Despite this, there is a growing emphasis that organisations' digital transformations transcends the functional level of IT and IT expertise (Singh and Hess, 2017; Tumbas, Berente and Brocke, 2018).

Regarding this, it has been suggested that to create capabilities and drive digital transformations, organisations need to recruit new experts in the area of digital and train the organisation's existing workforce (Horlacher and Hess, 2016). Moreover, recent research on the emergence of CDOs focuses on three primary domains: "digital innovation, data analytics and customer engagement" in constructing the organisation's digital capabilities (Tumbas, Berente and Brocke, 2017, p.122). As the nascent research on the emergence of new roles regarding digital transformations in the organisations shows, one major part of such digital efforts is about 'customer engagement and experience' and thus, that's one of the reasons that the existing discussions of digital business argue that digital business efforts should transcend the IT function and the functional structure in which business areas working in silos (Bharadwaj et al., 2013).

Therefore, there appears to be ambiguities, competition and tension between existing IT function, the CIO role, and the new emerging role of CDO. Existing work – based on the occupations and the professions literature (Abbott, 1988) – tells us that - studying this tension is an important area for investigation. However, whereas an occupational approach teaches us to look at these occupational struggles, a practice-based approach teaches us to look at what the work is. Despite Tumbas et al.'s (2018) insight on these occupational

struggles from a jurisdiction perspective, their research does not reveal much about the nature of this work - what these new forms of expertise are, what the job activities are, and what the content of the work is (Anteby, Chan and DiBenigno, 2016). Thus, the aim of this chapter is to shift the lens from that of a jurisdictional rivalry between occupational groups to one that studies the work of those experts involved in the implementations of digital initiatives. The hope therefore is to shed light on how the new expertise emerge in the organisation in working with digital technologies and how the organisation facilitates its emergence. To fulfill this aim, in the following section, I will explain the role of technology in changing occupations, which is followed by a discussion of the theoretical lens in studying occupations.

5.2 New Technology and the Emergence of New Occupations

It is suggested that new technology is one of the main triggers for occupational change or the emergence of a new form of expertise (Anteby, Chan and DiBenigno, 2016; Fayard, Stigliani and Bechky, 2017). Research on the use of digital technologies in organisations has highlighted how the adoption of new technologies change the existing work practices and occupations (Bailey and Leonardi, 2015; Leonardi and Bailey, 2008). Susskind and Susskind (2015) categorised the influence of technology on professional work into two classes of ‘automation’ and ‘innovation’. While the former relates to the routine part of the expert work to provide more efficiency, the latter is about innovative technologies transforming the professional work in offering possibilities of doing the expert work in different ways without replacing “existing people or working practices” (2015, p.113).

Although much research has focused on how information technologies lead to changes in existing occupations and work practices, there is a dearth of research on the rise of new occupational expertise in response to new forms of digital technologies. It has been suggested that with the proliferation of digital technologies, new jobs and categories of occupations emerge (Stark, 2011). The emergence of these new occupations occurs as the ‘digital workforce’ influence the organisation in ways that work is structured and performed. Digital workforce, comprising digital natives, who grow up with information technologies, and digital immigrants, who continuously adopt new technologies as they

emerge (Prensky, 2001), bring forth new competencies to the organisations (Colbert, Yee and George, 2016). For example, one such new occupation that has attracted attention is the ‘data scientist’ (Waller and Fawcett, 2013; Davenport and Patil, 2012). While Vaast and Safadi (2016) have touched on the formation of this new occupation of data scientist through the use of Twitter, for instance, there is still a lack of understanding in how this and similar categories of occupations have arisen.

5.3 New Experts and the ‘Doing Lens’

Specialist occupations seeking to establish their professional status achieve this through not only its promotion in public arena but also in the workplaces and the work that they do (Abbott, 1988). Abbott suggests that “the central phenomenon of professional life is thus the link between a profession and its work” and he suggests that to study professional development, we should “analyze how this link is created in work” (1988, p.20). Abbott (2005, p.565) defines occupations as social entities, which can be recognised as “categories of work” encompassing “areas of tasks in a division of labor”, “particular and enduring groups of people who have sustained membership by particular individuals” in these categories, and having particular “institutions—associations, unions, friendly societies, licensing boards, and so on” that advance and enact these categories. While jobs are defined as “bundles of tasks performed by employees under administrative job titles” (Cohen, 2013, p.432) and are related to particular workplaces, occupations also include membership in communities. Therefore, Anteby, Chan and DiBenigno (2016, p.188) define an occupation as “a category of work that is concretely instantiated as particular jobs in particular organizations under particular job titles”. Thus, an occupation has four elements: the category of work, the actors who are members of the community of practitioners, the actions that are performed through the members’ role, and its system of institutions.

Through their comprehensive review of the literature on occupations and their work, Anteby et al. (2016) pointed out the importance of what they call a ‘doing lens’ to study occupations. According to them, “[o]ccupations are defined not just by how entrants become occupational members, they are also defined by what they do” (Anteby, Chan and

DiBenigno, 2016, p.200). I think Anteby et al.'s (2016) lens of 'doing' is relevant to study the emergence of occupations since occupations are recognised by their work (e.g. what they do). They introduced three lens-filters to study the 'doing' of occupations: 'doing tasks', 'doing jurisdiction' and 'doing emergence'. 'Doing tasks' "focuses on how occupational members—often within a single occupation—perform tasks or practices and the individual or group implications of this performance". 'Doing jurisdictions' "considers multiple occupational groups, and documents how they enact practices to compete with each other for exclusive, legitimized control of particular sets of tasks". 'Doing emergence' "involves considering how collectivities mobilize to enable the emergence of new occupations" (Anteby, Chan and DiBenigno, 2016, p.201).

Since I aim to study the emergence and development of expertise among specific categories of occupations around digital technologies, I focus only on 'doing tasks' and 'doing emergence'. The former is about understanding the work content of occupations (Abbott's areas of task (2005)) and their consequences and the latter is related to "how practices and actions enable the emergence of occupational groups" (Anteby, Chan and DiBenigno, 2016, p.208). The importance of occupations' work content has also been highlighted in other occupational studies such as Preda's (2009) study of financial analysts or Pollock and Williams' (2015) study of IT industry analysts. Preda (2009, p.150) noted that "[a]n account of the constitutions of jurisdiction should start from the *content* of this expert knowledge and its generation". Therefore, with the aim of exploring the emergence of new experts in the organisation regarding customer-facing digital technologies, I focus on what these experts do and how the organisation facilitates their doings.

In the following sections, I explain how the new form of expertise is being formed by explicating the ideas from the case of the exemplary digital organisation (detailed in Chapter 3). First, I present the evidence about the role of experts' background and the organisational context of the new roles. Second, I go into the details of how the expertise is formed by narrating how the experts form and expand their knowledge, what they do and how they go about doing them. This would present a picture of how digital expertise

is formed by focusing on the experts' practice and not their competition with the existing roles.

5.4 Findings

In this section, I present evidence on the mechanisms underpinning the development of digital marketing expertise and how the organisation fosters that.

5.4.1 Contextual conditions

5.4.1.1 Individual

The experts I interviewed (Table 3-5 in Chapter 3) are from a heterogenous background in terms of formal higher education. Whilst about half of the interviewees have degrees in a relevant business, marketing or communication field, others studied in topics such as Fashion Design, History, Linguistics that do not have any relevance to the current practice of these experts. Social media manager 8 states that “I studied Economics which was at the time something that I studied in the school and was interested in and did well at school, I ended up doing something very different to that”.

This state of studying in an area and consequently starting a job in another area was the case for several of the experts I interviewed. Social media manager 5 explains how she has been “*fickle*” until landing in her first social media role:

I did an HND in fashion design and then went on to do my degree in fashion and textiles design management. I didn't really know where to go from there...I knew of Schuh and I knew that I really wanted to get into their head office. So, I got a full-time job as a sales adviser. I'm quite fickle with a few things...they tried to lead me into store management, but I thought that wasn't for me and then I also noted there was also a social media coordinator position came up which is like a brand-new role in the company...that was purely almost by chance (social media manager 5, interviewed 2nd February 2017)

As the quote above shows, for the new experts, there has not been a straight and clear path towards what they are doing neither in terms of formal education, nor working experience, as she suggests she landed in her first social media role by chance. This also happened in the case of TSE's global head of influencer marketing. Subsequent to her studies in the French language and Linguistics and a teaching role, she started her online shop, through

which she developed web-design skills and basics of online marketing. This helped her in starting her marketing career with a job in Accor Hotels:

I built my own e-commerce website and that's how I learnt about the whole what is behind the website and I got into how we do push the website to the public and that's how I got into doing more social media stuff, paid and unpaid ads, and I learnt quite a bit and then I started working in Accor Hotels doing marketing and e-commerce, managing the hotels websites, started to look into proper ROI trackings and so that's how I started to learn more about Google Analytics etc. (global head of influencer marketing, interviewed 15th February 2017)

A similar pattern can be recognised in the case of social media manager 2. Although she studied English, American and German Literature, she started working in the field of PR and communications prior joining TSE as a social media manager:

I've spent two years in PR, doing a trainingship, that was all in Germany, Berlin, and then I came here [the UK] and I worked in various positions that related to marketing, before I came to [TSE] which I have actually worked at in the very beginning of when I came to [the UK], I worked as a SEO copywriter and then my last job before going back to [TSE] as a social media manager, I worked in food and drink industry. However, that was sort of beginning of social media and I was actually, among other things, looking after the German market social media presence (social media manager 2, interviewed 25th July 2016)

Despite the lack of a formally relevant degree for the majority of the experts, personal motivation and interest seems to play a role in finding their way toward what they are considered expert in. Social media manager 8 explains:

I worked for a bank a bit and then I worked in public sector for government and the NHS and I was moving towards kind of communications projects, I was involved in researching a lot and producing guidelines and documents and training things for the staff, a lot of that was moving towards online which was an area definitely I wanted to get into...At that time, the public sector was moving a lot more slowly, obviously than private sector, so it wasn't hugely exciting for me. In terms of the social media channels we could use, it was very restricted (social media manager 8, interviewed 13th July 2016)

As the quote shows, his initial work was oriented towards online technologies, he could not realise the potential of the of technolog in the public sector and that's when he found the opportunity at TSE.

One of the things that has been highlighted in the interviews with these experts is that they started learning about what they were doing as they were doing it and as digital technologies were evolving. For example, social media advertising manager 1 explains that she developed her offline and online marketing skills by working in advertising agencies while completing her studies in History:

I started off with a small advertising agency and doing traditional form of marketing, not including any online marketing. From there I moved to an online advertising agency but over there we were focused mostly on Google AdWords and my work over there was primarily being an account manager but that involved a lot of understanding of SEO (social media advertising manager 1, interviewed 27th October 2016)

She believes her skills in search engine optimisation (SEO) and search engine marketing¹⁴ (SEM) that she developed through working in advertising agencies helped her in securing her first position at TSE. Social media manager 3 also started working in the area of online marketing once she was studying Marketing Management for wine industry. Unlike the majority of the experts that didn't have relevant education but developed the relevant skills through various working experiences, a few of them followed a more direct path toward their expertise. Social media manager 1 is such a case as he studied Audiovisual communications and Interactive media and had experience of working in various areas of online marketing:

I have been working with some internet agencies, both as a content marketing manager leading some projects for big brands like L'oreal or Microsoft for this agency or later for a company called Apendemas.com, it's a website all about education so you can search different courses and studies and it's a way to find them and then I was hired by [TSE] (social media manager 1, interviewed 18th July 2016)

For content managers, a background in journalism seems to play a part in development of their writing skills for the role of content management. As content manager 1 explains, she has a decade of experience working as a journalist, which complemented her Master's

¹⁴ Search engine marketing or paid search (advertising) is an approach used by marketers who pay search engine to show their advertisements for specific keywords (Rutz and Bucklin, 2011).

degree in corporate communications and understanding of various online marketing channels:

I am a journalist and have worked as a journalist for like more than 10 years, but I have also Master's degree in corporate communications and that includes some social media training and content creation and digital marketing and in the last five years, I've been specialised in social media management and content creation, and more like digital PR and influencers relationships and at [TSE], I'm a content manager for the Spanish market, and this means that I deal with all the content that is created for the Spanish news site at [TSE] and like handing out newsletters (content manager 1, interviewed 5th July 2016)

Similarly, content manager 2 has a wide experience of working as a journalist and she explains how this background is important in her role in content management:

I think content management and journalism are similar in a lot of ways. The way that the content is created from the technical perspective is quite similar. So, it was in a way a kind of natural progression [from journalism to content management]...the way to create the content is quite the same as what you would do in a journalistic point of view. The main difference I think is that, in content, you have a brand in mind, so rather than reporting news or reporting on the general media stories, you would focus more on what could your specific audience for that brand be interested in, so that's the main difference I think (content manager 2, interviewed 10th August 2016)

Notwithstanding the heterogeneity of these experts' formal education, there appears to be a homogeneity in their working background as all experts I interviewed had a background working in general marketing roles, particularly online and web marketing such as SEO and SEM. Among them, some had more direct experience to what they were doing at TES (at the time of interviews) such as writing and creative writing for content managers or social media skills for social media managers. Looking into the LinkedIn profiles of 54 other experts at TSE (not the interviewees) revealed the same kind of pattern in terms of education and working experience.

Except those mentioned, a group of such experts started their careers at TSE through TSE's internship and graduate programmes. This group usually had relevant education without prior working experience. For example, social media advertising manager 2 states that "prior to graduating, I actually got an internship at [TSE] while I was working on my

dissertation at the same time and that internship was predominantly focusing on search engine optimisation” (interviewed 10th January 2017). Therefore, formal education doesn’t seem to play a significant role in fostering their expertise, but the prior experience in some aspects of marketing has played a role.

Although the majority of the new experts at TSE had the knowledge of online marketing through their previous work experiences, as the technologies of social media was developing, their initial exposure was through personal use. This then helped them in building their understanding in the business use of social media. For example, social media manager 5 explains how her personal use of social media was a key factor in developing her community management skills, which was initially the primary part of her first job in social media:

[in my previous employment] a social media coordinator position came up which is like a brand-new role in the company and I was like that sounds good it's what I do when I go home. I used to be on MSN chat and I used be a member of Neopets, I used to do a lot of moderations and I was doing technically community management without knowing it. So, that was strange that my hobby turned into the job. So, that was almost by chance and a lot of luck (social media manager 5, interviewed 2nd February 2017)

As the quote above shows, her active involvement in then-internet forums (what she considered a hobby) was a key factor in what she needed to do in her first social media job as a social media coordinator at the firm Schuh and managed to grow Schule’s social media communities from 20000 to quarter million over the course of one year. Similar patterns were observed in the case of social media manager 1 as he was also one of the experts who had an exclusive social media role prior joining TSE. He specifies that his particular interest in the area of digital technologies drove his learning about them: “I am passionate about new technologies and my learning has developed through my jobs as you need to update yourself as the technology changes”.

5.4.1.2 Organisational

In addition to individual factors, there are conditions that the company provides for the experts to facilitate their learning and development. The company supports several

mechanisms that I discuss in different ways. First, internal communications are facilitated through several knowledge sharing platforms such as Slack, which they all use, and different teams have specific channels through which they share knowledge and information and try to update each other. In this regard, content manager 2 explains:

I think nearly all of us probably follow the news, follow the social influencers, follow blogs and experts in the area to sort of try and stay on top and then we'll try and share also, because for content it's really important what happens in social as well. So, I'm also in that Slack channel for example and see what people share and we all try as much as possible, it never gets boring! (content manager 2, interviewed 10th August 2016)

Sharing knowledge and information is highly valued at TSE. The functional teams (chapters) hold weekly meetings to share learnings or discuss new trends, but they also have specific Slack channels to communicate trends and brainstorm on any challenges in a very quick fashion. Social media manager 4 states:

we share a lot of information across our chapter, so we have weekly meetings in our team, where we share our findings, share our ideas. One of the most popular tools internally is called Slack. We have two channels for social media initiatives, in social we just share ideas. We also have social results channels where we just share best practices, so for example, Netherland team shared this article performed really really well, it has reach of 81000 people and we had almost 8000 clicks, so we could take a look and share it across our market and easily implement it in our channels (social media manager 4, interviewed 11th August 2016)

Second, TSE continuously reorganises itself and adopts new approaches to facilitate the ways that these new experts learn new knowledge. For example, TSE adopted lean and agile approaches in their marketing practice and based on these lean and agile principles, they create experimentations, test ideas, learn and share the knowledge.

According to lean start up model, nothing can substitute creating minimum viable products and releasing things early in front of real customers. There is a budget for experimentations and if teams want to test new platforms or functions, they can create various tests and analyse the results (the feedback loops) before making the final decision (senior marketing manager, TSE's documents)

As part of reorganising, TSE changed the organisation's structure from a functional structure to a team-based structure. It also continuously re-evaluates the efficiency of

teams and rearrange them accordingly. Content manager 2 explains how this change has been important although the functional teams (chapters) still work together:

we do try to work as much as possible together, because we were just team of content managers and we shared a lot but over time we noticed that there is really very much cultural differences, how people consume content and how they use social, we all created our own more specific market specific strategy (content manager 2, interviewed 10th August 2016)

As content manager 2 explains the shift to the team-based structure of tribes and squads organises the experts in autonomous teams that can make decisions and act on them much quicker than the previous hierarchical and functional structure. One of the business operations and strategy team members points out:

in the new structure, the tribes are mission based that set the main objectives. The tribes (one central and three regional) comprises squads that are cross functional teams. The squads work towards fulfilling the mission of the tribes...one of the roles of country squads is to customise the product for the market by developing localised features of the product (TSE's documents)

5.4.2 The organisation fosters expertise across different specialism areas

As a digital organisation, TSE has created compound roles with a core specialism and knowledge of broader areas to be capable of conducting digital marketing initiatives. These experts develop their specialism in different areas through these three dimensions: building on the core knowledge, extending the expertise boundary, and becoming more technical.

5.4.2.1 Building on the core knowledge

All digital marketing experts I interviewed have a central core specialism in the area of digital marketing, which includes social media, social media advertising, digital media, SEO, content management, or influencer marketing. For example, social media manager 5 explains that community management is a key part of the social media managers' job. She states that "I do spend a lot of time talking to people, so, the community management is big focus of my role...So, I'm kind of trying to wheedle my way into conversations when I can, and I do sign off with my name just to make that kind of human touch" (interviewed 2nd February 2017).

This resonates with what social media manager 3 considers the main focus of her job. She asserts that “within social media, there is community management, which is you replying to users, animating the community basically, this extends as well to forum. So, Facebook, Twitter, Instagram, our forum in France and Pinterest” (interviewed 27th July 2016).

In the case of content managers, the principal focus of the job is writing and editing pieces of textual content for publishing on TSE’s website and social media as content manager 1 points out:

As a content manager, the function of my role is to manage anything that gets published on the news site for Spanish market and that includes coming up with ideas for the content, doing the keyword research, taking charge of the brief that we send to freelancers. Once they've done the articles, I proofread them, and they upload the content on the system, and once I check that everything's fine, I hit the publish button (content manager 1, interviewed 5th July 2016)

In addition, in the case of digital media managers, the ability to conduct keyword research and work with web ads platforms constitutes the core of their practice, as explained by digital media manager 2:

in terms of paid search, it's actually the whole execution of paid search campaigns from the keyword research to analysing performance to working with bid management solutions to launching mobile campaigns to working with the agencies, managing the budgets (digital media manager 2, interviewed 26th January 2017)

Although these experts have a central specialism, they continuously change/update their specialist knowledge as ‘the technologies and their features and functions change every day’ (TSE’s document). In this regard, social media manager 1 explains how he builds on his knowledge by watching the trends on Twitter and major technology media websites:

I read, I read in TechCrunch, Wired and all the most important media/websites about technology. I am also in social media, on Twitter, if you follow interesting people or relevant people, you just will hear about it and you just get what others are doing and what the companies are doing (social media manager 1, interviewed 23rd November 2016)

Although the initial exposure to the technology of social media as a user is the case for social media managers, the principal learning of business uses of social media occurred through the actual doing of it. This is particularly the case for social media advertising managers, who did not have any previous experience as the social media ads platforms were emerging. Social media advertising manager 1 explains how she develops her knowledge in this area:

you need to be a keen learner because the landscape is changing all the time. I would be mainly reading about what's going on social and various platforms, also we have a channel in the company on Slack where we would give updates...this is a field where you need to self-learn. For example, I have experience of launching new Ads platforms on Twitter and Pinterest and you basically need to learn it yourself, figure out, do some research, read, etc. (Social media advertising manager 1, interviewed 5th December 2016)

As she explains, these actors should be self-learners in not just learning what new technology has been released in different platforms but also learning how to use the new platforms and functions.

5.4.2.2 Extending the expertise boundary

TSE has adopted a 'growth hacking' approach to enable the members of squads (cross functional teams at TSE) to make decisions and implement them and to make sure all experts have knowledge of different areas of marketing and, to use a phrase from the field, to become 'T-shaped'. As shown in Figure 5-1, being T-shaped means that all experts within the company must have the core knowledge of their specialised field (depth) and develop their knowledge across other areas within the field (breadth). This also includes broader and more technical fields such as data science and engineering (T-shaped represents the depth of knowledge in one core area and breadth of knowledge in other areas). One of the growth strategy squad members explains:

TSE developed a training programme based on growth hacking principles to upskill all individual experts in various squads, both marketers and engineers. The program covers 32 topics in engineering, marketing and data science. For examples, T-shaped marketers can run experiments through A/B tests, analyse the results, measure the impacts and control how to enhance user experience (TSE's documents)

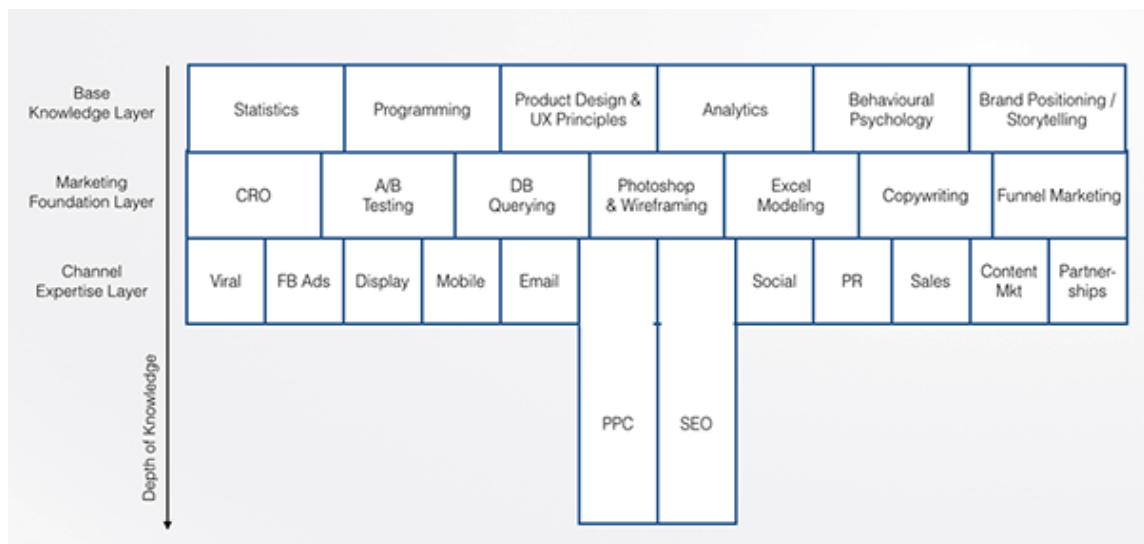


Figure 5-1 An Example of a T-shape Marketer (Musambi, 2017)

As an example, in the case of a digital media manager in the paid media squad, the channel expertise layer can consist of in-depth knowledge of Pay Per Click (PPC) and Search Engine Optimisation (SEO) and broad knowledge of social, PR, mobile, email, display, etc.; marketing foundation layer consists of funnel marketing, Database querying, A/B testing, etc; and the base layer knowledge can include product design, analytics, programming, etc. In this regard, social media manager 4 asserts:

until last year, we used to work in silos...but now on a daily basis, I'm not only doing social responsibilities but also trying to see the bigger picture, because when it comes to digital landscape it's not about only one platform, all the channels influence each other (social media manager 4, interviewed 11th August 2016)

The ultimate goal is to minimise dependencies and bottle necks so that teams can act more swiftly and achieve higher levels of growth. Social media manager 6 explains her broad knowledge of different areas within marketing specialism:

the core of my role is social media but then we are very much what we call T-shaped at [TSE], so you have sort of core area but then your practice and knowledge extends to other areas of web marketing. So, it involves a lot of content, content creation, content management; a lot of influencer work, so working with bloggers, travel influencers, Instagrammers; SEO; campaigns in general, so running marketing campaigns from the beginning to the end, from the analytics side of why we want to

do this campaign to testing it, to then fully running it to see if it works or not (social media manager 6, interviewed 6th March 2017)

According to one of TSE's directors of growth (in a conference presentation at the Digital Marketing World Forum¹⁵), there is an obsession with T-shaped learning at TSE as they believe it would lead to sustainable growth. Therefore, the T-shaped learning approach has also been applied in their graduate and internship schemes to develop such skills. One of the entry level marketers in the Latin America (LATAM) squad explains the experience of developing his multi-faceted expertise:

As one of the initial tasks, I was responsible for the affiliation accounts for Latin America...I managed to grow the sessions and ROI over 100% YoY, which led me to take control of affiliation for all LATAM markets. Then, I was then given the opportunity to broaden my skills to other areas such as SEM, and app marketing. I managed to scale up several AdWords campaigns and also initiated a new influencer program for app download (TSE's Documents)

This shows how important this is at TSE that digital marketing experts expand their expertise. Therefore, it seems that TSE actively encourages all individuals and teams to assign part of their time to learning new things and they have particular working spaces where they can use to read industry books or articles, update their knowledge and upskill. Having this broad range of skills has also been highlighted in some of our expert interviews, for example, Expert 6 states:

in my previous roles as a digital marketer, I was doing everything, from deals with our partners to some coding, social media, advertising, interviews with journalists and all the PR stuff around that and the digital marketing. So, I was doing digital marketing mainly Facebook and Google and display network to have banners everywhere to follow you around (Expert 6, interviewed 28th February 2017)

Being T-shaped or having multi-faceted expertise is seen to allow them to work more independently but also facilitates better communication and collaborations across different specialism areas.

¹⁵ <https://www.digitalmarketing-conference.com/>

5.4.2.3 *Becoming more technical*

As I mentioned in the previous section, according to TSE, one dimension of being a T-shaped expert based on the growth hacking mindset is ‘the base layer knowledge’, which is about having basic knowledge of an area beyond the core area of expertise. In the case of digital marketing experts, this is about knowing more about product design and data science, or in other words, becoming more technical. In this regard, TSE holds training days and also hosts ‘knowledge shares’ to facilitate this process of learning new skills such as coding. One example is the launch of growth hacking programme at TSE, which covers 32 different topics within areas of marketing, programming and data science. According to one of the members of the Innovation and Emerging Technique squad:

Our digital marketing experts need to become more product-driven and have analytical skills. They do A/B tests and measure the impacts of tests using key metrics instead of unreliable attribution models. Ultimately, these experts have the power to improve the users’ experience of TSE’s products (TSE’s documents)

As well as such training days and programmes, TSE continuously encourages the culture of learning so that the experts can decide in which area they need to upskill and dedicate their time. In this regard, one of the PR managers explains her experience of learning SQL (Structured Query Language):

At TSE we are working with data all the times, it is based on data that we create relevant content for our audience, we educate them with travel advice, we share industry insights with the media, etc. This is why I decided to learn SQL to be able to work with data to also reduce dependency on data scientist colleagues and move faster. So, I started some online courses to learn the basics. With more practice, I was able to create more complex templates...Although this wouldn’t be a significant work in the world of data science, this brings forth better data manipulation in our team (TSE’s documents)

Another initiative by TSE is the launch of a ‘programming community’ within TSE to enable them in coding and automation processes, as one of the technical managers in the central growth tribe explains:

We launched the community of programming at TSE to facilitate the learning of non-software engineers on how to code. The examples are teaching the individuals to use

Python¹⁶ with Pandas¹⁷ in automating data tasks, to use APIs to extract data for their reports, or advanced analytical techniques in Excel (TSE's documents)

In this regard, social media advertising manager 1 shares her experience of the necessity of learning how to code and using Application Programming Interfaces (APIs) for pulling data:

so many changes are happening all the time...Also, this kind of changes makes you become more and more technical with the platforms. Right now, I'm learning to code...knowing some coding can help you especially if you need to source some data or sometimes connect to APIs (social media advertising manager 1, interviewed 5th December 2016)

This was also highlighted in some of the expert interviews. For instance, when talking about his skills, Expert 1 includes "basic Programming, coding HTML, and databases". In addition, Expert 5 explains how professionals in the field of digital marketing need to become 'multi-disciplined':

I think more people need to be multi-disciplined now. There's no point saying 'right, I will do PR'. I think there is going to be rise of people who are aware of coding and technology and just having very different skills, because I think the companies that focus on individual departments without having the ability to have people with being multi-skilled are not going to survive (Expert 5, interviewed 27th February 2017)

5.4.3 The organisation Encourages Data-centred Actions and Decisions by Experts

At TSE, it seems the vision is that all actions and decisions are increasingly driven by data and that staff, in this regard, have the capability of analysing large volumes of data, to (re)define relevant metrics, and to measure the impact on the customers and the business. This goal was implemented through three dimensions: automating customer processes and data analytics, measuring every state of customer journey, and (re)defining what's valuable.

¹⁶ Python is a programming language (www.python.org)

¹⁷ Pandas is an open source library used for data analysis purposes in Python programming language (pandas.pydata.org)

5.4.3.1 Automating customer processes and data analytics

There is an increasing emphasis on automation in customer communication processes and data analytics at TSE. In terms of customer communication, TSE has developed ‘bots’ (autonomous and programmed virtual robots) for messaging applications such as Telegram, Skype and Facebook Messenger. They have also developed search skills¹⁸ for Microsoft Cortana and Amazon Alexa to facilitate the conversational search processes that the customers are demanding. Social media manager 8 points out:

I think with smartphone technology and other platforms, there is much more increasing role of instant response automation...I think there are more users that want to try new technologies, they want to have automation and we need to embrace that because the big platforms like Facebook are putting an emphasis on their strategy towards automation, so they want to drive that relationship with brands and users on Messenger (social media manager 8, interviewed 9th September 2016)

As this information states, there is a shift as major social media platforms drive their users to their messaging platforms and at the same time a further shift to mobile. TSE considers this an opportunity that must not be missed. He further explains:

Users might not wanna have to bother to type in anything and just search by voice, so that's what we were doing with the Cortana...I think we need to be in front of the curve and that's why we tried Alexa as well. I think it allows us to learn about our users and to see if they are enjoy using these features or not. More and more searches will be done via the bot or via voice search as we progress into the future, so we need to be at front of that curve (social media manager 8, interviewed 9th September 2016)

In addition to the platforms shift, there is a movement in how the users want to access digital services and that's why TSE assumes they should be ‘at the front of the curve’. This trend towards automation has also been highlighted in our expert interviews, for example Expert 5 asserts:

There is also a rise in automation and machine learning to automate certain questions, for example, if people are just asking the same question, ‘where can I buy this’, you know, ‘can I have return this’, etc. There is more automation coming in so that those responses can be sent back and don't need to have humans actually involved. I think we're seeing a rise in that and also chatbots as well, so customer service done by

¹⁸ Skills on voice-based platforms are capabilities that function to do certain tasks (based on Amazon Developers Platform, <https://developer.amazon.com/alexa-skills-kit>).

chatbots to leave us free to do the more intelligent interpretation (Expert 5, interviewed 27th February 2017)

As a corollary of this, there is a move toward automation in how marketing teams collect and analyse data. Therefore, TSE has established one squad (team) dedicated to ‘marketing automation’. Social media advertising manager 3 explains the role of this squad:

As paid growth squad, there is a huge emphasis on automating the ways we work, to not spending time on the things that are not bringing value...dedicated squad to marketing automation, they create dashboards using various data sources or they would create custom metrics for us or they would try to automate the reporting that we may require (social media advertising manager 3, interviewed 18th January 2017)

One of the reasons that TSE started the ‘marketing automation’ squad is for the purpose of analysing and optimising paid media campaigns. Based on the accounts of one of the growth leads [TSE’s document], the paid media marketers could previously extract data and create their own spreadsheets manually just by copying and pasting. However, since most of the partner dashboards have APIs, the data can be automatically pulled into Tableau¹⁹. Thus, the marketing automation squad creates ‘customised dashboards’ to save other squads’ time in compiling the data and reporting to be spent on analysis and experimentations. A Marketing automation analyst in this squad asserts:

Our goal is to enable growth by automating workflows and pulling through insightful data that will enable other squads to make growth decisions. Within my role I find out the needs of other squads, collect the data (API integration or pulling data we already have in S3), joining it up with other useful data (from GA), and then front ending it on a platform like Tableau so that other squads can easily access and visualize the data (Marketing automation analyst, interviewed 7th March 2017)

In addition to automating data analytics processes, TSE has automated the ways they collect users’ feedback and assigning it to the relevant squads. According to one of TSE’s technical managers (TSE’s documents), they developed their own Slack²⁰ integration (the automatic connection between feedback collection platform and their internal

¹⁹ A data visualisation software

²⁰ The internal social media platform that TSE uses.

communication platform, Slack). Through this integration, the collected feedback by User Satisfaction team through Zendesk²¹ being sent to the right team on their Slack channel. This automation of formerly time-consuming process provides real-time feedbacks to the squads.

One of the digital media managers specialising in paid search shared his experience of attending the SMX London Conference²², in which there has been great emphasis on the importance of various automations (in paid search campaigns, keyword expansion, bid management, and landing page optimisation). In this regard, they work with software engineers and data scientists to automate related tasks such as ‘merging hundreds of destinations into thousands of unique ads and keywords’ (TSE’s document).

5.4.3.2 Measuring Every State of the Customer Journey

All measurements at TSE is said to follow what is called a ‘state machine’, which is a customer data platform. Similar to how computer scientists have used state machines to model and manage complex processes (Cheng and Krishnakumar, 1996), TSE has developed its own state machine to look at the customers (users) at different stages of their journey and adapt the interaction or communication approach accordingly. Although the marketing experts at TSE measure the old-fashioned metrics (which are called ‘vanity metrics’ by TSE staff), such as size of the email subscription, tweet impressions, or unique sessions, they realised that they need to measure more ‘meaningful’ metrics to consider different status of customers based on the types of their interaction with TSE’s products (web or app), devices they use, their location etc. and in this regard, they have developed the ‘state machine’. The state machine analyses the level of customer’s interaction and the type of interaction with TSE’s product (search engine).

According to the interviews and TSE’s documents, the customers’ state has been defined as the initial state of the ‘unaware’ (users do not know about TSE), to ‘acquisition’ (users come to TSE from various channels), ‘activation’ (users perform an activity on TSE’s search platform or content websites), ‘retention’ (users visit TSE again or multiple times),

²¹ The customer service software that TSE uses.

²² A conference on SEO and SEM

‘referral’ (users share their experience with their friends and refer them to TSE), and ‘revenue’ (users perform activities that generate revenue for TSE). These states for each user are dynamic and change over time based on how they interact with TSE’s platforms from inactive to more active or vice versa to enable them to measure the key points in the users’ journey (or life cycle). According to one of TSE’s technical managers who leads the state machine squad:

We keep record of each user’s history of interaction with TSE and since some of such interactions incur cost to TSE, while others lead to revenue, we are able to calculate the ‘user/customer life-time value’ (CLV). Also, we are able to run predictive analytics for each category of users and predict their future CLV (TSE’s documents)

Therefore, this future prediction of CLV allows the marketing experts to optimise their acquisition, activation and retention activities to shift the users to the states that are more valuable. Before the introduction of the state machine, some of the social media experts experienced some issues in terms of measurements. As the social media advertising manager 2 explains:

back then, our technological struggle for social media was tracking and measuring ROI in a more effective way. The attribution model we used didn't allow this to happen, so instead of having any monetary KPI, it was purely quantitative KPI on the amount of sessions that you generate, which you know sometimes limits your ability to shift the focus and towards generating revenue (social media advertising manager 2, interviewed 10th January 2017)

Therefore, these experts, as they report, are not only able to measure the former metrics, but they also can monitor the metrics in the state machine and focus on ROI (return on investment) of the activities as pointed out by social media advertising manager 1:

once the ad is on Facebook, the ads start delivering impressions. So, Facebook shows the ads to users based on the targeting that we have chosen and then I would monitor for example the number of impressions we served, how many clicks that I got from those impressions, and...I would also monitor the cost. And further down the line, I would also monitor the new metrics which are activation, retention, revenue and referral (social media advertising manager 1, interviewed 27th October 2016)

Thus, apparently the state machine provides a unique dataset, through which the marketing experts are able to follow the timeline of each user’s activity, personalise the

communication and seemingly improve user experience. In addition, they seem to be able to segment the users based on their behaviour so that they can send optimised (re)targeting communications (e.g. emails, push notifications, etc.). Moreover, this dataset and categorisation (based on the state machine) would ultimately bring forth, as they saw it, a more personalised experience and more value to the users. social media manager 5 states how the automated dashboards help them in getting the measurements:

We tend to use Tableau over GA because it's intertwined all data dashboards and then it shows us everything that we could possibly really need to know. So, we have a whole variety of different dashboards which are already pre-set out, so you just need to put a URL or whatever you've done, and it shows you the sessions, the activation rates etc. So, you obviously want the activation rate to be quite high, as high as possible, and that's kind of the main ones that we use right now (social media manager 5, interviewed 2nd February 2017)

5.4.3.3 Redefining What's Valuable

As specified in the previous section, the whole user journey is being mapped at TSE in order to track the users' activities to ensure that TSE has added value to the users, which is seen to add value to TSE. Social media manager 8 explains that they think about the whole user journey from the beginning of searching and booking stage to the end (post-booking), in order to plan and organise for the platforms they should use to provide useful and relevant information to the users. Therefore, he explains:

we don't just think about acquiring the user, we think about how we can be relevant and add value to them which then adds value to us...So, some of the values to the business can be measured in how many users have been bringing through, what did they do on the site, how much revenue they bring, etc. (social media manager 8, interviewed 9th September 2016)

As he pointed out, the value that users bring to TSE can be viewed and measured from different perspectives ranging from the number of users on TSE's search platforms (web or mobile app), how they navigate on the website, to how much revenue they generate for TSE. This is also highlighted by one of the digital media managers in a blog post (based on TSE's documents) that although a lot of digital marketing metrics such as post reach, engagement rates and click through rates are prevalent, those do not necessarily lead to a business result (revenue). Therefore, the marketing experts at TSE are continuously

(re)evaluating how they can measure the tangible value that they are presenting to the users and for the business. This occurs through continuous feedback loops throughout the user journey:

as an example, in one case we measured the relationship between the contents with high click through rates and content that provided high value for the users to return to us. Based on this result, we changed our focus from buying the cheapest clicks to drive largest volumes of traffic to acquiring high quality users through relevant content and right channels (TSE's documents)

As indicated in this example, researching what adds value to the business is a norm at TSE. In this regard, these experts change the metrics they measure in order to find out what is valued by TSE's users. However, this is a challenging process as social media manager 8 explains:

I think the challenges are around the platforms changing the way they prioritise content, so algorithms. Challenges will always be attributing value to the activities that we do on social, tying together all the data from the organic activity to kind of what the users are doing, so we have a data challenge (social media manager 8, interviewed 9th September 2016)

As he mentions in the above quote, the challenge in finding out what is valuable for the users is related to platforms' algorithms and how they prioritise content for the users. Another challenge in this regard is related to the 'automation' processes. As I indicated previously, TSE has been automating some of the customer processes through the development of bots for messaging apps. However, through the 'talk to human button' in their Facebook Messenger bot, social media manager 5 (TSE's documents) realised that some of the users get confused whether they are talking to a human agent or not. Thus, she introduced two changes into the way she communicated with the users: signing off each message using her name and responding to them as she would expect to be responded as a user. Therefore, because the main goal is to offer more and more value to the user, they decided to find a balance between automation and human interaction as they believe they should not lose human touch in creating value to the user.

Therefore, the data shows that this is an ongoing process to (re)evaluate how data is being collected based on different metrics to measure the value for the users and for the business

across the range of platforms (channels). For example, in dealing with the challenge of platforms algorithms, the Spanish squad decided to move away from reach and engagement rates (although they still measure these) to focus on sharing rate, because according to social media manager 1, “we think if someone is willing to share your content, it’s because they are really interested, and we really provided value to them” (interviewed 18th July 2016).

In addition, the nature of measurements is also related to how developed the practice of that platform or channel is. For example, in the case of influencer marketing, the platforms such as Facebook do not offer specific insights for influencer projects and as TSE’s global head of influencer marketing told us, she needed to develop the systems of measurements and trackings:

Internally what I had to do was to start building things from scratch. So, everything from processes to trackings for influencers to activities, cost benchmarks, target benchmarks. Because when you are doing paid media like Google ads or you're doing native ads or social ads, you could pull data from all over the sources, the data is available for you. With influencer marketing, not many people have done it, so, I had to identify all these measurement gaps, how can we make the most out of what we do and measure it properly (global head of influencer marketing, interviewed 20th March 2017)

To summarise this section, the various measurements, the redefining of the metrics, this rethinking of criteria etc. reveal how these new experts attempt to show the value of their expertise to the organisation. Because this is a field of work that is not established, there are not fixed and stable approaches, metrics, and mechanisms to perform based on. Thus, it is also difficult to evaluate the performance of these experts as the criteria are evolving. Working in this highly unstable setting (due to platform characteristics and extended user practices that I discussed in Chapter 4), these experts are ongoingly trying to find new ways of measuring the outcome of their work for the users and for the organisation. It is through these measurements that they begin to portray their value and, in many regards, help to establish their expertise within the organisation. This then forms the basis of other organisational changes such as how the organisation decides to restructure the teams, adopt other platforms, or allocate advertising budgets.

5.4.4 The organisation promotes the build-test-learn approach

The way that marketing teams operate at TSE is based on agile, lean and growth hacking techniques, which has been developed as a unique approach for the business of TSE. According to one senior product manager (based on TSE documents), the marketing campaign management follows the build-measure-learn principles of ‘lean start up’ (Figure 5-2), which works as a process of: generating a campaign idea, creating a hypothesis of how the idea would lead to, setting up measurement metrics, building the minimum viable product (that is the campaign), launching the campaign to a group of users for test, analysing the results for a certain time period, pivoting the idea until it is scalable, or failing fast and learning. Through this lean and agile process, the marketing experts are seemingly enabled to optimise the campaigns for best results and create rapid learning cycles.

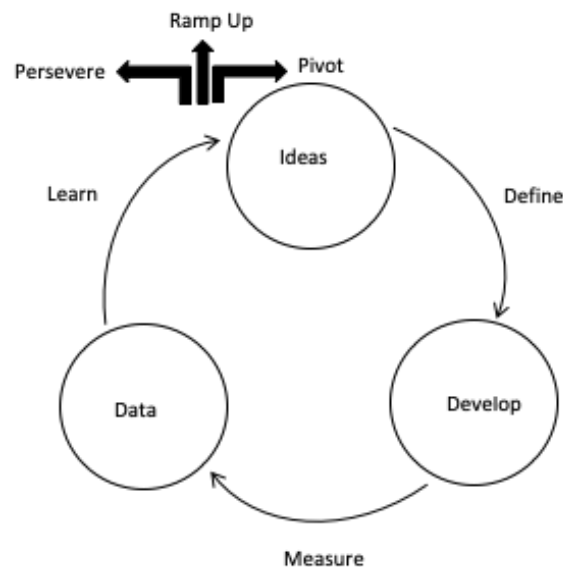


Figure 5-2 The Lean StartUp Approach [Based on TSE's Documents and Ries (2011b)]

5.4.4.1 Optimising marketing campaigns

Operating in a fast-changing landscape, TSE seems to have moved away from a conventional linear process of campaign management to an iterative agile process to enable the time and resources spent on campaign activities to deliver better results for the users (customer experience) and for the business (sustainable growth). The underpinning of the whole process is ‘data’. Data that is generated by the users is analysed and used to

build campaign ideas and hypotheses, which form the basis of the campaign experiments. Social media manager 7 explains the process:

Quite a lot of the work done around experimentation structure is to create those campaigns. So, it goes from basic analysis of who would be the target audience, why this hypothesis, why the data support your hypothesis, then what is a test, and then analysing the results (social media manager 7, interviewed 27th March 2017)

An example of such a practice was when the marketing team wanted to launch a large-scale global content campaign. It was in the early days of adoption of the build-test-learn approach and although the campaign teams had developed all campaign elements based on previous user data and channel performance metrics, they did not test the campaign itself before the large-scale development (with thousands of assets). Despite the lack of a small-scale test, the team decided to launch the campaign in a smaller scale (in one market) to see what they could learn for a more efficient global execution. According to the head of the product in the campaign:

we launched the campaign in full but only in that particular market. Although we were able to track pass/fail metrics, we couldn't track many of key metrics. The high bounce rate on the campaign's landing page revealed that the content wasn't what the users expected...Thus, based on this result, we managed to modify the channels and trackings, but we learned that we needed to start with a minimum viable campaign and validate the assumptions through small, iterative tests (TSE's documents)

Such iterations are developed to test and validate the ideas, the target audience, the execution methods, and the digital channels. Notwithstanding the significance of this for the large-scale marketing campaigns (to prevent large waste of resources in the case of campaign failure), it became embedded in other activities that the digital marketing experts do, such as what type of content performs better on what platforms, what frequency of content sharing works better for a specific market on Facebook, which layout of text and image works better in the retargeting emails etc. One instance of such experimentation is content curation for a more personalised newsletter. Regarding this, the idea was to include a piece of content relevant to the destination that the user searched at the top of the newsletter and automate it so that the data from the state machine can be used, the relevant content piece can be found based on its location ID tags, and the

automated newsletter uses that content piece as the subject. One of the content managers who was involved in the experiment highlights their findings:

We ran the experiment in the UK and the results were statistically significant. While the open rate increased by 2%, the clicks on the personalised content increased by 65%. This learning leads us to include such personalised content in our weekly newsletter (TSE's documents)

This iterative and agile approach in marketing has helped the experts to get more positive outcomes from the campaigns, activities and projects and also optimise the outcomes in relation to required resources.

5.4.4.2 Creating rapid learning

One of the underlying goals of experimentations at TSE that I described in the previous section is to create quick learning cycles. Social media manager 8 explains the importance of continuous experimentations for social media particularly because of those platforms' algorithms:

Experimentation is part of our day-to-day work at TSE and social media is one of the areas that we are continuously testing new things. The possibilities are infinite on social media and our aim is to try and find out what works better. To hack the platforms' algorithms, our strategy is to continue experimenting and therefore, to change things over (TSE's documents)

Given the complexity of social media platforms, any learning from the experiments is important as social media manager 1 states:

Our experiments depend on the channel as well, adopting a social media platform is quite complex because usually you need a long time to give a value but at least you can get the first conclusions, you can get the first learning and you could say 'maybe it is not big enough yet but it's gonna be valuable for us and for our users'. And maybe you fail and that's ok, it's actually something very important at TSE that failing is ok as the company values the learning (social media manager 1, interviewed 18th July 2016)

Although conducting experiments is part of the digital marketing experts' job, the pace of experiments and the insights gained is crucial. One of the growth directors explains that:

Based on our experimentation principle, the process includes hypothesising about how users would behave regarding a change in an element of content, email, call to action,

etc. The hypothesis moves through the scaling platform that is called ‘Growth Factory’ at TSE. In this process, the aim is to make sure that the experiment would move to the ‘status’ of success or ‘fail forward’. Therefore, we would be able to learn fast regardless of what the result of the experiment would be. We believe the faster we learn, the faster we grow (TSE’s documents)

One of the senior growth managers also asserts that failing forward and learning is part of TSE’s cultural values. Because as Expert 2 explains one cannot break through using pre-defined strategies and must experiment and learn. He asserts that “there is always a marketing PlayBook but ‘hacking’ means finding a way to break through and you can't really break through a marketing playbook, they are bound with the predefined strategies that they do” (interviewed 26th October 2016).

One of the digital media managers comments that when the result of an experiment does not meet or excel the initial metrics, they consider it a case of failing forward, because it fosters the culture of continuous experimentation (to test other possible ways). He provides (TSE’s documents) the example of an experiment for re-targeting users who have previously conducted a search on TSE’s platform and left without making a booking (and these users are not registered or subscribed to TSE). The experiment included sending these users a dynamically personalised email containing the flight route that they had searched for and its estimated price to see if this re-targeting can be 100% ROI positive similar to other retention communications (e.g. display ads, mobile notifications, etc.). He asserts:

Although the experiment failed, the learning was that such email re-targeting showed very strong open rate and click-through rate. Also, this result was not consistent across markets, for example, successful in France but not the UK. However, we changed it by reducing cost per click and test it for only certain routes and the result surpassed the initial 100% ROI (TSE’s documents)

Therefore, according to the ‘growth factory’ squad, instead of spending several months working on campaign ideas and testing them through focus groups, as they might have done in the past, they tested them through iterations and analysed the data from feedback loops, so that they can ‘fail fast and early’. Although this has increased the speed and

volume of work, the overall time spent to launch a major campaign has been reduced by several months with reported higher quality ideas.

5.5 Discussion

Recent studies argue that as organisations are transforming to become digital, they need distinct forms of expertise. These are people with skill sets that differ from previous generations of transformative technology (Fitzgerald et al., 2013; Horlacher and Hess, 2016). One widely discussed transformation has been the creation of the new role of CDO (Tumbas, Berente and Brocke, 2017), an expert created to govern the organisation's digital transformation efforts regarding outward facing digital technologies (Haffke, Kalgovas and Benlian, 2016). However, the nascent research has focused only on the jurisdictional rivalry between this new occupations and more established roles (Tumbas, Berente and Brocke, 2018). This means there is still a lack of understanding in the work carried out by these new experts, how their work and expertise more generally is involved in wider organisational transformation.

To understand this new expertise, I moved away from this focus on jurisdictional rivalries and studied their work content (Anteby, Chan and DiBenigno, 2016; Abbott, 2005). Drawing on the qualitative data, I present a framework (Figure 5-3) to show the underpinning mechanisms through which such expertise is developed and fostered in the organisation.

First, 'hybridisation' is about creating amalgamated roles where there are experts with competence in different specialisms capable of conducting work across digital marketing initiatives. Second, 'data-driven approach' is about measuring the value for customers and business and automation of customer processes and data analytics. Third, 'experimentation' is about bringing forward new solutions to be able to respond to shifts in customer behaviour and the platforms through continuous feedback loops.

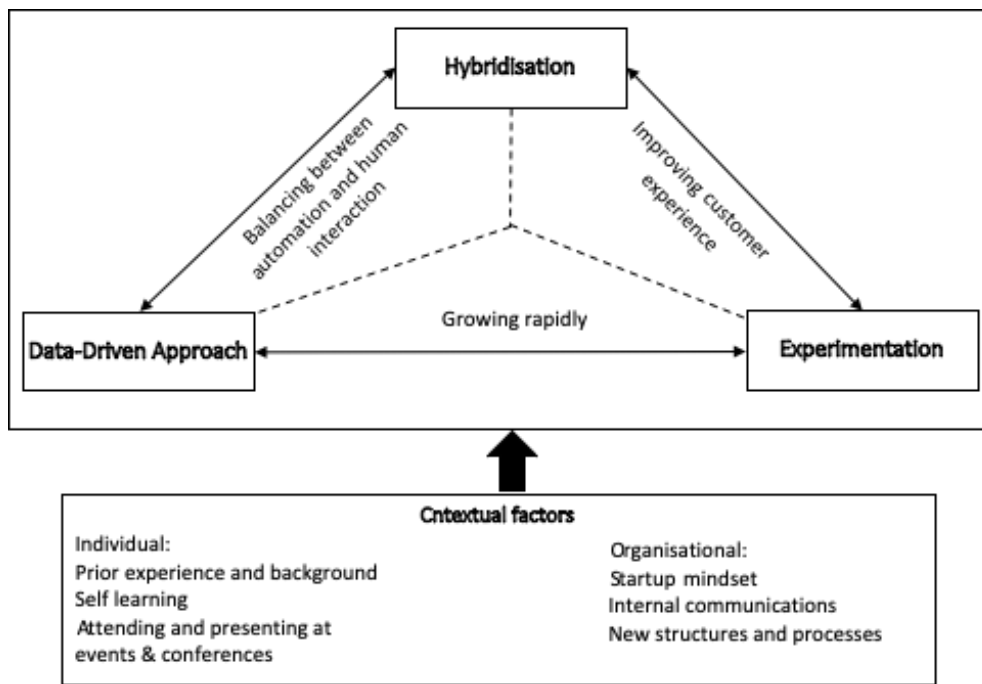


Figure 5-3 The Mechanisms of Developing Expertise in Digital Marketing

Of course, these mechanisms are inter-related and influence each other. While data-driven approach directs experimentation, experimentation provides adjustments to data-driven approaches and the interplay between the two potentially leads to the rapid growth of the business. Data-driven approach enables hybridisation and hybridisation, in turn, enhances the data-driven approach, which leads to a balancing between automation and human interactions. Finally, experimentation drives hybridisation and while hybridisation strengthens experimentation, their interplay brings forth improvement in customer experience.

The mechanisms and their interplay are also influenced by individual and organisational factors. On the individual level, the majority of the new experts are ‘digital natives’ (Colbert, Yee and George, 2016) with a high level of personal exposure and interest in digital technologies. According to the fieldwork data, although for majority of the experts, their formal higher education studies do not play a role in shaping their expertise, they all have some level of work experience in marketing, specifically web marketing. On the organisational level, the digital enterprise continuously facilitates the work of these new experts by restructuring to bring people who should collaborate closer together, cultivating

information sharing and communication through internal social media, and promoting a culture of agility (almost like a lean start-up).

5.5.1 Hybridisation

This chapter shows that the new experts that have emerged in relation to organisation's response to the customer-facing digital technologies are hybrid and the organisation attempts to foster this hybridisation. As recent studies pointed out, customer engagement and experience is one primary dimension in organisations' digital transformation being led by CDOs (Singh and Hess, 2017; Tumbas, Berente and Brocke, 2017). In this regard, the new occupational expertise has formed around the field of digital marketing. The forms of expertise I found in this case study are in the areas of social media, social media advertising, digital media, SEO, content management, and influencer marketing.

Due to the increasing pressure from the customers' expectations of ubiquitous engagement and interactions (Alexander and Lyytinen, 2017), the digital marketing specialties overlap and the experts are expected to have knowledge of different areas and must work very closely together. Moreover, such experts are also encouraged to develop their skills in other specialisms (such as data science and coding) to become, as it is called in our case study, T-shaped. This is because, as Tumbas, Berente and Brocke (2018) have recently highlighted in their study of CDO role, digital efforts require links between different functions such as IT and marketing. Therefore, this chapter shows that this gives rise to new categories of occupational experts with a fusion of skills and knowledge in marketing and technical areas.

5.5.2 Data-driven Approach

Being data-driven is the underlying approach in the practice of the new experts in digital marketing. These experts gather and analyse large volumes of data from various sources (social media native insights, social media paid insights, Google Analytics, etc.) depending on their area of specialty to assess the performance of their activities. To facilitate and accelerate this, a marketing automation team consisting of software engineers, data scientists and marketing experts work to build dashboards and automate the process of data extraction from various platforms in real-time. One primary objective

of such automations is being able to track and measure every stage of the customer journey, which is then fed back to the digital experts' activities for optimisation. This builds on Tumbas et al. (2017, p.128) who also pointed out that 'data analytics' is one of the key capabilities in digital transformation with the aim of "customer intimacy" to "create a consistent customer experience across digital and non-digital channels". I have shown how such customer intimacy is cultivated through following every move by the users, automating data collections and developing the skills to analyse the data, but also using analytics capabilities to predict the future results.

5.5.3 Experimentation

Experimentation refers to the mechanism, through which the digital marketing experts test their initiatives, optimise their practices for the highest value creation and build on their knowledge through learning from fast iterations. One rationale behind the experimentations that constitute the majority of what these experts do is to handle the changes in the nature of the technology. While traditional or mainstream forms of IT are about quality and security, it has been argued that the new digital technologies are about 'innovation' (Gregory et al., 2015). Due to dynamic nature of these new forms of technologies (Kallinikos, Aaltonen and Marton, 2013), experimenting and innovating with them is 'infinite' (as stated by one of TSE's social media managers). This echoes other researchers' findings that organisations should maintain their flexibility of finding alternative ways in uncertain conditions of digital transformations. For instance, Ferreira, Fernandes and Ferreira (2018, p.7) argue that "companies currently operate in environments of great uncertainty and complexity, the ability to adapt to a variety of contingencies is fundamental". Such adaptations can happen through rapid experimentation cycles that I explained through the empirical field data that offer organisational agility (Warner and Wäger, 2018) that must be developed in the generative setting of digital technologies.

As shown in this chapter, new forms of expertise are arising in organisation as part of their digital initiatives. Focusing on what the experts do, I showed that the new modes of expertise are about having multidisciplinary knowledge of different areas such as

marketing and data science and are grounded on the conducting tests and data-driven decision making. These are supported by not just some individual factors such as self-learning but also by organisational forces that drive competency developments and facilitate the work of these experts. But how are organisations changing as they are reorganising in such digital efforts? How might we be able to understand these transformations? I will attempt to answer these questions in the following chapter.

6 Chapter Six: Search: The New Watchword of the Digital Organisation

6.1 Introduction

As discussed throughout this thesis, scholars agree that the contemporary enterprise is “currently facing a major paradigm shift in business and IT management” (Urbach, Drews and Ross, 2017, p.iv). This new paradigm, they suggest, will have profound implications not just for the “IT function”, but also its “structures, processes and people” (2017, p.iv). Mckelvey, Anderson, and Yoo (2016) point to the source of this shift as a result of the rise of ‘digital platforms’. Together these scholars present a picture of how digital technologies are dramatically remaking the organisation. Yet, they do not explicitly pick out the key characteristics of what the new forms of digital work might look like, and, importantly, how we might go about researching them.

In their ambitious proposed agenda for the study of ‘digital work’, Orlikowski and Scott (2016) discuss how the rise of “algorithmic phenomena”, which is a key part of these platforms, have the potential to profoundly transform how work is done. Algorithmic phenomena, they suggest, are “different to what we have encountered in prior studies of work and technology”. One difference – perhaps the main difference, they argue – is that “contemporary algorithms are largely not available for scrutiny”. As Introna argues, “[t]hey seem to operate under the surface or in the background” (Introna, 2015, p. 9). This raises important challenges for the possibilities of studying contemporary work. Orlikowski and Scott (2016), citing Introna, suggest that given their “inscrutability and executability” (Introna 2015, p. 9), algorithms can only be understood dynamically in action. What might it mean to study the emerging [digital organisation] in action?

In contemplating this question, it is worth considering what these platforms do and whether they encourage forms of work and use that is different from what went before. In this respect, this chapter is influenced by the work of the economic sociologist, David Stark (2011, p.1), on ‘search’, and his argument that search is the “watchword of the information age”. Whilst talking predominately about the internet, he writes that “among

the many new information technologies that are reshaping work and daily life, perhaps none are more empowering than the new technologies of search”. It is not difficult - living in a world seemingly full of ‘algorithms’: one needs to think only of search engines such as Google, social media websites such as Facebook or online retailers such as Amazon – to see how this process of search is becoming intensified. To throw light on how algorithms are reshaping of contemporary work, as suggested by Orlikowski and Scott (2016), I propose to study search dynamically in action.

But how to go about this? How might we study search? Stark provides few guidelines here, other than to describe search as “the process that best exemplifies the challenges of the contemporary organization”, and that if organisations are shifting towards a search paradigm, this requires a corresponding transformation in internal organisational processes (Stark 2011, p. 174).

In this chapter, I address this issue of what this shift might look like by providing insights from the empirical case study of an ‘exemplary’ digital organisation (detailed in Chapter 3). This privileged form of access allows, I argue, to develop early insights into how organisations are being transformed as they reorganise around digital technologies and these search processes. I present evidence that suggests that search as mediated by new digital platforms are changing the way organisations interact with their customers and others, and that this, in turn, is leading to changes in internal IT processes and roles, and more broadly across the processes of business organisations.

In order to show how search has become to reconfigure organisation I found value in early discussions from the literature of innovation and knowledge management in the following section. Although not about information systems, there is much to be gained from reviewing this literature as it sets the groundwork for how we might consider the process of search within the digital organisation.

6.2 The notion of search

According to the Oxford English Dictionary (OED)²³, ‘to search’ is to explore or examine, in situations where the searcher knows the purpose of search is to discover certain things or determine the presence or absence of people or things. OED’s definition of search has expanded to the computing context in 2014 as to look for information utilising search engines or search function in a computer. This study finds the discussion by the economic sociologist David Stark (2011) on the notion of ‘search’ useful. According to Stark, ‘search’ is “the watchword of the information age” (2011, p.1) and search technologies are the most empowering type of information technologies that have been transforming and reshaping quotidian and organisational life.

Stark (2011, p.174) describes the basic challenge as the type of search when searchers do not know what they are looking for and identify it when it is found. This type of search is different from the quotidian notion of exploration as an analytic search for organising information that looks for clarity, rather it is interpretive and looks for areas of ambiguity. In explaining why studying ‘search’ plays an important role in economic and organisational sociology, he reckons four reasons. Firstly, ‘search’ has turned into a large business (e.g. search engines such as Google or social media sites such as Facebook or YouTube). Secondly, it has transformed the strategy of marketing from demographic classification to properties of networks (e.g. through the data from social networking sites). Thirdly, when organisations move from classification-based to network-based marketing, Stark (2011, p.173) argues that “they are also shifting from classification to search in their internal processes”. Fourthly, search is fundamental in transformation of economic and organisational sociology as “it is the process that best exemplifies the challenges of the contemporary organization” (2011, p.174).

Within the organisation and management scholarship, search has been discussed in the literature of organisational learning, knowledge management, innovation and new product development. Huber (1991) considers search as an organisational learning mechanism that

²³ accessed 20/10/2017

occurs through the process of information acquisition. He differentiated three forms of search: scanning (the search of a wide range of organisation's external environment), focused search (the search of a narrow range of organisation's internal and external environment), and performance monitoring (scanning and focused search to understand how effectively the organisation has met the pre-defined goals). Thus, the impetus for search is triggered by a problem in the environment in externally initiated search (scanning and focused), while it is the opportunity that the organisation is looking for in the internally initiated search.

It has also been suggested that such organisational learning occurs through feedback systems, which support organisation's reflexive practice through the process of learning and changing (Antonacopoulou, 2004). The centre of learning and changing is critique, which is "about the search for new possibilities beyond assessments which see things as black or white, right or wrong, positive or negative". Such critique can drive individuals to move away "from existing assumptions and practices and provide the strength and conviction to search for new meaning, to search for new understanding, to search for new ways of living" (Antonacopoulou, 2004, p.60).

Rosenkopf and Nerkar (2001) explored organisations' local and non-local search and how they integrate knowledge from such sources. They defined 'search' as a kind of behaviour by an organisation or entity to look for solutions in the vicinity of their existing knowledge and expertise (Stuart and Podolny, 1996 cited in Rosenkopf and Nerkar, 2001). They introduced a typology of exploration to illustrate "how the various types of exploration affect the extent to which firms' knowledge is recognized by other firms and integrated into future technological developments" (Rosenkopf and Nerkar, 2001, p.288). Katila and Ahuja (2002), in studying how organisations search in new product innovations, based their work on the definition that views search as a learning process that organisations attempt to find answers for their problems in an uncertain environment (Huber, 1991).

In addition to finding solutions to problems or opportunities, learning from failure can be an impetus for search, that is called 'problemistic search' (Madsen and Desai, 2010). This type of search for knowledge, in addressing prior failure, is more likely to adopt new and

diverse ideas because of the related sense of urgency in problemistic search. Thus, failure increases the willingness toward searching for new knowledge and it acts as a roadmap portraying which activities the search should be focused on (Levinthal and March, 1981).

The issue is that none of the prior studies has offered a comprehensive definition of search. This is problematic, because, first, it does not capture the essence of search-related practices, and second, it does not capture the variety and distinctions in such practices. I intend to address this issue and present a preliminary working definition of 'search' (which will be developed in Chapter 7). Based on the literature of organisational search and Stark's argument, I define search as a spectrum of activities ranging from everyday information management and exploring ideas and solutions to interpretive forms of inquiry and seeking for the unknown. Within this spectrum, 'search' has the following dimensions.

Scope: Temporal and spatial, local and distant. Search might be local or distant, and this locality or distance is related to the degree of knowledge newness for the organisation and spatial and temporal aspects of it. Katila and Ahuja (2002) highlighted the important role of how widely organisations seek for knowledge and information in the organisational learning. They differentiated between local and distant search based on the extent that the new knowledge seeking practice is closely related to organisations' current and existing knowledge and the extent they move away from the boundary of their existing knowledge. Rosenkopf and Nerkar (2001) studied different levels of internal and external knowledge searches and they found that "exploration beyond organisational boundaries persistently obtained more impact than exploration within organizational boundaries" (2001, p.302). They also introduced the second dimension to the search within or beyond organisational boundary, technological boundary, which is whether knowledge is based on a similar or distant technology. The organisation's past experience would influence its locus of search for knowledge or technology (Zahra and Gerard, 2002; Argote and Miron-spektor, 2011). The scope of search can also be different depending on how far organisation seeks knowledge in terms of time.

Mediated by other actors. Search is mediated by technological artefacts and human actors. The importance of search in organisations for finding external sources in creating new knowledge or technology has been highlighted by evolutionary economists (Nelson and Winter, 1982 cited in Laursen, 2012). Organisations' external search practices can involve different actors such as customers, suppliers, competitors, research-oriented organisations and universities. These actors might mediate the practice of search differently as drawing knowledge can form a formal collaboration (Laursen and Salter, 2014; Laursen, 2012). Some scholars pointed out the significant role of IT in organisational external search practices (Majchrzak and Malhotra, 2013; Joshi et al., 2010). For example, having conceptualised IT as 'data access systems' and 'network connectivity', Trantopoulos, Krogh, Wallin, and Woerter (2017) showed that IT mediates the search processes and they jointly influence organisation's innovation performance.

Variety. Search is varied depending on its objective. Organisations can involve in a diverse range of searches: they search for product innovations (Rosenkopf and Nerkar, 2001), for new product development (Martini, Neirotti and Appio, 2017; Lester and Piore, 2009), and for service innovation (Mina, Bascavusoglu-Moreau and Hughes, 2014). These diverse searches might be conducted differently: being treated as problem solving (Katila and Ahuja, 2002) or a form of inquiry as Dewey (1998) explains the perplexed situations in which the object of search is unknown. For instance, Lester and Piore (2009), exploring new product development in three different areas, distinguished between two types of search: analytic search and interpretive search. While in the former, the focus is on identifying and defining the problem and its elements and finding the best solutions, the latter is uncertain and involves open-ended discourses (Lester and Piore, 2009).

Intensity. Search might be different depending on how intensely or deeply the organisations would use internal and external sources (Laursen, 2012). The intensity has been referred to 'search depth'. While some studies focused on the degree of search in organisational internal knowledge (Katila and Ahuja, 2002), others considered search depth "the extent of external knowledge sources that the focal firm draws upon deeply" (Trantopoulos et al., 2017, p.292).

Process. Search is a process (Paananen, 2012). It consists of a series of activities and resources directed to an end such as innovation and product development (Martini, Neirotti and Appio, 2017). Therefore, search does not have a stable state, it is emerging and ongoing.

In what follows, I present the findings explaining how the digital organisation interacts with its consumers, how it allows ‘pre-emptive’ forms of interaction with these consumers, how new forms of experts are managing the new approaches, how the organisation responds to changes in the digital platforms, and how these lead to organisation’s reflexive practice. Afterwards, the chapter concludes by presenting a discussion of how the empirical findings speak to the literature about the nature of IT and organisations’ digital transformations, particularly.

6.3 Findings

In exploring how digital technologies are transforming organisations, I explain the changes as ‘*search*’, which has two dimensions: ‘*external search*’ and ‘*internal search*’. I have found that the organisation has developed new approaches that shape the elements of the external search, which then brings about internal search. In the following, I characterise the elements of this new phenomenon and explain how the organisation operationalises external and internal search.

6.3.1 Establishing New Approaches

One dimension of search is *external search*, in which the organisation develops a series of new approaches to perform search in relation to its external environment (consumers and platforms). These approaches include: facilitating and comprehending consumer search, developing relationship with influential consumers, creating new discovery agents, fostering pre-emptive forms of actions, and responding to platform changes.

6.3.1.1 Comprehending Consumer Search

The consumer is at the heart of the digital organisation. In its interactions with customers, it is they who are at the centre of these changes. Everything is constructed or configured around the way that the customer approaches these systems. In this case, this was evident

because most things seem to spring from their search. By entering a few commands, perusing through a large number of interconnected (API-enabled) information sources, to search for a flight or hotel, they set in chain of various events. I identify some aspects of their search process.

Their search is heterogeneous e.g. there are a variety of ways in which these initial search processes occur. Consumers might organise their search around a specific product or brand or a competitor. Alternatively, their search may be much broader e.g. organised around a ‘category’ of product. In my case study, for example, consumers might search for flights to a destination on search engines or TSE’s platform. They might search for travelling to a particular destination but not specifically for flights, hotels or car hires; or they might be searching more generally for ideas how to spend their time over holiday periods. This is reflected in how TSE’s platform has evolved over the past few years from purely a search platform to a platform that the customers can be informed and inspired to search for travel (based on virtual observation notes). According to digital media manager 2:

The needs of our users are diverse the way they search on our website. Not only we design pages for keyword searches and SEO purposes, but our team develops more and more new content to educate our users but also inspire them to travel to new places (so that they search on our platform) (digital media manager 2, interviewed 26th January 2017)

In conducting these searches, consumers are not locked into any one platform (e.g. they move across and between different technical options when conducting search). Searches can be conducted on search engines such as Google, Bing, Yahoo, Yandex in Russia, Naver in South Korea, Baidu in China or on social media platforms such as Facebook, Weibo, VK, YouTube, etc. Moreover, more searches are conducted on social media sites, for example, YouTube has been regarded as the second largest search engine. This was noted by Expert 4 that “social media is very integrated into Google Search results. So, people have become comfortable with the idea that this information is out there on these social platforms and they trust the information on these platforms” (interviewed 23rd February 2017).

The consumer search process is not a one-off but endures over time (e.g. it is core in all stages of the consumer journey): consumers rely on search platforms throughout their journey from finding the products/services to making their purchase and post-purchase engagements. In the case of TSE, coherent bonds are created through connections between elements of data, product and growth and mapping the users' journey, identifying their problems and solving them through content and product design and personalisation engine (TSE's documents).

Search is not limited to consumers; however, it increasingly dictates how the digital organisation interacts with its customers. A consumer search is a 'trigger' that once detected, it initiates an organisational response. Internal actors will themselves search to understand what the customer is attempting to consume. The content manager 2 explains the importance of this understanding: "we try to understand how the users are looking for - the information; I think that's the most important thing to understand - how the users are consuming their content, how they get their information and how they find it" (interviewed 10th August 2016).

This search is the core of the new expertise of 'content managers' to produce the content that users will actually be able to find and then consume it. Social media manager 4 also asserts how users' needs and interests play a role in creating valuable content for them:

When it comes to creating content, it starts from understanding what people are interested in, what problems they have, what needs of travellers exist in the market that they search... for Russian travellers, the big problem is to get visas to travel, when we realised that it is a really big issue that can easily hold off you from travelling, we built a tool called visa tool (social media manager 4, interviewed 11th August 2016)

Understanding consumers' search constitutes not only what customers are searching for but also how they search, on what platforms they search and what devices are used for their search. For example, the outcome of publishing a YouTube video by an influencer (YouTuber) in South Korea was measured and it revealed a growth in TSE's brand keyword search, organic sessions and sessions from Google paid search. According to TSE's Business Operations and Strategy Team, Google is more likely to be selected by YouTube users compared to local search engines (Naver in South Korea). They found that

'Korean users usually watch the video on mobile, while they refer to their PC for further search. The key to the success of the video in Korean market was cross-device and mobile customisation' (TSE's documents).

The process of how TSE understands its consumers' search is complex as content manager 1 expresses the challenges in predicting what type of content to plan for and create:

Sometimes you think things are not going to work and they work or that you think they are going to work and they don't... we do analyses and we run keyword research to find out if a topic had a lot of searches and there is interest, and [in that case] the data was telling us that it didn't have that much of interest, we wrote the article and the article is out-performing...So it is not an exact science and it's very difficult to measure, and it's very difficult to predict sometimes (content manager 1, interviewed 5th July 2016)

In this regard, experimentation is an important part of social media managers and content managers' job. According to TSE's Head of experimentation:

To understand how users see changes in products or campaigns, experimentation is key. We establish causality about such changes to continuously improve them, to match the needs of travellers from the right target audience and we make decisions based on evidence (TSE's Documents)

6.3.1.2 Developing Relationship with Influential Consumers

The networked structure of the digital search platforms has allowed the emergence of a new category of consumers, referred to 'influencers', who are usually followed by a large number of users and can have a large impact on their network. The emergence and growth of such influential users indicates the increasing demand of consumers for information (content) search. Through such content, the influencers make a difference to (or hold sway over) brands' offerings. Therefore, TSE developed certain processes and activities, called influencer marketing, to search for such influencer consumers and collaborate with them. In one of our expert interviews, expert 2 explained the practice of 'influencer marketing':

Influencer marketing or earned media, it's how to position a company in the market as a leading brand and how to help them have a say rather than spending a lot of money on advertisement...you need to build relationships with social media influencers, with those people who can influence their followers either to follow you or try your business or try your product. And when you tap into their network...the benefit is that you are

getting the return of investment where you are acquiring customers through a message which we call 'it's what they love to do' (expert 2, interviewed 26th October 2016)

In TSE, Indonesia marketing team started working with 'influencers' four years prior to the time of the interviews, initially with bloggers and Twitter influencers (TSE's documents). Subsequent to the success of such activities in Indonesia, TSE expanded the practice globally by creating an 'influencer marketing manager' and later 'global head of influencer marketing' role with a mission to create and grow a "global social influencer network". The global head of influencer marketing at TSE (the former Indonesia marketing manager) explains the origin of their practice:

Back then we had what we used to call buzzers...Indonesia is one of the biggest Twitter countries in the world... So, I decided to focus most of my attention into Twitter. I started to do a few things with some of the buzzers...then I saw that it was very ROI positive and then at the same time, we were able to use their influence to tap onto their audience and get their audience to eventually follow us. Then, I decided to focus less on the traditional PR [public relations] and more on influencers, bloggers (global head of influencer marketing, interviewed 15th February 2017)

Being able to track the activities and measure their effect and by observing the positive outcomes of the initial influencer marketing activities, the (then) Indonesia marketing manager started shifting the focus from more traditional approaches such as PR activities more towards working with influencers:

We started with one off bloggers, buzzers and then eventually decided we're going to do a proper meeting, the way we do with journalists. So, I sort of reduce the budget that we normally spend on journalists and put that budget into investing in creating a bigger network with local bloggers (global head of influencer marketing, interviewed 15th February 2017)

Subsequent to the success of such activities in Indonesia, TSE expanded the practice globally by creating an 'influencer marketing manager' role, which subsequently turned to the 'global head of influencer marketing', with a mission to create and grow a "global social influencer network". To manage this network globally, TSE has developed an in-house influencer relationship management system that establishes, manages and tracks relationships and projects with influencers.

6.3.1.3 Fostering Pre-emptive Forms of Action

Search encourages pre-emptive forms of interaction. Organisational actors are trying to answer the customer query before the query is made in hoping when the consumer eventually comes to search with intent, the organisation is ready e.g. to meet their needs. Social media managers use specific platforms of '*listening*' (such as Sprinklr) that help them understand the major conversation trends on social media. As social media manager 2 describes, "what you do on social media is not only talk; you actually listen. The main thing is that you listen to what the conversations are about, what it is that people are looking for, what it is that people are interested in" (social media manager 2, interviewed 25th July 2016).

The practice of '*listening*' is very important for social media managers, content managers and influencer marketing managers. For instance, they are able to find out what users are interested in, what they are talking about their brand or their competitors' brand or any related topic and classify them into specific niches. Based on the result of '*listening*', they are able to establish specific campaigns or create relevant and useful content for specific niche markets. For example, social media manager 1 asserts how users' comments and posts on TSE's Facebook page can provide insight for them. He states that "in this way of communication, you don't need to talk to 100 people to understand what people think about TSE, you just need to go to TSE's Facebook page and read about it. I think that's the game changer in many ways" (social media manager 1, interviewed 18th July 2016).

Social media manager 4 also suggests any type of content they create is based on what their users search for. He explains that "we start from listening, then creating content based on what people want and it doesn't necessarily have to be social media posts; content can be based on searches in different search engines such as Google and Yandex" (interviewed 11th August 2016).

'Listening' in itself is a complex search process, in which organisational actors make queries about specific topics, specific products, specific markets and different temporal and spatial aspects, etc. to find the ongoing conversations about those and gain knowledge of consumers' sub-categories. Expert 3 explains this process of listening:

It's a method where you set up a query and a query could be keywords, hashtags and brands and everything around it. And you would plug it into the platform, specifying which time frame you want to listen for and what platforms and what geographic areas, languages, so there are quite a lot of filters you have to put in, and with that you listen to that and you get insight, you have all this data, then what does it all mean? what does it mean that this person is an influencer and is talking about this? So, you analyse that (Expert 3, interviewed 23rd November 2016)

According to Expert 3 (Sprinklr's Senior insights analyst manager), 'listening' can be used for specific purposes in campaigns and projects or for gaining insight about a particular topic that the brand is interested in:

A lot of the times you want to listen for what people talk about in general. You can be listening also to what people say about your brand specifically, or what do they say about competitors, what do they say about, a topic that you might be as a brand interested in that, so sometimes it's just about gaining an understanding of what people are interested in (Expert 3, interviewed 23rd November 2016)

At TSE, various approaches and technologies are being used for 'listening'. In addition to Sprinklr's listening function, social media manager 5 points out that using Buzzsumo and Reddit assists her in understanding trending topic on different social media platforms.

We have a tool called Buzzsumo, which lets us check trending topics that are happening both on Facebook and Twitter because they are very different in most cases and you have to care to both, and Reddit, it also shows what the general public are talking about in a lot of cases that you don't really know about (social media manager 5, interviewed 2nd February 2017)

One specific application of '*listening*' is in influencer marketing management to find influential users in niche markets on different platforms and collaborate with them. TSE's global head of influencer marketing explains:

Rand Fishkin, he is an SEO guru, one of his quotes is "don't build links, build relationships". We know that Google algorithm has two side of it, you've got the whole machine side of things and you've got the human side of things and that's where influencer marketing actually comes into the human side of the Google algorithm (global head of influencer marketing, interviewed 20th March 2017)

In a conference presentation with bloggers (influencers), she explains that TSE's influencer marketing practice is not just the latest trending marketing practice, but data

has shown that it is a very effective approach. She states that “influencer marketing is not a game of chance, it's strategic investment in influential content creators to support our bottom-line results” (conference presentation, November 2016). But the question is how TSE identifies such influencers, build relationship with them and work with them. TSE’s global head of influencer marketing explains their criteria for identifying influencers:

YouTubers, and Instagrammers, bloggers. The criteria of the right influencers from TSE perspective would be someone who has got good knowledge about the brand, somebody who is a user, who is an advocate, somebody who has strong authority in a relevant subject matter [travel in the case of TSE], somebody who had a loyal audience that fits into the brand’s target audience, somebody who has skill in content creation, somebody who has a sense of marketing, somebody who has a decent number of following and a good engagement rate (global head of influencer marketing, interviewed 15th February 2017)

In this process, the content managers and social media managers use various platforms such as Sprinklr or Buzzsumo to listen to the ongoing conversations on different social media platforms and analytics platforms such as Google Analytics to see which users meet the criteria. TSE’s global head of influencer marketing asserts:

with Google Analytics you can see the referral traffic. Through the referral traffic, you can then manually identify bloggers that are already referring traffic to you...looking at different platforms, there is content platforms like Buzzsumo for example, so you decide on a particular topic and you see who are the people who are talking about it and who's got most authority in a particular topic and then you could identify that (global head of influencer marketing, interviewed 15th February 2017)

6.3.1.4 Reacting to Platform Changes

Technologies of digital and social media are not inside but outside (and outside the control of) organisations and organisational actors need to continuously respond to changes in platforms and their algorithms on which they have little control or say. For example, the series of changes in Facebook News Feed algorithm²⁴ have imposed bigger challenges for marketers to compete for the space on the users’ News Feed. Social media manager 1 shared his experience of how the introduction of Facebook videos affected their actions:

²⁴ <https://newsroom.fb.com/news/category/news-feed-fyi/>

a year ago, we saw a huge drop in 'reach' in the Spanish market and we didn't know why this was happening as we were publishing the same number and type of posts...we asked Facebook and they really didn't know why...At that time, we found out that they try to move people from engagement more to videos. So, we started to publish more videos and visual content and the 'reach' at the end started to grow (social media manager 1, interviewed 23rd November 2016)

Therefore, he adds that they need to change their metrics in measuring the impacts of social media content as they would shift depending on new features and functions and their weight in Facebook's algorithm. In this regard, he states that "at the moment, what Facebook calls 'reach'...is not our main focus in many ways, it's something that is controlled by their algorithm. So, for us as a metric, it's not always the best way to know if our content is useful for the users".

On the other hand, the continuous developments in the digital platforms requires learning new skills continuously. Social media advertising manager 1 points out that:

there are so many changes, sometimes it can get exhausting, you are not really capable to follow every single thing that is going on, but I think on the other hand it steaches you filter the data and filter the information, you just need to sometimes cut the noise, so I'm not going to read about changes to lead ads because I'm not working on that just now, if I'm going to do that then I'm going to upskill (social media manager 1, interviewed 23rd November 2016)

Although platforms' changes might require learning new skills, in the case of platforms launching new features, organisational experts should be quick and reactive to such changes, as social media manager 5 describes this when Facebook launched its live broadcasting function:

for Facebook live, for example, when launched in the UK, we went outside and filmed walking around [the city] aimlessly. So, it was reactive, and it probably could have been done with a bit of polishing, but it meant that we could at least try the platform out and it also worked in our advantage, because Facebook giving most attention to anyone who is doing live streaming videos, so it meant you bumped up in the algorithms. So, it's just the case of jumping as soon as you see something's happening (social media manager 5, interviewed 2nd February 2017)

Not only the new experts think should stay up to date about the changes and act on them to learn new skills, they should also be reactive by improvising swift solutions. Because

as described by social media manager 5, adopting platforms' new features are sometimes about being timely rather than offering high quality content.

6.3.1.5 Re-designing the Interface

Moreover, search is reshaping the Human-Computer-Interface. As the search for new ways of conducting search itself (such as conversation search and voice search) is growing, this is reshaping how consumers consult with the digital organisation. This includes continuous developments in digital technologies and the rise of bots and artificial intelligence (AI). The organisation I studied (TSE) is at the forefront of such developments – being one of the first companies to design search bots for Facebook Messenger, Telegram and Skype, and voice search skills for Amazon's Alexa and Microsoft's Cortana.

Figure 6-1 shows that TSE designs and integrates various interfaces such as messaging and voice into its search platform. TSE's social media manager 8 explains that “more and more searches will be done via the bots or via voice search as we progress into the future, so we need to be at the front of that curve and also we like to create strong relationship with the tech companies”.

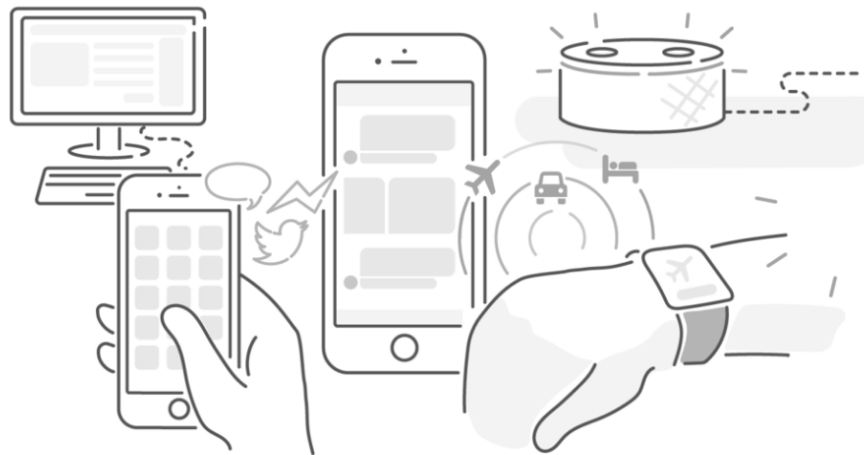


Figure 6-1 TSE's Interfaces: Web, Mobile, Messaging, and Voice [Based on TSE's documents]

Conversation is the core of text and voice search as the Head of Facebook messenger at Dublin Web Summit 2015, highlighted the importance of conversations before the web

era that is reflected in new search media. As the TSE's Bot team technical manager explained:

comfort is the key criteria in software and as people are used to texting all the time, they are much more comfortable to do the search through a conversation rather than filing fields and putting filters, which takes a lot of clicking to find their answers (TSE's documents)

In this regard, TSE's Head of Bots and Conversational Search noted that they are bringing the search within the platforms that people are more increasingly interacting as they are progressively trying to find their answers more quickly and easily and he refers to this as the "era of messaging revolution" (TSE's documents).

6.3.2 How *External* search informs *Internal* search

In the previous sections, I indicated how the organisation operationalises search through developing new approaches. In this section, I highlight how such new developments facilitate the organisation's search in relation to its internal environment. In the following, I explain how the organisation perform internal search through creating new discovery agents, disrupting their current routines and adapting and changing their current ways of working.

6.3.2.1 *Creating New Discovery Agents*

The operationalisation of search activities that I described in the above sections is performed by the new categories of experts in digital marketing. These encompass various organisational actors dealing with social and digital media platforms: social media managers, content managers, influencer marketing manager, digital media managers and social media advertising managers. These new experts are continuously (re)innovating to perform their roles. In doing so, and talking to these actors, they would often describe it as a '*search for unknowns*'. For example, the global head of influencer marketing describes this as "there's a lot of learnings that you can't actually just Google and find, so I had to build training materials, how-to guides, all these things that you just don't find anywhere".

In other words, they are finding their way by experimenting and, trial and error, which offers them more agility. TSE's Head of experimentation explains the A/B testing in their approach:

as an approach to test an idea considering a change in some elements of products (for example, a piece of content on social media (B)) and controlling for other factors (A) to establish a hypothesis and run the experiment for a period of time to test the hypothesis with real data...the goal of experimentation is to learn and if we want to learn, we have to predict things in advance and get trustworthy data from our A/B tests (TSE's Documents)

Therefore, experimentation and learning from A/B tests is particularly important in TSE. In this regard, social media manager 2 asserts the importance of A/B testing in her practice:

About A/B testing, so, something very simple could be I just simply want to understand which copy [of the text] works better. I have identified, for example, that on Monday morning I get most response with a specific call to action, but for example, I want to try whether a different call to action would work with the same image, I would just post it at the same time using different copies, and this goes for many things... we just test, I would say, 70% of what we are doing (social media manager 2, interviewed 25th July 2016)

An example of such practice is the case of a campaign I observed on Facebook and in one of TSE's blogs by the Australia and New Zealand social media manager. The initial effort to test three ideas by the Australia and New Zealand squad for a Christmas campaign did not yield much interest by the users. Analysing the data and utilising other sources of data, the team changed the idea of Christmas to holidays in January. Using Facebook's ad targeting and Audience Insights functions, they were able to decide on the target audience with minimum cost through third party ads manager technology (Smartly). Subsequent to the initial success of the concept, they created the minimum viable product (MVP) for the whole year, the MVP performed well and received the attention of the large media outlets as well. The social media manager asserts this is due to the use of data and validations before the large-scale implementation (virtual observation notes and TSE's document).

6.3.2.2 *Disrupting Current Routines*

In the search process and to maintain the capacity of search, one ability that the organisation develops is learning to unlearn. The domain of digital and social media platforms is highly dynamic and according to the interviewees, in order to remain relevant, the organisational knowledge should be regenerated. Social media manager 2 describes this fluidity and that things might be performed differently even within the timespan of one week:

The nature of social media being something that is not fixed, it's very fluid, there is a tremendous development as you see with lots of new platforms gathering momentum. You have to stay on your toes as well, you cannot rely on the one thing that has worked this week might go down well next week (social media manager 2, interviewed 25th July 2016)

In this regard, organisational actors, as stated by social media manager 3, create “constructive disruption” to respond to the fast-changing digital environment and constantly create new growth opportunities. She describes that experimenting on social media platforms provided them the enlightening lesson that they should not limit themselves to ‘best practices’ on search technologies:

At TSE, we urge ourselves to create ‘constructive disruption’ and I think this is where questioning best practice happens. It can be uncomfortable and difficult to challenge best practices, but the digital world is changing so rapidly that maintaining the same practices for long can increase the risk of missing the growth opportunities. So, we should continue disrupting (social media manager 3, interviewed 27th July 2016)

Thus, these experts need to learn not to lock into their earlier practices and to be able to search for and recognise new opportunities. In this process and in experimenting to identify new opportunities, the outcome might not always be as intended (in other words, the experimentation can fail). In TSE, all experts are urged to conduct experiments and the core of experimentation is ‘learning’, which is valued. Thus, they celebrate failure in what they call ‘fail forward’. This means that the learning from the experiment should drive a ‘pivot’ with the minimum waste of resources. According to social media manager 5:

Everything's done on quite small scale and then you leave it for the dedicated time period...as the validation to prove whether something has worked or not...there are quite a lot of things that happening here before the project even gets off the ground and then once it's taken off the ground, you have to scrutinise it and whether you see something is failing you can pivot, so you can try something different and see if you can make it work instead but failure is also not a bad thing here. There is a whole 'fail forward' and fail fast mentality (social media manager 5, interviewed 2nd February 2017)

According to the interviewees, in this process of experimenting and learning, the focus of their roles might shift as well. For example, the social media advertising manager 1 explains this shift:

My role changed from overall social media campaign person towards someone who is focusing on specifically mobile app campaigns or any type of advertising around mobile apps that can be done on social media. So, on a daily basis, I would manage the campaigns that we have for acquiring new app installs, new users for our apps, this also involves a lot of research around data and user behaviour (social media advertising manager 1, interviewed 27th October 2016)

This also illustrates that the organisation is continuously changing the focus of new experts' roles and teams and redefining priorities.

6.3.2.3 Adapting and Changing

Search is not just an individual activity but highly distributed and 'socialised' throughout the organisation. As I highlighted in the previous sections, individual experts are innovating in different areas of digital and social media such as social content management, social engagement with customers, influencer marketing management, social media advertising, and social media analytics. Individual interactions are aggregated when individuals are organised into *teams* and search begins to occur through the collaboration of team members who specialise in multiple areas of digital and social media. For example, a market (country) level marketing team (squad, as TSE calls it) is constituted by a marketing manager, a social media manager, a content manager and a PR manager. Social media manager 8 emphasises that "it's super important to understand that social is kind of a channel or group of channels that permeates through all the other

channels and can be a sort of touch point in many different ways” (interviewed 13th July 2016).

Therefore, it is seen essential for TSE to make sure all individuals working in different areas of marketing work together and not in silos. The members of squads (a cross-functional team) and chapters (functions) hold daily stand-up or weekly meetings respectively. As I explained in Chapter 4, such collaboration and knowledge sharing also occurs online through utilising collaborative technologies such as Trello, Jira, SharePoint, Slack and Skype for Business.

In addition, search occurs at the level of the *organisation*. Search is never still but continuously reinventing itself through ‘organisational change’ e.g. the re-structuring of teams, the re-combining and re-mobilising of resources, and a redefinition of priorities. The Expert 3 suggests that working in the era of digital technologies requires different working approaches and she explains how Sprinklr as a technology helps organisations achieve that:

It’s a different way of working I guess [in the social and digital media era]. Sprinklr as a company helps other companies to move beyond teams working in silos and working independently to move to a company that has all the teams working together and collaborating and a lot of the times not duplicating the work (Expert 3, interviewed 23rd November 2016)

As it was explained in Chapter 3, TSE went through a restructuring, shifting from a functional structure to a team-based structure of tribes and squads. According to TSE’s documents and interviews about this major change in the organisational structure, they found that more collaboration and direct communication were needed between several functions such as social media and PR or analytics and other marketing areas. One member of the Business Operation and Strategy squad notes that ‘in search for more efficiency and agility, TSE moved away from functional structure to cross functional team-based structure called squads to become more lean and agile and allow for autonomy (TSE’s Documents).

The impact of such changes in TSE's structure and ways of working has been explained by the digital media manager 1:

I think the processes become a lot more streamlined, we did get a lot of access to engineering and analytics, which was absolutely brilliant. It did help to accomplish a lot of things, and introduction of lean methodologies was also really really helpful...I must say that TSE has been very very efficient in regrouping and restructuring to make it easier to work (digital media manager 1, interviewed 16th December 2016)

As the quote above indicates, TSE has effectively advanced this reflective form of behaviours throughout the organisation to allow the continuous reconsiderations of practices and recognise the areas for change.

6.4 Discussion: The Search Phenomenon

In this chapter I have sought to work up the idea of 'search' in order to throw new light on the recent discussions on digital transformations. The interest in search is, in part, a response to Orlikowski and Scott's (2016) invitation to study digital forms of work and organisation "dynamically in action". It is also an effort to characterise how organisations have been searching in order to tackle the challenges associated with (they and especially their customers) becoming digital.

The literature of organisational search is useful here as it primarily discusses search in responding to known and defined problems (Madsen and Desai, 2010; Huber, 1991). However, Stark's (2011) conception of search is different (and based on Lester and Piore's (2009) interpretive search) as he points to how often the problem is not clear. This notion seems to usefully transfer to digital transformation and workings of algorithm-based platforms (which are said to be inscrutable).

Through drawing from the case study's qualitative data, I have identified how one exemplary digital platform provider is reorganising itself around search. The fieldwork data showed that there were four elements (depicted in Figure 6-2) to this reorganisation: how it i) *seeks to understand and make sense of consumer search* on its platform ii) the emergence of *occupational groups who create new knowledge* about these search processes iii) how this knowledge allows the organisation to *act pre-emptively* towards its

consumers and others, and finally, how, because many of the technologies of search are outside its control, iv) it finds itself *responding to external changes*.

6.4.1 Facilitating and Comprehending Consumer Search

Digital organisations foster consumer search processes (e.g. they set up the organisation to both enable and understand the search process). This means, since everything begins with their search, the consumer is at the centre of the organisation. Scholars have already noted digital era consumers have become more demanding in terms of expectations (of being “well-informed, spoiled and empowered” (Granados and Gupta, 2013, p.637)). This contrasts with previous enterprise system logics where the consumer was ‘managed’ or ‘configured’ (Woolgar, 1990) within/by the system. Moreover, a further consequence of the new search is that consumers are now endowed with new capacities and roles. For instance, in terms of the latter, it was shown how platforms foster the emergence of a new category of consumer, the ‘influencer’. Influencers are customers who have attracted large numbers of social media followers and thus as a result hold sway over the digital organisation.

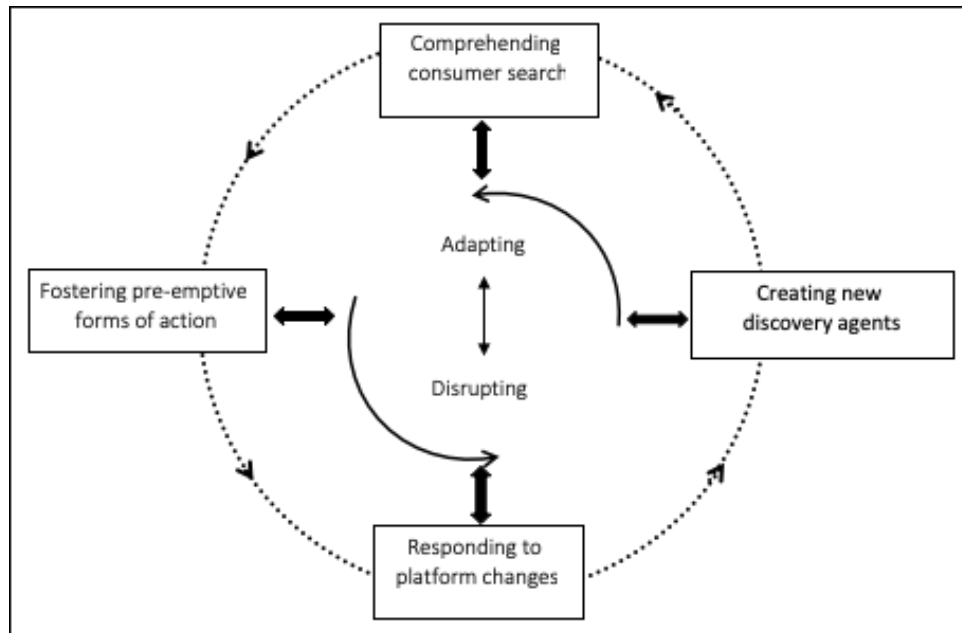


Figure 6-2 The Search Phenomenon

6.4.2 Search allows Organisations to Act Pre-emptively Towards Consumers

Search is an intrinsically forward-looking process. Whilst in previous computer generations (such as ERP), the technology is generally considered to be looking back (at combined records of previous activity), search, by contrast, encourages pre-emptive forms of interaction. The new experts described in this thesis specialise in finding various ways of engaging and interacting with consumers to create value (Keen and Williams, 2013). I described how they were constantly ‘listening’ in an effort to foster new interactions. I also identified how listening was itself a complex search process where organisational experts queried information systems and platforms in order to pick out patterns and then respond based on their understanding of this information.

6.4.3 Search Means Responding to Platform Changes

Search technologies do not reside exclusively within organisations but are also (perhaps overwhelmingly) outside. This means that organisational experts are continuously responding to the changes in platforms and algorithms. Contrasting with the previous enterprise systems paradigm, the organisation has little or no ‘control’ over how these important platforms or their dynamic algorithms are developed. Whilst there was often much back and forth between the adopting organisation and the enterprise system vendor, for instance, it was generally accepted that it was the adopting organisation who had control over its own IT systems (Hanseth, Ciborra and Braa, 2001). This no longer seems to be the case where it is the platform owners who decide the pace and direction of changes.

6.4.4 Search Demands New Discovery Agents

Search demands new discovery agents. We see the emergence of *new discovery agents* to help the organisation manage and respond to these search processes. The case organisation developed new techniques in understanding what consumers are searching for, how they are conducting searches, and on what platforms and devices they are searching etc. Scholars have already noted how the digital organisation requires new talent (Horlacher and Hess, 2016; Keen and Williams, 2013), but I take this further by showing the specific

kinds of new expert agents being spawned within organisations. These agents - such as ‘content managers’, ‘social media managers’, ‘social media advertising managers’, ‘digital media managers’ and ‘influencer marketing managers’ – attempt to understand the specifics of consumer search (what content they are interested in), to search for and attempt to ‘build relationships’ with those consumers who make a difference (the ‘influencers’ who hold sway over others).

Another aspect to developing this search and discovery expertise is ‘who’ does this work. A key difference from previous generations of systems is who owns and controls the new systems. If ‘integration’ (of data across the organisation) is what IT departments do, then ‘search’ is what non-IT people do. Since search technologies do not require complex computing knowledge, it is no longer the traditional IT experts at the frontline. Rather, various organisational actors outside the IT department now deal with digital platforms. In so doing, we saw how these actors were continuously (re)innovating to perform their roles. In talking to these actors, they would often describe themselves involved in a steep learning curve and how their job involved much grappling around in the dark (*search for unknowns*).

6.4.5 Search Drives Organisation’s Dynamic Reflective Actions

This chapter also showed that together these four elements drive the organisation to continuously create disruptions and make adaptations that lead to changes in how external search practices are carried out. This is because unlike previous forms of search (regarding knowledge management and organisational learning), the organisations do not know what they are looking for. Thus, in the search for unexpected opportunities (Dewey, 1998) such as a sudden change in a platform’s algorithm, they need also to develop interpretive capabilities (Lester and Piore, 2009). In this process, the organisation delimits itself in finding best solutions and closure because the type of search that the organisation deals with is not problemistic search (in addressing known problems or underperformance) (Madsen and Desai, 2010). Rather, they create productive disturbances and they learn the ability to unlearn (Stark, 2011) in finding other and novel ways of handling the elements of search (described above). Thus, through dynamic intertwinement of disrupting and

changing, they adapt existing practices and business as usual and constantly creating new usuals and new best practices. Therefore, the organisation becomes more reflexive and is capable of generating new knowledge.

This chapter along with the previous two chapters presented the empirical findings of this case study research. First, Chapter 4 offered an initial discussion about the range of issues the organisation deals with highlighting the dynamic character of digital platforms and digitalisation beyond organisational settings that have given rise to new types of users (extended users). The chapter discussed how the organisation develops new work practices through the assumptions and knowledge about the technologies and extended users, working mechanisms and norms, and facilities. It also explained that these work practices are mutable and constantly changing as the platform dynamics and the extended user practices lead to the ongoing reconfigurations of the assumptions, knowledge, and working norms of the organisation. Second, Chapter 5 presented an in-depth discussion of how new expertise has emerged in the organisation with regards to the new forms of digital technologies. Unlike the discussions of occupational rivalry and focusing on the doings of the new experts, it discussed three mechanisms of hybridisation, data-driven approach and experimentation through which they work and develop their expertise. Finally, this chapter (Chapter 6) described the changes in the organisation as search, through which they develop new approaches to manage the new forms of technologies and their users. In the next chapter, I will discuss the findings of the three empirical chapters together and how they can help us in understanding the digital transformation of organisations.

7 Chapter Seven: Organisational Digital Transformation in Action: Towards a Theory of ‘Search’

7.1 Introduction

The objective of this thesis was to provide an understanding of organisational digital transformation regarding work practices, emerging expertise and organising approaches. The study was grounded in the Information Systems (IS) literature in response to the recent discussions that organisations are experiencing a paradigm shift in their business and Information Technology (IT) management (Mckelvey, Anderson and Yoo, 2016; Urbach, Drews and Ross, 2017) as digital technologies are reconfiguring products, services, customer experiences, business processes and business models. Thus, it builds on the IS discipline in exploring the various ways that digital technologies (e.g. social media platforms) are changing organisations. It also provides insights, not so common in the rush to welcome in new technologies, by looking back at the previous forms of IT (e.g. enterprise systems) and reflecting on what they tell us about the potential implications for organisations today.

Since these new digital technologies are unlike existing predominately ‘inward’ facing systems discussed by IS researchers and facing outwards towards customers to deal with customer engagement and interaction (Kannan and Li, 2017, p.23), this study also draws upon ideas from Marketing and Organisation Studies. Building an interdisciplinary understanding – bringing together recent discussions in both IS and Marketing – is of growing importance in this area (Kannan and Li, 2017; Goes, 2014).

Focusing on the transformative role of these customer-facing technologies, the thesis will contribute primarily to the IS literature by explaining how work practices emerge, and how they are then reconfigured in relation to consumers practices. The thesis will also contribute to Marketing, which has produced mostly quantitative impact studies of these

technologies, by showing how new occupational groupings and expertise have developed to herald in these technologies.

In the previous chapters, I have narrated three descriptions of the case study findings: (i) the dynamic character of digital technologies and extended user practices, (ii) the new expertise in relation to digital technologies, and (iii) the particular approaches developed by organisation in managing the platforms and what I have described as extended users. Bringing these descriptions together has allowed me to identify a fourth larger, and perhaps more important shift – the emergence of a new organising logic of digital transformation. The aim of this chapter is to bring these three themes together, to shed light on the specific practices of digital transformation and how these changes are themselves being (re)configured and co-constituted by other elements (such as extended users and platforms dynamics). In the following sections, I discuss the three main focal points of the study:

- First, the emergence of digital work practices and how they are forming knowledge and assumptions, establishing norms of practice and facilities.
- Second, the role of dynamic digital technologies and extended user practices, and how they play a role in continuously reconfiguring organisational work practices.
- Third, the development of new expertise surrounding digital technologies and various ways that the organisation facilitates the development of such expertise.

Subsequently, I will bring together these ideas to discuss a new logic and how it is changing the ways that digital organisations relate to their customers (extended users), how they manage the development of algorithm-based platforms, and internal dynamics of digital organisations. This is followed by a discussion of the generativity of this logic that I will call ‘search’. After this, I will discuss how the findings link to the literature on the previous generations of transformative information technologies (e.g. enterprise systems) from which we have much to learn (this being a limitation of current research on digital technologies which tends to forget this lesson). Finally, the chapter concludes by presenting a summary of the discussions.

7.2 Extended User Practices in Digital Organisations' Work Practices

Extant literature has pointed to how digital technologies have unique characteristics that have brought forth experiential computing (Yoo, 2010) and digitalisation, both at the individual and organisational level (Yoo et al., 2012). One key argument of this thesis is that we are witnessing unprecedented levels of change for individuals/organisations (as compared to, for instance, previous generations of IT). The in-depth investigation of practices in a digital organisation, described here, shows that in order to handle digital platforms, organisations must institute new norms and working mechanisms, they must construct facilities, and organisational actors must build their knowledge and assumptions of the technology and its users.

Prevalent perspectives in marketing simplistically consider these technologies as new types of *tools* or *channels* of communication (along the same lines they considered previous types of channels such as TV or print) (Kumar et al., 2016; Batra and Keller, 2016). For instance, marketing studies have explored various ways that organisations or marketers use these technologies to enhance their relationship with the users (Rishika et al., 2013; Malthouse et al., 2013), to promote their loyalty (Thompson and Sinha, 2008; Wu, Fan and Zhao, 2017), or to increase their visits and spending on the organisation's products and services (Kumar et al., 2016). Thus, this body of research focuses on the impacts of using these technologies by marketers on consumers' behaviour (producing what I have described as 'impact studies').

Although some of these marketing studies acknowledge the more active role of consumer users in newer forms of communications (Ordenes et al., 2018; Kumar et al., 2016), by focusing on a 'tool-view' of the technology, they do not consider the ways that these users are empowered (Yoo, 2010; Granados and Gupta, 2013) to play a more substantial role in reconfiguring everyday practices of marketing in the organisation. Moreover, this view does not consider the materiality of the technology and how it constitutes the practice. Hence, in short, it only provides a limited understanding of the phenomenon.

Unlike the tool-view, this thesis takes a relational view of the technology (Orlikowski and Scott, 2008; Orlikowski, 2007, 2009). Furthermore, it has sought to demonstrate how the social and material practices of individual users shape the sociomaterial practice of the digital organisation. Thus, it has introduced a fresh conception of technology users as ‘extended user’, showing the accentuated role that these external individual users play in organisations users’ work practices. What this thesis has found important to consider is not only how the composition of the technology is constantly changing due to its algorithmic base and new feature releases by platform developers, but also how extended users actuate functions and features of the platforms differently (Kallinikos, Aaltonen and Marton, 2013). This suggests that organisational work practices are in a mutable state, given that the organisational actors are constantly (re)configuring their knowledge and assumptions of the platforms and extended user practices.

In this sense, digital technologies are distinct from former generations of information technologies (e.g. enterprise systems) that were said to be configurable, yet, once installed and institutionalised, to have a high level of stability (e.g. Grint and Woolgar (1997) who referred to technologies as resembling ‘concrete’ that is flexible only before it sets (Koch, 2001). Orlikowski (2000, p.409) asserted that “the recurrent use of a technology is not infinitely malleable[,] [s]aying that use is situated and not confined to predefined options does not mean that it is totally open to any and all possibilities”. By contrast, I suggest that the organisational use of digital technologies is open to myriads of possibilities because of the platforms’ dynamics (Faraj, Pachidi and Sayegh, 2018; Kallinikos, Aaltonen and Marton, 2013) and the many ways that extended users actuate the various affordances of these platforms (Yoo, 2010). Therefore, the sociomaterial practices of organisational users are continuously shifting as the extended users’ practices lead to unceasing changes in the assumptions of the organisational users (experts).

Unlike existing marketing and IS studies, which show that the organisations need to manage – and perhaps ‘configure’ - the users, this study reveals that extended user practices and platforms are (re)configuring the practices and doings of organisational actors. By identifying the role of extended users in organisational use of digital

technologies, this study goes beyond the traditional organisational user-focused (Orlikowski, 2000; Vaast and Walsham, 2005; Ellway and Walsham, 2015), or more recent materiality-focused (Leonardi, 2011; Leonardi and Barley, 2008), perspectives towards technology use. Regarding the former, such studies have focused on the role of organisational users as social actors (Lamb and Kling, 2003), while the digitalisation trends have extended the use of technologies to non-organisational and daily individual activities (Yoo, 2010; Yoo et al., 2012). The study also furthers the latter stream by identifying the important role of extended users that goes beyond the functions and affordances of the platforms. It shows that the sociomaterial practices of extended users (re)configures the work practices of the organisational users (i.e. experts, which is explained in the following section).

Moreover, handling the mutable digital work practices requires other changes in the organisation in addition to changing the knowledge and assumptions of its organisational users. This relates to how the organisation arranges the work and defines the structure that facilitates the changing work practices. This falls in line with what studies of digital innovation (Nambisan et al., 2017; Huang et al., 2017) and lean startups (Ries, 2011a) have pointed out about higher level changes in organisations. In this regard, organisations establish more flexible organising approaches to assist the highly experimental work done by organisational users. This also illustrates that managing digital technologies extends the micro level practices of organisational experts and is socialised throughout the organisation, given that it is re-combining the functions and teams and re-mobilising the resources.

Finally, to handle such a level of dynamism, organisations adopt other technologies to allow the organisational users to access the diverse range of digital platforms from one platform and manage them. Therefore, organisations adopt social media management and data analytics technologies to enable the associated work practices. This builds on recent research highlighting the importance of organisational investment in such new technologies (e.g. social media management platforms) (Benthaus, Risius and Beck, 2016; Risius and Beck, 2015).

7.3 Development of New Expertise in Digital Organisations

Another argument of this thesis is to suggest that the current range of digital technologies requires particular skill sets and new forms of competence that differ sharply from those forms of expertise generated by previous waves of information technologies (Fitzgerald et al., 2013; Horlacher and Hess, 2016). Customer engagement and customer experience constitute the dimensions of digital transformation (Singh and Hess, 2017; Tumbas, Berente and Brocke, 2017), hence, the position of such digital transformation practices is regarded to be between IT and marketing (digital technologies are externally oriented toward customers) (Tumbas, Berente and Brocke, 2018). From the governance perspective, this has led to the growing importance of CMOs, and an emergence of CDO roles within the organisations (despite the presence of CIOs in the organisations). This new form of expertise is also different because it is outwith the IT department. Whilst IT departments have the expertise and responsibility for adoption and implementation, in the case of previous information technologies, other areas of expertise are required when it comes to digital technologies that are more oriented towards customer affairs.

Thus far, the literature has explored the rise of such new expertise in the area of organisational digital transformation from the perspective of occupational tensions between CDO and the well-established CIO roles (Haffke, Kalgovas and Benlian, 2016; Tumbas, Berente and Brocke, 2018). One problem with this is that extant literature has foregrounded these tensions and has had much less to say about what these new roles actually do. In this thesis, by contrast, I have explored the emergence of new digital expertise in the organisation (beyond the top-level governance) and from a practice perspective so as to understand what these experts do and the ways that the organisation facilitates the development of their expertise. This study has found that new digital expertise emerges and develops through the mechanisms of ‘hybridisation’, ‘data-driven approach’, and ‘experimentation’.

Hybridisation. As it has been recently pointed out in the literature, the management of customer-facing digital technologies extends beyond the realm of marketing (Kane et al., 2014b; Quesenberry, 2016). This thesis presents evidence that experts are working in

relation to digital technologies, with increasingly hybrid knowledge of different fields. Thus, there is a fusion of skills in the area of marketing and technical IT fields given that the organisational actors are extending the boundary of their expertise in marketing by having to learn about new disciplines, such as data science, in order to be able to perform in the areas of social media management, social media advertising, digital media, SEO, content management, and influencer marketing. Although the experts that I studied were specialised in one core area, they had the broadest knowledge of all, while continuing to develop their knowledge of data science.

This relates to the current debates among marketing practitioners wherein they need to develop new skills and knowledge (particularly in the areas of data science and marketing technology platforms see Moorman, 2017, 2018). Moreover, this hybridisation shows that the boundaries of marketing expertise is expanding as marketers develop knowledge of their own and other specialised areas of marketing, but also product design and data science. This particularly contributes to the discussions in the IS and Marketing literatures by showing how new experts' work is positioned between marketing and IT experience (Singh and Hess, 2017; Tumbas, Berente and Brocke, 2017, 2018), and how the expert knowledge is developed (Fitzgerald et al., 2013; Horlacher and Hess, 2016).

Data-driven approach. The second dimension of new organisational expertise is working based on analysis of large volumes of data (big data) generated through digital platforms. The marketing literature has highlighted the growing significance of measuring the outcomes of work practices in relation to externally-oriented digital platforms (Kumar et al., 2013; Hoffman and Fodor, 2010). Such discussions around measurements of marketing activities have surged regarding social media work practices, to use the data from these platforms for forecasting demands (Luo, Zhang and Duan, 2013), categorising and profiling customers (Moor and Lury, 2011), and measuring the value of advertising on these platforms (Viale, Gendron and Suddaby, 2017). This thesis offers insight concerning this central capability of digital transformation, since the organisation centralises data analytics as the underlying rationale of work practices related to digital technologies. The digital organisation needs to measure every step of the customer (user)

journey, and use such data to plan and implement further activities in relation to customers. This is key in digital transformation as it creates more intimacy with customers and consistent customer experience (Tumbas, Berente and Brocke, 2017). To realise this, the organisation employs various analytics platforms, creates multi-disciplined teams, and trains marketers to code and work with APIs to facilitate the extraction of data from a range of platforms in real-time.

More broadly, in the context of digital business, it has been suggested by Huang et al. (2017) that through the mechanism of ‘data-driven operation’, digital businesses are able to change the value creation process and scale up rapidly. They have found that data-driven work allows new ways of user profiling, which can lead to identifying opportunities and areas of innovation, while assessing the risk of those innovations more accurately. Unlike traditional marketing experts, the digital marketing experts I have studied are able to measure the value for customers in each stage of their journey and lifetime by monitoring and analysing large volumes of data from social media and other digital platforms (Viale, Gendron and Suddaby, 2017). The measurements of value for customers correspond to the overall value for the business.

Similar to the emergence of expertise in other fields (see Pollock and Williams (2015) in the case of IT industry analysts, or Preda (2009) regarding financial analysts), these digital marketing experts make ‘value’ measurable. In other words, they are able to demonstrate the value of their practices and expertise, and in doing so have become ‘value measurement experts’. This is because they are constantly working with data, and through such measurements, reflecting on what they are doing, what they are measuring, and how they are defining metrics. Through such reflections, experts move between what platforms enable them to measure and what they innovate in bringing together different means of measurements (e.g. integrating various data sources) and measuring what they think represents value, and not what is defined by platforms.

Experimentation. With the distinctive dynamic characteristics of digital platforms (Kallinikos, Aaltonen and Marton, 2013) and consumerisation of digital technologies (Yoo, 2010) as discussed in the previous section, organisational experts’ work hinges on

experimenting on any activity as part of their work practices. This is similar to how Nambisan et al. (2017, p.226) have argued about “dynamic problem–solution design pairing” as one of the assumptions in theorising digital innovation. By this they mean that the boundaries of digital innovation are fluid rather than a predefined problem solution space, they are both path dependent and path breaking, and various groups might be involved in the process of finding new problem solution pairs (Nambisan et al., 2017). Through the process of experimentation, the organisational experts manage to implement new projects - in small scales - to collect real-time data from users, and analyse the performance of their projects. Thus, with this knowledge, they are able to continuously change aspects of their projects towards better results and run them in larger scales, or close the project and learn from the experience.

These three mechanisms of ‘hybridisation’, ‘data-driven approach’, and ‘experimentation’ mutually influence each other. The case study data showed that experts could find more accurate ways of measuring values for customers and organisations through continuous experimentation, resulting in the conduct of further experiments. Thus, this two-way relationship between data-driven approach and experimentation enable the experts to find new opportunities which lead to higher levels of growth for the organisation. Similarly, the necessity of working with data creates the need for hybridised expertise, and the more knowledgeable the experts become, they can find better ways of data manipulation and analytics. This creates a harmony between automation and human intervention and interpretation to use automation in creating quicker ways of accessing data. It also avoids automation when there is a need for human interpretation and interaction with customers. In addition, ongoing iterations of experiments drive hybridised expertise. This enables continuous learning, leading to better experiments. These cycles of iterative learning and increasingly diverse knowledge enhance customer experience.

Overall, this contributes to the recent discussions in IS and Marketing that these two disciplines should inform each other (Kannan and Li, 2017; Goes, 2014) since marketing has increasingly relied on technology, and as new technologies have become more and more customer-focused (e.g. social networks, social influence, personalisation, etc.).

Given that this thesis shows that marketing expertise is expanding into other areas such as data science, and as digital technologies are rapidly changing and offer new affordances of measurements; the marketing experts' primary focus is measuring value for the customers and for business enterprises. This study also builds on the discussions that organisations demand new skills in managing their digital technologies (Fitzgerald et al., 2013; Horlacher and Hess, 2016).

7.4 Search as the Logic of Digital Organisations

It is argued that algorithm-based digital platforms have the highest transformative impacts directing organisations towards a new paradigm (Urbach, Drews and Ross, 2017; Faraj, Pachidi and Sayegh, 2018). Recent research on the emerging nature of digital work posits that “algorithmic phenomena” will potentially transform how work is done in the next decade or two (Orlikowski and Scott, 2016). Arguing that such systems are ‘inscrutable’ (e.g. it is difficult to penetrate, they are ‘black-boxed’), it highlights the need to develop new ways to study this phenomenon, suggesting that algorithms can only be understood “dynamically in action”. In response to this challenge, this study has flagged how one visible manifestation of the algorithmic phenomenon is the rise of ‘search’ processes. As described in Chapter 6, search involves facilitating consumer search, acting pre-emptively toward consumers (extended users), creating discovery agents, and responding to platform dynamics. In this regard, these practices enable organisations in navigating through external searches and mobilising internal searches. The former occurs through finding novel ways of (re)making their relationship with customers and responding to digital platforms, while the latter is through (re)defining themselves internally. Together these elements form what might be thought of as a new ‘search’ logic of digital organisation. This is depicted in

Figure 7-1.

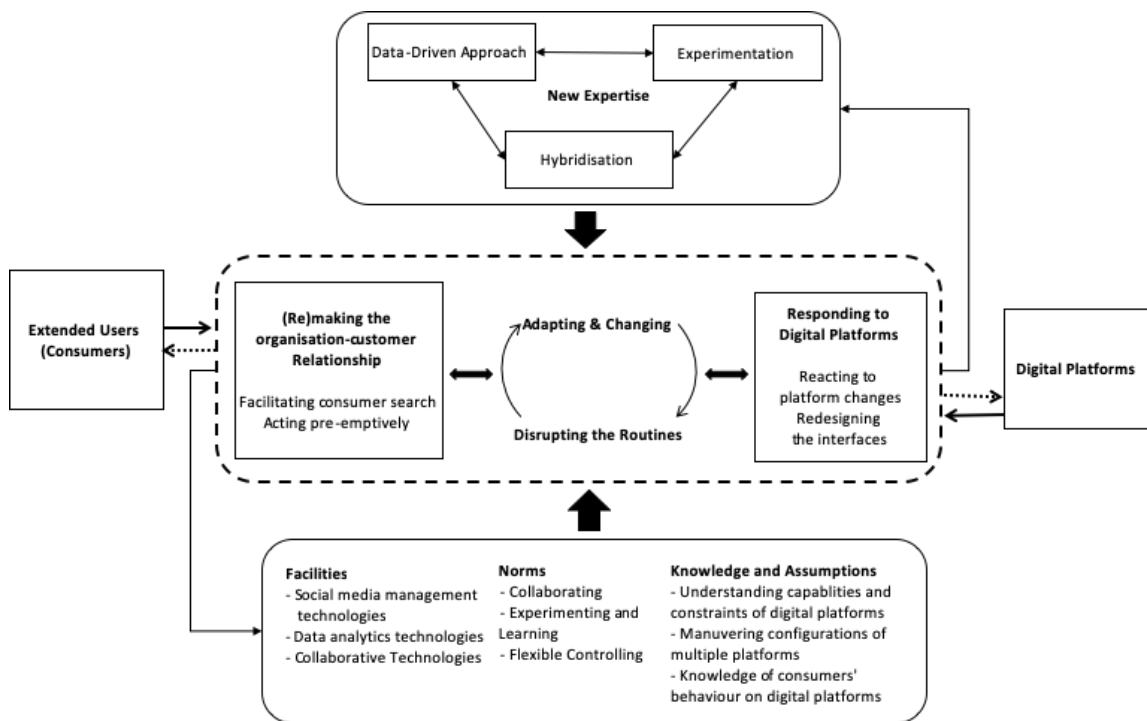


Figure 7-1 The Dynamic 'Search' Logic

7.4.1 (Re)making the Organisation-Customer Relationship

As I explained above, with the rise of experiential computing, extended users of digital technologies have become key players in how organisations manage their digitalisation efforts. This is because the use of technology has extended from the organisational sphere to the realm of quotidian activities and the ways in which extended users actuate affordances of the technologies have brought forth changes in how organisations work. Although such changes involve adaptations in knowledge and assumptions regarding this new category of users, organisations' reactions in terms of search are not passive, but rather active and proactive. As noted in Chapter 6, organisations develop an understanding of how extended use across platforms occurs; however, they develop two approaches in mediating such extended use.

First, they take advantage of relationships with a particular class of extended users - the 'influencers' - because of the unique capacity bestowed on them. Through such relationships, organisations are able to outsource part of their customer interactions to users who are experts in a specific area and have authority over their fellow extended

users. Second, organisations take a proactive approach through listening to the activities and discussions by extended users that form the underlying principle of their actions. In this respect, they become forward-looking through real-time data rather than back-ward looking through historical data and thus can act pre-emptively towards them.

7.4.2 'Search' Involves Responding to Digital Platforms

Digital platforms and technologies of search are constantly changing; the composition and content of technology change upon platform designers' release of new functions and shifts in users' data (Ekbia, 2009; Kallinikos, Aaltonen and Marton, 2010). Such changes are unprogrammed and unplanned and thus organisations cannot regulate them in advance. Therefore, they need to develop the capacity of understanding such changes and reacting to them when they occur. This is important as the platforms run based on learning algorithms which are unpredictable. Since such changes cannot be pre-empted, organisations must constantly monitor for the changes and learn how to address them as they appear.

7.4.3 'Search' (Re)defines the Organisation Internally

The remaking of relationships with customers and responses to platforms' malleability raises the questions regarding who does the work and how the work gets done. As discussed above (Section 7.3), new roles under new job titles have developed as the need for new expertise is burgeoning (Fitzgerald et al., 2013; Keen and Williams, 2013). As I have already extensively discussed, this new form of expertise is a hybrid form, with specialisation in areas of marketing, but also a capability in working with data and handling value measurement. As I have shown, these experts are not working on predefined problems; rather they learn and develop their knowledge of situations as they arise. The active learning and knowledge creation *in the making* are how these experts play in their roles. Therefore, experts are developing new ideas in finding ways of understanding and mediating the extended users' search activities (this is one significant difference between this expertise and that found within the realm of traditional IT).

There are, as yet, no 'standards' for organising search. The previous generation of enterprise technologies was characterised by 'best practices' (Wagner, Scott and Galliers,

2006; Berente and Yoo, 2012); these were prescribed and recommended ways of operating (Alvarez, 2008; Bala and Venkatesh, 2013). This new emerging logic – exacerbated by the ‘algorithmic phenomena’ (Orlikowski and Scott, 2016), which is a source of constant productive disruptions in creating new growth opportunities – means that the search is a process of constant discovery.

One key aspect of this was that it encourages experimentation (as I discussed in section 7.3). New experts constantly try-out new things (e.g. in finding out which combination of text and image would lead to better results at a specific time and day for a specific market on Facebook (or other platforms), how they can measure such results (performances), what better results might mean etc.). My thesis reveals that they constantly change their way of working in order to remain flexible in this fast-moving environment.

Together, the various elements described here drive the organisation to engage in disrupting and adapting practices that lead to changes in the overarching search phenomenon. In this process, organisations delimit themselves in finding the best solutions and closure. This means, that unlike what has been mostly discussed in the literature of organisational search (Huber, 1991; Madsen and Desai, 2010) that organisations seek to find answers to certain problems, the aim of search practices in this context is not to find optimal solutions and answers (as this is not possible due to the complexity of situations). Instead, they create productive disturbances (by questioning their assumptions) and they learn the ability to unlearn (Stark, 2011) (changing the existing way of doing things) in order to remain flexible in the fast-moving environment they work.

7.4.4 Search is Fluid and Generative

To be more specific about search, this study considers the process as an in-depth, multi-purpose, materially and socially bound, temporally and spatially spanned and recurrent doing. That search is in-depth means that organisations intensively engage with internal and external knowledge sources (Katila and Ahuja, 2002; Trantopoulos et al., 2017). Multi-purpose means that search can be performed for a variety of purposes and thus it has different objectives:

- It attempts to gain knowledge of how consumers interrogate their offerings, to identify and (hopefully) capture influential consumers, and to act pre-emptively not reactively towards their client base.
- It is aimed at platforms to actively learn about their ongoing developments (new functions, algorithms, policies, etc.) and respond to these changes as they are emerging.
- It is aimed at developing resources, knowledge and expertise, and continuously analysing the performance of search practices, critiquing the practices, and making adjustments and changes (Keen and Williams, 2013). Thus, this search is open-ended and interpretive (Lester and Piore, 2009).

In addition, search is materially and socially bound. First, it is mediated by social and technological actors. As shown, organisations' external search is centrally organised around consumers and collaborations (Laursen and Salter, 2014; Laursen, 2012) with a specific category of consumers, namely influencers. Such search activities are also highly bound with non-human actors and technologies such as platforms of listening (e.g. Sprinklr, Buzzsumo), collaborative technologies (e.g. Trello, Jira, SharePoint, Slack, Skype for Business), and other analytics platforms (e.g. Tableau, Google Analytics) and thus, they are materialised (Majchrzak and Malhotra, 2013; Joshi et al., 2010; Trantopoulos et al., 2017). Second, organisations' digital reconfigurations are continuously enacted through sociomaterial practices (Orlikowski and Scott, 2008) of search. Such enactments include different ways that organisations generate value for their customers (e.g. being closer to them through pre-emptions or influencer collaborations) and ultimately for the business.

Search can have different scopes and is temporally and spatially spanned. As I have already stated, digital organisations engage in external and internal searches, that are distant-beyond the boundary of the organisation- and local- close to the boundary of their existing knowledge (Katila and Ahuja, 2002). For example, organisations' search activities aim to move away from organisations' existing knowledge and to unlearn and create new knowledge (Rosenkopf and Nerkar, 2001). Search activities are not defined nor predetermined, but emergent as experts conduct their experiments. Finally, search is

recurrent, there are no specific start and end points to search and search activities are continuously enacted over time.

Also, building on Stark (2011), I move beyond the idea of search as i) an everyday information management to interpretive forms of enquiry to include a wider spectrum of activities that comprise ii) how the organisation responds to other external platforms. Therefore, I define search as i) the process whereby organisations endow their customers through inviting them to sample their products and services through interpretive forms of enquiry (instead of controlling that process) and ii) become increasingly reflexive in responding to consumers and platforms. Therefore, the search logic is generative.

The generative quality of search fosters reflection, evaluation, disruption, adaptation, and change in creating new opportunities for business growth. This is because search is sociomaterial and generates different reconfigurations of material enactments “through the active inclusions and exclusions that are made in practice” (Orlikowski and Scott, 2016, p.93). It is open to a diverse recombination of resources and actions. Thus, when search becomes the underlying logic of organising, the centralised control shifts to a de-centralised autonomy, which facilitates the ongoing adaptations of practices. Therefore, the search allows organisational experts, distancing themselves from standardising the processes, to unceasingly generate new, valuable doings.

7.5 Digital Transformation VS. Previous Technological Changes

The executability and performativity of algorithms provide an unprecedented volume of data with higher levels of accuracy (e.g. Google’s search activity of users and Facebook’s user preferences and interactions) (Goes, 2014). Thus, one implication of the ‘algorithmic phenomena’ for organisations is the emergence of new roles, such as the chief digital officer (CDO), which Tumbas and Berente (2017) suggest will create new forms of value from digital technologies through performing the work of ‘digital accelerator’, ‘digital marketer’ and ‘digital harmonizer’. This suggests that, instead of organisations continuing

to focus only on traditional IT issues, a new form of data manipulation has come to the fore.

Enterprise solutions such as ERP and CRM systems propelled a new information systems vision driven by the integration imperative (Dechow and Mouritsen, 2005; Robey, Ross and Boudreau, 2002). The integration paradigm has been the dominant paradigm in information systems, in recent decades. However, with the rise of new digital platforms, scholars argue that organisations are facing a major shift (Urbach, Drews and Ross, 2017; Gregory et al., 2015; Mckelvey, Anderson and Yoo, 2016). In line with these arguments, and based on Stark's (2011) ideas, this research has shown how contained within this shift is the new search logic. As I discussed throughout the thesis, this new paradigm is remaking consumers as well as organisations. The platforms too are unceasingly being reproduced (Kallinikos, Aaltonen and Marton, 2013). Figure 7-2 depicts the shift of relationships between IT platforms, an organisation and its customers from the previous integration paradigm to the new search logic.

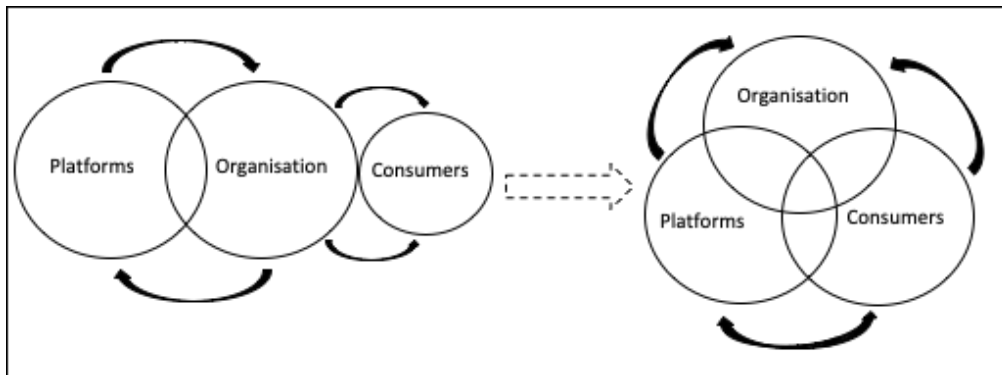


Figure 7-2 The Shift From the Previous Paradigm

In contrast with the integration paradigm, where organisations owned the IT systems and had control over them (Hanseth, Ciborra and Braa, 2001), in the search paradigm, organisations have lost their control over new digital platforms. Organisations no longer own the new systems given that digital technologies have become ubiquitous and affordable (Chae, Koh and Prybutok, 2014) and they have been consumerised (Bygstad, 2015; Yoo, 2010). These technologies are fluid, unstable and transfigurable (Kallinikos,

Aaltonen and Marton, 2013) and have transformed the nature of social relationships in both consumer and organisation domains (Susarla, Oh and Tan, 2012).

In the integration paradigm, IT departments were responsible for mainstream enterprise systems (Bygstad, 2015) and the implementation of these solutions (Sykes, Venkatesh and Johnson, 2014). However, IT departments are not able to keep up with the increasing demands of business departments for digital initiatives (Tumbas, Berente and Brocke, 2017). Therefore, existing discussions argue that digital business efforts should transcend the IT function and more siloed business structures (Bharadwaj et al., 2013). This thesis' framework of search builds on such discussions by presenting evidence that organisations build new categories of experts who work in cross-functional teams to manage and lead digital marketing initiatives.

The underlying principle of the integration paradigm is standardisation of business processes (Gattiker and Goodhue, 2005), which occurs through the implementation of the 'best practices' embedded and inscribed in enterprise systems (Wagner, Scott and Galliers, 2006; Berente and Yoo, 2012). Thus, in the previous paradigm, organisations went through transformations of their business processes to fit those embedded 'best practices' (Alvarez, 2008; Bala and Venkatesh, 2013). However, according to the 'search logic' we have witnessed and begun to describe here, organisations must not lock into best practices. This is because best practice takes on the state of a standard, which counters the fast-changing digital environment that is constantly generating new growth opportunities.

7.6 Summary

This chapter has brought together findings from above to discuss how they address the main objective of this thesis. Through an interdisciplinary lens, this study has attempted to offer insights by connecting the two bodies of knowledge: Information Systems and Marketing. I have deployed a practice approach to throw light on the emergence of new forms of digital technologies that differ considerably from previous generations of transformative technologies. Through a fine-grained analysis of how new work practices emerge around digital platforms, and how new organisational experts develop their knowledge and assumptions of platforms and their users, I showed how one particular

digital organisation establishes new norms and builds new facilities. I introduced the notion of the 'extended user', which helps to explain the role that those individual users outside the organisational setting play in the digitalisation of relationships. Thus, organisational work practices are mutable and are continuously (re)configured. This is because organisational experts are continuously updating their knowledge and assumptions about the platforms' changing nature (their dynamic composition and algorithmic base) and the extended users of these platforms and the myriads of different ways they are actuating their affordances and changing the content of the platforms. In this regard, organisational actors are continuously innovating in their work practices as experimentations become the norm in their collaborative work. Furthermore, they rely on the other new technologies adopted (facilities) by their organisation to manage the continuous changes in conducting their work. Therefore, this indicates how these technologies and associated work practices are different from previous generations of IT, given that the use of the latter occurs within the boundary of the organisation and becomes institutionalised.

Second, the chapter discussed the work practices of these organisational actors to show how their expertise is developing. Drawing on the occupational lens of doing task in understanding occupations, it showed that the organisational experts expand their knowledge not only in their specialised field of marketing, but also in more technical areas of data science and coding. In other words, they have become multi-disciplined or hybridised. Besides, these experts have become value measurement experts by using data-driven approach to measure the value they offer to the customers and to the business. In this regard, experimentation is the foundation of their work practices, which creates more optimised growth opportunities and provides rapid learning. This builds on the discussions about how organisations develop digital skills and expertise, as seen in IS and marketing literatures. But it also contributes to the occupational studies and particularly those about digital expertise by explaining the rise of expertise from a practice perspective rather than jurisdictional perspective.

Third, through the new work practices and expertise, the organisations develop specific approaches that restructure their relationship with customers, respond to platform changes and redefine themselves internally. The chapter has called the developments a ‘logic of search’. This new logic has, particular characteristics: it is an in-depth, multi-purpose, materially and socially bound, temporally and spatially spanned and recurrent doing. This means search is generative and advances continuous disruption, evaluation and reflection by producing different recombinations of resources and actions. In some respects, it has become the underlying logic of the organisation I studied. It also provided us a methodological template on how to study the digital transformation of organisations, given that the algorithm-based nature of digital platforms has made them more difficult to penetrate (Orlikowski and Scott, 2016); Search provides a way unpack the inscrutability (e.g. black-boxed nature) described by scholars, by mapping the search processes as they are occurring. The final section of this chapter presented my thoughts on how these digital technologies and the search logic, as part of the new emerging paradigm suggested in the literature, can be compared to the previous generation of the IT and the integration paradigm. The comparison was discussed around three areas of organisational control over technologies, expertise and division of the technologies’ responsibility, as well as the underlying principle of the paradigm.

8 Chapter Eight: Conclusions

8.1 An Overview of the Thesis

This thesis has studied the organisational digital transformations with a focus on externally-facing digital technologies such as social media platforms. These technologies are primarily concerned with customer experience and engagement (Singh and Hess, 2017; Tumbas, Berente and Brocke, 2017) and the various ways that organisations are reaching out to, communicating with, informing, and retaining their customers. These technologies have had the largest implications for marketing practices (Aral, Dellarocas and Godes, 2013) in particular, but for other areas of organisations as well (e.g. see Leonardi and Meyer, 2015 for organisational communications and ; Huang et al., 2017 for product innovation). Whilst it has been emphasised that these technologies are offering unprecedented effective ways for marketers in generating higher levels of sales and augmenting customers' loyalty, what is involved in accessing these outcomes is largely unknown. Despite these expanding transformations, there is little understanding of practices involved, how organisations are developing these practices and expertise, and what organising arrangements they require in their transition to becoming digital. Furthermore, it has already been highlighted that this research area needs a multidisciplinary perspective (Goes, 2014; Kannan and Li, 2017). Nonetheless, scholars have yet to build the necessary bridges between the required areas, with the result that our understanding is still quite fragmented.

This study has constructed its principal theoretical framework by drawing from two disciplines that address the issue of organisational transformation in relation to digital technologies: *Information Systems* (IS) and *Marketing*. Although both disciplines emphasise the important role that these technologies are playing in such transformations, neither has yet exploited the insights presented by the other (Goes, 2014).

8.1.1 Bridging IS and Marketing

As noted in Chapter 2, although the marketing literature has drawn much attention to the role of digital technologies in marketing and advertising practices, the discipline has only

focused on quantifying the final outcomes of using these technologies in terms of the customers' behaviour (e.g. 'impact' studies). In addition, the IS literature has mainly focused on how the waves of new technologies are changing the organisational IT management. Also, the IS research has not paid sufficient attention to external users of digital platforms (consumers) and how their use of the technologies can play a role in the digital workings of organisations. This has resulted in a limited understanding of the internal dynamics and intricacies of organisational work practices with regard to these new technologies.

Marketing researchers highlight the importance of using digital technologies for organisations by showing the potentials of new forms of marketing communication and their influence on brands compared to other traditional marketing approaches (Kumar et al., 2016). While they offer valuable insight about the factors for the successful management of digital platforms and how those would impact the customers (behavioural outcomes of these users' interactions with the organisation on digital platforms) (Ordenes et al., 2018; Kumar et al., 2013), they are problematic in several ways.

Broadly speaking, I have attempted to take marketing scholars to task for their theorisation and study of the nature of technology and related organisational change. Firstly, much of the writing has produced 'impact studies' (Kumar et al., 2013, 2016) in that scholars consider only the immediate introduction of the technology and not its later development and appropriation within organisations. Secondly, and related to the above, these studies are often limited when they consider new technologies and how they influence customers' behaviour as they only endeavour to identify influencing factors compared to previous conduits through which organisations (brands) communicate their messages (Thompson and Sinha, 2008; Wu, Fan and Zhao, 2017). Thirdly, this approach provides a limited view of digital technologies as tools or black boxes, which does not allow consideration of the technology's materiality and how it is constituted and changed through practice. In addition, this tool-view of technology does not allow the consideration of how various organisational actors – their work and roles - are entangled with these technologies and how their work is organised. Finally, there are limitations in the research designs of much

of the existing marketing literature. Most studies are cross-sectional rather than longitudinal (meaning that scholars miss out on understanding how technological outcomes can evolve and change over time).

However, despite these limitations, this study has found a marketing study perspective useful for the way it has foregrounded the role of consumers (extended users) in using digital platforms and highlighted the key role they play in generating content as well as their interaction and engagement with the businesses (Ordenes et al., 2018; Kumar et al., 2013).

This takes us on to the IS literature which has focused mainly on either changes in the role of the IT function through the proliferation of digital technologies (Bygstad, 2015; Gregory et al., 2015) or the digitalisation of organisations' internal processes and existing work practices (Ellison, Gibbs and Weber, 2014; Gibbs, Rozaidi and Eisenberg, 2013; Leonardi and Meyer, 2015). As a result of this focus, they have not paid the same attention to the role of individual consumers as extended users with regard to customer-facing digital technologies. Whilst the IS tradition has pioneered a practice lens in understanding uses of technologies within the organisational domain and boundaries of organisations (Suchman, 1997, 2007; Orlikowski, 1996), it has not considered the role that extended sets of users – those beyond the boundaries of the organisation - might play in their work practices.

In this thesis, I have used insights from a practice-based approach to explore the under-researched dynamics of organisational transformations and, in the case of customer-oriented digital technologies, to explain the emerging work practices, new expertise and organising approaches. In this process, I have also borrowed ideas from the marketing and IS research streams to shed light on the phenomenon of digital transformation (to create a bridge between these disciplines).

8.1.2 A Summary of the Empirical Findings

The findings of this research have been presented in three different self-contained but linked chapters, with each one discussing one area of this study in detail. The first chapter

of the three discussed how new work practices are emerging in managing digital platforms by explaining the assumptions and knowledge about the technologies and their users, working approaches and norms, and facilities. In this respect, the chapter drew on studies highlighting the dynamic nature of digital platforms (Faraj, Pachidi and Sayegh, 2018; Kallinikos, Aaltonen and Marton, 2013) and also the notion of experiential computing (Yoo, 2010) in order to explain the mutability of organisational work practices. The chapter offered a new ideation of technology users as ‘extended users’ to refer to the external individual users whose experiences have been digitalised (Yoo, 2010).

In this chapter it was also noted that it is of significance to consider not only the dynamic and changing composition of these technologies (persistent updates and algorithmic basis), but also how extended users are actuating the functions of the technologies in many different ways (which continuously changes the platforms’ content). Therefore, it showed that the sociomaterial practices of extended users (re)configure organisational user practices as they are continuously changing their knowledge and assumptions of the platforms and these extended users’ doings.

In the second empirical chapter, the ways that new forms of expertise in digital technologies are emerging were characterised. The chapter extended the discussions about the rise of new roles in organisations required in managing digital initiatives. In particular, by focusing on occupational doings, it offered a fresh view of new roles beyond the primary area of occupational rivalry and jurisdiction found in the literature (Tumbas, Berente and Brocke, 2018). The findings showed that the new areas of expertise are emerging through mechanisms of hybridisation, a data-driven approach, and processes of experimentation. Moreover, the chapter offered an insight on digital expertise, beyond the governance of these technologies and the new CDO role, to unravel how the new expertise and skillsets, which it has been suggested that organisations need, are being developed.

Afterwards, the third chapter of the findings delved into the underlying details of digital transformation. The chapter has drawn upon, and further developed, the notion of ‘search’ (Stark, 2011) to explain the new approaches that organisations develop in relation to extended users of digital platforms and the platforms’ dynamic changes. This has also

helped to understand the ways that organisations revise and rearrange their internal processes. Finally, Chapter 7 attempted to bring the findings and learnings from the three empirical chapters together to characterise the outcomes of digital transformation in producing a new search logic. By this I mean the logic underlying the various digital initiatives.

In this chapter, I present the theoretical, methodological and empirical contributions and relate these to discussions in the literature. Finally, the thesis will be concluded by discussing limitations and suggestions for future research.

8.2 Theoretical Contributions

The theoretical contributions of this thesis are twofold. First, the study contributes to the IS field in different ways. Second, the findings offer insights that contribute to practice-oriented studies of technology and organisation.

8.2.1 Information Systems

In writing this thesis, I was influenced by Orlikowski and Scott's (2016) agenda setting paper, which, acknowledged how "algorithmic phenomena" would potentially change how work is done. In the first part of this agenda, they called for further thinking on the new questions/issues that might arise in the study of digital work over the next few decades. Their premise, that algorithmic phenomena are different to what has come before, implicitly suggests that these new generations of technology go beyond previous generations, such as enterprise technologies. There are also methodological implications in their agenda in that they argue that algorithms can only be understood "dynamically in action", suggesting the need to study the systems in use and across multiple sites and platforms. This thesis contributes to their agenda through outlining a novel new logic that is emerging across organisations. I would argue that the 'search' processes described in this thesis are a highly visible manifestation of the algorithmic phenomena they describe. Arguably, this will have similar consequences for organisations as previous ideas (like 'integration'). Indeed, this does not mean that search processes identified in this research are unique. They are now found within and across the new digital platforms. The notion of search also meets Orlikowski and Scott's (2016) second requirement e.g. to study these

technologies dynamically in action (see section 8.3 below for further insight on the role of search as a methodological template).

The second contribution of this study is to the current nascent discussions on the digital transformation phenomenon, which has been argued is different from traditional information technology paradigms (Urbach, Drews and Ross, 2017; Mckelvey, Anderson and Yoo, 2016). Mckelvey, Anderson and Yoo, (2016, p.1) argue “[a]lthough intelligent computational algorithms powered by big data and analytics have great potential to augment human agencies, predicting the surprising outcomes of complex ecosystems could be infeasible unless the tools could accommodate nonlinear, dynamically changing interactions in the complex ecosystem”. This research has shown such ‘dynamically changing interactions’ through the fluid and generative search logic within organisations. As Mckelvey, Anderson and Yoo (2016) suggested, the implications of these dynamic interactions are essentially different from what went before in organisational information systems. In line with Urbach, Drews and Ross’ (2017) argument, I have shown such implications through the shift from previous integration paradigm to search logic: from control to lack of control, from centralised IT to non-IT experts, and from standardisation of processes to unorthodox actions.

Third, the thesis contributes to the growing body of research on the implications of digital and social media technologies for organisations (Aral, Dellarocas and Godes, 2013; Goh, Heng and Lin, 2013; Miller and Tucker, 2013; Benthous, Risius and Beck, 2016; Rishika et al., 2013). These studies have shed light on the potential outcomes of utilising these new forms of digital technologies. However, they have not explained how organisations develop internally to achieve those outcomes. Therefore, this study provides important contribution to this area of literature as it explains how search has become the new logic of the organisation, through which the organisation establishes new techniques and coordinates search activities. This is in agreement with Bharadwaj et al.’s (2013, p.480) suggestion that organisations are fine-tuning their actions to personalise their products and services based on social media data. However, this thesis does not suggest that organisations should inevitably use specific platforms (e.g. Facebook). Instead, it

proposes that organisations must develop specific search techniques to be able to navigate technologies of search.

In addition, organisations are responding to their digital transformation needs by developing new roles in the top-level management, such as CDOs (Singh and Hess, 2017; Tumbas, Berente and Brocke, 2018) to prepare the organisations in their digital initiatives, particularly in the area of customer experience and engagement (Singh and Hess, 2017; Tumbas, Berente and Brocke, 2017). In addition, Alexander and Lyytinen (2017, p.8) in their recent research on how organisations develop big data capabilities found that “exploitation strategies to evolve data insights into digital innovations of value added products and services through customer engagement and interaction [are] a major factor in organizations’ ability to successfully monetize their digital pursuits”. Unlike the traditional IT initiatives, the digital transformation efforts, as is shown through the search logic, require new forms of expertise, experimentation, agility, and collaborations across the organisation.

To date, the extant literature has viewed the emergence of these roles as in rivalry –through conducting jurisdictional battles – with the more established CIO role. As a result, it fails to throw much light on these new emerging occupations and what they actually do within the organisation. Thus, another contribution of this research is to this nascent research on the emergence of new occupations in advancing digital initiatives. In studying new digital occupations, I moved beyond a focus on technology governance to show how these experts get involved in a diverse range of tasks to facilitate the entrance of new extended users and new form of organisation based on the logic of search.

Moreover, in contrast to Tumbas, Berente and Brocke’s (2018) study that describes how new occupations (CDOs) enact their logic of action, in relation to existing functions, through deploying the jurisdictional metaphors of grafting, bridging and decoupling, this study showed that the digital expertise is grounded on disruptions, evaluations and interpretations. In this regard, the expertise boundary is blurred as it is continuously expanding to handle new developments.

Nevertheless, the study also builds on the emerging stream of research on the governance of digital technologies. While these studies are looking at the phenomenon from the macro level, which involves ambiguities in how organisations are allocating responsibility of digital (Tumbas, Berente and Brocke, 2018; Haffke, Kalgovas and Benlian, 2016), by looking into the more micro-situated doing of digital initiatives, the thesis presents evidence on how organisations might facilitate the implementation of digital initiatives. This shows that responsibility of digital is not being centralised (e.g. specific to one department or function such as IT) but is being distributed across the organisation.

8.2.2 Practice-oriented Studies of Technology

Practice studies of technology have focused on how organisational users are appropriating, ignoring, using or configuring the functions of different technologies within the boundaries of organisations. Although such studies also considered unplanned situations such as limited use (Orlikowski, 1993) or improvisations (Mazmanian, 2013; Orlikowski, 1996; Stein et al., 2015), their attention has centred around the actions and practices of these internalised users. This focus of practice-oriented studies of technology use has continued in studying new forms of digital technologies such as enterprise social media (used within the organisations' boundaries and by internalised users). On the contrary, in this study I have shown the role of extended users of the new digital technologies (consumers) (Kane et al., 2014c) by explaining how these extended users are playing an important role in reconfiguring organisational work practices.

Considering the external users in understanding the patterns of organisational technology use and work practices shows how organisational use of these technologies is formed, not only by understanding and interpreting material functions of the technologies, but also by developing an understanding of how extended users are deploying them. The literature on organisational technology use has primarily focused on the specific groups of users and considered other organisational actors as, either social context of the situated use, or as onlookers (Sergeeva et al., 2017) as more recently discussed. However, all these studies have presented insights about how the patterns of technology use are formed within the domain of organisation. Thus, this study portrayed the key role, that extended users play,

in the formation and configurations of organisation's work practices in using digital platforms, as organisational users are continuously making adjustments in their doings.

More broadly, this thesis contributes to practice studies by offering the analytical approach of 'search' in studying digital transformation which allows a richer analysis of the practices, processes and actors involved. Search provides a multi-level focus, offering a nuanced understanding of the micro and localised doings, as well as of the 'higher levels of occupational expertise' evolution, and reorganisation processes.

This novel analytical approach allows researchers to follow search (see section 8.3 below) as it happens at the micro level (such as the search processes of actual users), and through zooming out, the development of expertise within the organisation to handle these search processes. This multi-level focus – e.g. zooming in and zooming out whilst following search – offers the fieldworker an access to different levels of analysis. This addresses the well-known problem with micro practice studies (e.g. ethnomethodological studies) which, in studying the local level, miss out on the broader dynamics of the field. Moreover, some analytical frameworks claim to be able to look at different levels, but these levels are studied separately. Through following a search process, one can study different levels simultaneously. While a user is searching, we have access to their immediate practice as it occurs, and through zooming out, the fieldworker also has access at the level of occupations (which are being structured), that of the organisation (which is being formatted), and the wider field level of platforms (which are evolving).

This also addresses, what Nicolini (2012) calls a toolkit approach or "palette" of "theory-methods" for multi-level research on practice, by zooming in and out. Since the toolkit approach aims at synthesising the practice theories rather than unifying them, it overcomes the "eliminativist" tendencies of any single particular view of practice theory (e.g. the limitation of ethnomethodological studies in only considering higher levels of institutions and social structures when observable in the actual practices). Through this programme of study, Nicolini offers methodological ideas that require researchers to go beyond some of the traditional empirical tools of social research, such as what he advocates as "interview

to the double” for data collection (the interviewees will explain the details of what they do to their double who will substitute them).

In a similar fashion, search mobilises a solution to deal with the way that “practice always occurs amid a texture of other interconnected practices” (Nicolini, 2012, p.228). However, while Nicolini’s toolkit approach mobilises different traditions of practice theory to enable the zooming in and zooming out in multi-level studying of practices, the proposition of this thesis is to enable this multi-level analysis without switching between different lenses. In addition, the thesis is proposing the analytical approach of search, as a specific approach in understanding digital transformation of work and organisations which involves local and distant practices (e.g. organisational users, extended users, platforms and their algorithms). Therefore, search also makes it possible to understand the “dynamic nexuses of connections” between practices that are located in space and time (Nicolini, 2012, p.232).

However, to provide a nuanced understanding of the nonlinear texture of nested practices in digital transformation, search requires other methods than what is specified in Nicolini’s toolkit approach. This is because digital transformation is an assemblage of sociomaterial practices, much of which are not observable to the ethnographical researcher as manifest through the platforms and interfaces. Therefore, the use of online data and virtual ethnography (as also emphasised in IS studies) is necessary to get to grips with the spatial and temporal flows of practices.

8.3 Methodological Contributions

In this thesis, I have argued that search is becoming the new logic of organisations. It describes both extended user practices and also the broader ongoing changes in organisations as they continuously become more reflexive, and disrupt and adapt their practices.

As mentioned above, this has addressed recent discussions about ways of studying digital platforms and the changing nature of work. In particular, the conceptualisation of digital transformation as a process of managing and enabling search has addressed Orlikowski

and Scott's (2016) paper on a new research agenda for studying digital organisations. Highlighting what they call "algorithmic phenomena", they propose a programme of study for 'digital work'. They suggest that since algorithms are hidden, inscrutable (Introna, 2015, p.25), black boxed but also performative (Faraj, Pachidi and Sayegh, 2018), the only way to understand them is through studying them "dynamically in action" (2016, p.93).

They emphasise that "our existing ways of conceptualizing digital formations (Latham and Sassen, 2005) and the tools that we employ for studying "digital work" are not sufficient if we are to understand the generativity with which they are inextricably intertwined" (2016, p.93). Beyond this, however, there is a lack of understanding of how scholars can approach these technologies, especially in terms of how to get to grips with digitalisation when it is emerging dynamically in action.

I argue that 'search', as the way this thesis explains it, offers a tool and methodological template for other researchers in viewing the ways that contemporary work and organisation are digitalised as they are evolving 'in action'. Therefore, and as discussed in Chapter 7, because search is complex, fluid, and generative, I suggest the methodological nostrum of '*follow the search*' as a way to understand this phenomenon.

Here I am influenced by the famous slogan, 'follow actors' (Latour, 1987), in following the scientists and their paths and associations to catch up with their innovations. This allows the researchers "to trace social connections in new and interesting ways" (Latour, 2005, p.61). That is, to capture the reality of a realm that is not yet "a sort of social realm", and where we cannot study it by establishing which group of actors and level of analysis we want to study at the start. Thus, one way to follow search is by mapping the traces of search and observing how it unfolds in various forms through (i) interactions with customers as they carry out the search process; as (ii) new experts and expertise form to manage and facilitate it; and (iii) the organisational teams who come together from different specialist areas; One could begin by conducting an 'inventory' of the actors involved in search (e.g. marketing specialists, data scientists, and product developers), how each of these specialists act differently towards search (e.g. how search differs between a data scientist and a social media manager), and how search is different across

actors of different levels (e.g. search by growth directors compared to digital media managers' search).

In addition to tracing search spatially (across occupations and the organisation), temporal aspects are also important. One can learn different things through studying search at different moments of time. For instance, building on the Science and Technology Studies suggestion, to study science and technology in the making (Latour 1987), it could be valuable to study search in action during a key or crucial moment. One such moment might be when the search algorithm is being changed, for instance; it might be important to understand how the search process unfolds when platforms introduce major changes in their algorithm. For instance, during my field work, Facebook carried out an extensive change to their algorithm and this provided me the opportunity to observe how such change brought forth a wave of unsettlement in my field organisation. Other opportune moments might be when platform designers modify or introduce new functions (such as introduction of Instagram insight platform or Facebook Live) which could influence the practice of searching in and beyond the organisation.

Finally, in terms of the methods to use when studying search, whilst I have applied close-in qualitative research in understanding how search processes unfold, it could also be beneficial to consider longitudinal studies to help to unpack how search might evolve over time, as rapid platform transformation grows. One could imagine a study of the 'biography' (Pollock and Williams, 2008; Williams and Pollock, 2012) of these kinds of search processes for instance. That said, it is not necessary that search should be studied qualitatively. It might be that search can be studied quantitatively to measure the dimensions of search and its influence over the organisations' agility and reflexivity of search outcomes, for instance. There is much potential in this new perspective/approach.

8.4 Practical Implications

In addition to the theoretical and methodological contributions, this thesis also offers insights for practitioners. Research by consultancy firms such as Deloitte, and analyst firms such as Gartner or Forrester, shows that organisations are increasingly investing in digital platforms in developing new growth opportunities (Sarner and Wilson, 2016; Kane

et al., 2018). However, such forms of research still put a lot of emphasis on the technology and how emerging technologies might empower marketers. For example, on the one hand, Gartner research director in a Gartner Digital Marketing Conference highlighted that the “evolution of technology now gives marketers the power to create platforms and systems that maximize predictability of an optimized response” (Pemberton, 2018). On the other hand, other research based on surveys of business leaders argues that digital transformation is more about the strategy of the organisation than the emerging technologies (Kane et al., 2015). The former view was challenged in this thesis as was the discussion of impact studies of marketing, as they provide only a partial view of the phenomenon and do not explain how those opportunities are utilised and realised. Although the latter view aims to clarify that digital transformation is beyond the impacts of the technology, it has only shown the importance of transforming other dimensions of business such as culture. Thus, the implication of the present research is to address these practical issues by presenting evidence that digital transformation is about a proactive and dynamic search. This search constitutes novel ways of accessing customers, reacting to platform developments and changes, and rearranging the internal processes, knowledge and norms.

One of the trends that has been emphasised in the research by analyst firms is the importance of understanding customer trends (Pemberton, 2018; Slaats, 2013), such as the use of multiple channels of interactions concurrently. While these findings inform businesses of such trends, they separate the customer trends of platform use from the technology. However, in this thesis I showed that customers are users of the platforms that have been extended beyond the boundary of organisations (and I called them ‘extended users’). Responding to such trends is not just through the use of those platforms, but by actively configuring the extended users’ activities through listening practices and pre-emptive actions.

The other trend is regarding the technology or platforms themselves, such as the rise of ‘bots’ and voice search, that has been pointed out in the 2018 Gartner Digital Marketing Conference. They advise businesses to focus on bots and voice search as new ways of

learning about their customers. The findings of this thesis show that organisations need to continuously understand how platforms are changing or developing and respond to these changes. This is because such developments are not within their control and their customers (extended users) might be moving towards using them. Therefore, businesses search for developments in platforms and particularly search interfaces, and develop such interfaces.

In addition to such trends, the survey results by Deloitte and MIT Sloan Management Review depicted that organisations need to develop digital talent and skills in their digital transformation efforts (Kane et al., 2016). It also revealed that the majority of organisations (except digitally mature organisations) have not developed significant digital talent and expertise. Thus, this thesis has addressed this limited understanding in how organisations can create the digital expertise, presenting a detailed picture of how organisations develop new organisational roles and foster their knowledge and expertise. This occurs through the creation of hybrid roles that combine an established expertise in marketing with a developing expertise in data science. Such expertise is developed and fostered as the experts work based on tests and experimentations, and measure and analyse the results of their actions. In this regard, they are able to optimise their projects and campaigns, measure the value offered to the customers and the business, and continuously review what counts as valuable based on the trends mentioned above. This study also indicated that organisations play an important role in this by offering extensive training and development opportunities.

Whilst such expertise is emerging, the organisations haven't decided how to organise new roles or assign the digital responsibilities. In this respect, this thesis showed that organisations must go beyond traditional functional based, and develop multi-disciplined teams as handling digital platforms requires knowledge of different fields (e.g. marketing and data science). As an example, marketers are increasingly developing their technical knowledge of coding and data analysis, and work with platform APIs, as data scientist are developing specific metrics and dashboards, on analytics platforms, to facilitate their measurement practices. To manage these new roles and teams, organisations establish new

norms based on collaboration and more autonomy to enable them to make faster decisions and respond to technology and customer trends.

Finally, this thesis can inform platform developers about designing specific functions for organisations. An example is in the case of influencer marketing: according to the analyst firm Forrester, some organisations are developing their own in-house influencer marketing systems, while others adopt the emerging influencer marketing solutions (Skinner and Oesterreich, 2018). Thus, platforms such as Facebook and Instagram can design specific insights management systems for influencer projects. In addition to platform designers, this study can inform policy makers and regulatory bodies concerning the novel ways organisations are making use of their customer practices in navigating their platforms (which raise issues of transparency, and the privacy of consumers' data).

8.5 Limitations and Future Areas of Research

I would suggest that the study of search, and how the organisation re-configures itself to handle this novel process, is an interesting avenue for scholars to explore. Therefore, I suggest the following areas for further research.

Ethnography of search. I suggest that there is a need for an 'ethnography of search' which could develop insight into what, where, and how to study search. As I have portrayed in Chapter 6, search occurs in different levels and has different orientations. Since my focus has been more on the operationalisation of search, I was unable to follow search into the other areas of the organisation (such as product development and digital innovation). This could provide important insights into the intersection of product design, marketing, and data science, to help understand how the organisation develops varied skillsets and expertise, and facilitates and coordinates this diversity.

Does search have politics? Algorithm-based platforms have shown to have political qualities since their debut. For example, according to Introna and Nissenbaum (2000, p.170) the politics of search engines such as Google "represents the broader struggle to sustain the democratic potential of traditional media, the Internet, and the World Wide Web in particular" because they undermine 'access' as "a comprehensive mechanism for

finding and being found” (2000, p.181). In addition to the platforms’ politics because of their design (Winner, 1980; Introna and Nissenbaum, 2000), algorithms’ hidden politics can be related to “the classification, selection, and pre-processing of the data that is fed into a learning algorithm” (Faraj, Pachidi and Sayegh, 2018). The two types of politics – design and learning algorithm- are related as I showed through the empirical evidence (e.g. introduction of new functions in platforms’ design such as Facebook Live and how using the function influences their position in Newsfeed algorithm). Therefore, such political qualities direct reactive organisational responses involving specific inclusions and exclusions (Orlikowski and Scott, 2016).

I suggest such politics requires more research, to provide understanding of how effective such reactive responses are, and how this might lead to tensions among organisational actors in terms of who does what. In addition, with the data analytics and measurement capabilities, it is interesting to see how the activities are tracked and how accountability is measured. For example, if the organisation misses out such moments, or lacks knowledge of how to handle them, who holds the responsibility: content managers, social media managers, freelancers or agencies that work with them?

Sites of search. As I discussed in this thesis, search occurs through specific interfaces (sites), such as computer/mobile browsers or mobile apps, and more recently through bots and voice search on digital assistants. Although I touched upon it in the thesis, there is a need for more research on the ‘sites of search’ and how search is moving toward conversational search, as this promises to radically shape the future of search (as predicted by consultancy and analyst firms) (Colburn, 2017; Martin, 2018).

Boundary work. As discussed before, there are different categories of experts involved in search and these experts are continuously changing and expanding the boundary of their coverage area. Thus, search is a type of boundary work as it occurs at the intersection of digital marketing, data science and product design. Importantly, it is also a boundary that is extending (as more parts of the organisation come under the influence of search processes). Therefore, I suggest future researchers explore the boundary spanning practices that occur through search. Carlile (2002) has discussed three approaches to

studying boundaries across communities of practice, which include the language of communication, different meanings and interpretations, and dependencies across boundaries. Similar to this, further research is required to study search to understand how different actors collaborate in search and manage the communication and knowledge sharing barriers. What is the role of boundary spanning practices in search when the boundaries of expertise are being blurred? What is the role of boundary objects such as communication technologies (e.g. Slack, Yammer) or project management technologies (e.g. Jira, Trello) in such boundary work?

8.6 Concluding Remarks

Understanding search – its evolution, consequences, and politics - will be one of the scholarly challenges of the 21st Century. This study presents an in-depth view of how digital organisations with the rise of algorithmic phenomena are changing ways of working and organising. This view has promoted the entrance of customers as a new category of user to the organisation. With their unique position and power in using the platforms of search and making changes to their content, organisations bring forward new techniques in mediating customers' search processes. To promote these new approaches, new occupational expertise emerges that creates disruptions, evaluations and interpretations. Moreover, due to their lack of control over the evolution of these platforms, organisations find themselves responding to continuous changes. All these give rise to a new form of organising grounded on the logic of search.

9 References

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10 Appendices

10.1 Appendix 1: Pilot study themes

Theme	Definition	Codes
Experimental orientation to digital platforms	The efforts by businesses to learn how to manage social and digital media platforms and how to allocate their resources to such efforts.	'Trial and error'; 'to figure out', 'just learning'; 'it's ambiguous'; 'trying to understand'; 'challenge of knowing what the audience wants';
Ambiguity over the responsibility of digital platforms	The lack of a unified approach in distributing the responsibilities of social media and digital platforms and the rise of new job titles such as social media officers or digital marketing manager within the marketing function, in addition to having other functions involved accordingly.	'digital marketing'; 'initiation of social media officer role'; 'involvement of several roles for social media'; 'within the marketing function';
Challenge of measurements and data	Organisations' lack of knowledge in measuring the outcomes of their digital marketing initiatives and their effects on their business.	'several KPIs'; 'website traffic through Google Analytics'; 'not measuring the social media'; 'more related to brand exposure'; 'more search analytics than social media';

10.2 Appendix 2: Interview Guide for Organisational Participants

Sample Interview Guide for Social Media Managers	
Question Category	Question
Introduction	<ul style="list-style-type: none"> - Explaining the purpose of interview (what other interviewees are involved) - Confidentiality and right to withdraw from the study - Approximate length of interview - Any potential questions - Signing consent form - Permission to record the interview
Background	<p>Could you please tell me about your background, both education and professional background?</p> <p>Could you please explain about your current position at TSE?</p> <ul style="list-style-type: none"> - How long have you been working at TSE? - How long have you been in this position? <p>What do you do at your job? Could you please explain what your main responsibilities are?</p> <p>What skills are needed for your job?</p> <ul style="list-style-type: none"> - what do you think it takes to be successful in your current role? - How do you learn such skills? - How does TSE support such learnings?
About social media and digital technologies	<p>What social media platforms are being used for this market?</p> <ul style="list-style-type: none"> - How do you manage them (what is it involved)? - Where the content is generated? By who? - How often they are shared? - How do you decide who to follow/ what pages to like etc. (in detail)? Could you please share some examples? <p>Historically, how TSE's social media related practices in this region/market have been changed?</p> <ul style="list-style-type: none"> - How do you think the organisation has changed to develop social media capability? - What kind of challenges or conflicts are involved as these changes were happening? <p>Does your work involve working with other people or teams?</p> <ul style="list-style-type: none"> - What other roles? - How these collaborations happen? - What are the processes/mechanisms? - Do you use any type of specific technology for collaborations? Examples? [<i>what are the mechanisms and tools (technologies) for</i>

	<p><i>communication and collaboration among employees? Does TSE utilise an Enterprise social media for internal communications? If so, how does it help your work?]</i></p> <p>When you receive user’s complaints or issues, what is the process of handling it?</p> <ul style="list-style-type: none"> - Which teams do you communicate with in solving those types of issues?
<p>Measurement and analysis</p>	<p>How do you monitor or assess the performance of the TSE’s social media practices in this region/market?</p> <ul style="list-style-type: none"> - What kind of measures you have in place? What are the metrics you use? - How have they been developed? What people or roles are involved in this? <p>What kind of platforms or technologies are used for the purpose of social media monitoring and analytics?</p> <ul style="list-style-type: none"> - How do you use them? - How are the access levels defined? - How is the need for the adoption of analytics platforms defined? <p>How do the results of the analytics translate into the practice?</p> <ul style="list-style-type: none"> - Could you present some examples? - How might such results change what you do? <p>How does the information from social media (feedback/comments/analytics) affect/change the company’s products in this region/market?</p>
<p>Technology Changes</p>	<p>How do you stay updated with emerging trends and innovations, especially in the field of social media technologies?</p> <ul style="list-style-type: none"> - What processes or routines help you monitoring the trends with new technologies and devices as they appear? - How do you gain new knowledge and skills required? <p>How the emerging trends and innovations affect Skyscanner’s social media strategy in this region/market? (both new platforms/technologies and changes the existing ones such as the recent change in Facebook news feed algorithm or similar changes in other social networks)</p> <p>How does Skyscanner decide adoption of new types of social media in this region/market?</p> <ul style="list-style-type: none"> - What’s the process? - What information is gathered and how and from which sources? - Who’s involved in this process?

	<ul style="list-style-type: none"> - Who makes formal adoption decision? Could you please present some examples (e.g. Pinterest, Periscope, Snapchat)? - Once adopted, how it becomes integrated into the practices? <p>Has there been any example of experimenting a platform and deciding not to adopt in this region/market?</p> <ul style="list-style-type: none"> - Could you please describe the process and why the non-adoption decision was made? <p>How does the changing nature of social media affect your job (e.g. changes in Facebook and Twitter etc. such as Facebook Algorithm)?</p> <ul style="list-style-type: none"> - Does that affect your work? How?
Training	<p>Is there any policy at TSE regarding the use of social media and digital platforms?</p> <ul style="list-style-type: none"> - What are they? - How are they related to your job? <p>What structures, mechanisms or processes exist at TSE that foster collaboration?</p> <ul style="list-style-type: none"> - How do they help you? Could you present some examples? - How can they be a barrier and what challenges they might cause? <p>What further learning and development (related to social media and other digital platforms) is available at Skyscanner?</p> <ul style="list-style-type: none"> - What kind of training related to such technologies do you receive? - How does TSE foster such learning and development? - Are they by TSE or social media companies such as Facebook?
Problems and Challenges	<p>What do you think the challenges of social media and more broadly digital technologies are for TSE?</p> <ul style="list-style-type: none"> - How has the organisation transitioned from more traditional digital marketing to its newer forms? (e.g. search platforms to social media) - How has the company's focus changed from those digital platforms to social media? - Is there a competition/conflict between digital teams focusing on search platforms and social media teams? How does TSE manage that competition? - How does TSE <p>What do you think are the risks of social media for Skyscanner in this region/market?</p> <ul style="list-style-type: none"> - How these risks are evaluated and how they are tackled?
Concluding points	<p>Age, country of origin? (if the informant is happy to share this information)</p> <p>Is there anything else you want to add?</p> <p>Availability for a follow up interview</p>

	<p>Supporting data (demonstrations of platforms on their laptops, related documents/ conference presentations/ industry reports)</p> <p>Transcript to be sent for verification</p> <p>Asking other individuals who can participate</p> <p>Thank you</p>
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10.3 Appendix 3: Interview Guide for Expert Interview

Participants

Sample Interview Guide for Experts	
Question Category	Question
Introduction	<p>Could you please tell me about your education and professional background?</p> <p>Can you explain about your current practices?</p> <p>How long have you been working as ***?</p> <p>Could you please briefly explain what you do as a ***?</p> <p>What skills are needed for your job?</p> <ul style="list-style-type: none"> - What do you think it takes to be successful in your current profession?
Their specific expertise area	<p>I have read some of the interesting material on your website, but could you please explain what growth hacking/ influencer marketing/ social media marketing is?</p> <p>What is the role of digital technologies particularly social media in growth hacking/digital marketing?</p> <p>How do you think large organisations can adopt digital marketing practices?</p> <ul style="list-style-type: none"> - What resources, structure and mechanisms do they need? - Based on your experience, how do the organisations build such capabilities? - How are the outcomes of such practices measured? What kind of metrics are used in such measurements? - What technologies do businesses use in analysing their growth through digital marketing? <p>What is influencer marketing?</p> <ul style="list-style-type: none"> - Why is it important? - How can business organisations invest on influencers? - How do organisations analyse influencer marketing projects?
About social media and digital technologies	<p>With emergence and popularity of social media in the past 6-7 years, can you explain how this has affected organisations' marketing function?</p> <ul style="list-style-type: none"> - How this has changed the organisations' marketing activities? - How do the organisations allocate the responsibility of managing such platforms? - What are the new organisational roles regarding these technologies? - What do they do in their roles? What are their responsibilities?

	<ul style="list-style-type: none"> - How do the experts in such positions learn what they do? - How does this differ from previous forms of digital platforms such as search platforms? - How do the organisations balance their attention and focus on these platforms? <p>Can you explain the importance of social media for businesses in general and for large organisations in particular?</p> <ul style="list-style-type: none"> - How this might be different in large organisations and small?
	<p>What other technologies do organisations use/need for social media management?</p> <ul style="list-style-type: none"> - How do you think these technologies (e.g. Sprinklr) help the organisations in their social media efforts? - Why do the organisations need such new technologies? <p>How do the organisations analyse their performance on social media?</p> <ul style="list-style-type: none"> - What metrics and measures do businesses need to look at for analysing their social media performance? - Can you explain what each metric measures (reach, engagement, etc.)? - How do you compare the organisations' performance on social media with other digital technologies such as search engines? <p>How do you think the dynamic nature of social media (the emerging trends, changes in the algorithms, etc.) affects organisations/businesses?</p> <ul style="list-style-type: none"> - How do you think businesses/organisations can keep up with these changes in social media technologies? - How do the organization facilitate knowledge acquisition about such changes?
Problems and Challenges	<p>What do you think are the main challenges that large organisations face in managing digital technologies?</p> <ul style="list-style-type: none"> - How do the organizations manage the conflict among different roles within digital marketing? (e.g. those involved in social media and those involved in email and those involved in search engines) - What are the risks of these platforms for organisations?
Concluding points	<p>Is there anything else you want to add?</p> <p>Availability for a follow up interview</p> <p>Supporting data (demonstrations of platforms on their laptops, related documents/ conference presentations/ industry reports/ business press interviews such as Forbes, Entrepreneur, etc.)</p> <p>Transcript to be sent for verification</p> <p>Thank you</p>

10.4 Appendix 4: Lay Summary

While previously organisations used digital technologies to streamline internal business processes, the new wave of digital transformations is more about using technologies to enhance linkages to external stakeholders, especially customers as they have become more demanding since they have made use of the affordances of social media and other digital technologies. Based on qualitative data from the case study of a leading digital organisation, this thesis shows how the technology is remaking the internal workings of the organisation, leading to the development of new roles and expertise beyond IT departments, and recreating organisations' relationship with its customers. Whilst existing discussions about the implications of digital technologies have primarily looked at the impacts of such technologies on organisations and their customers, this study points out the role of customers as users of these technologies, that together bring forth continuous changes in organisations and the ways they arrange work. Therefore, this study has found that digital transformation is about changing the management rationale (logic) for designing and developing organizational arrangements. This new logic that I call 'search' contains three elements.

1. Organisations foster and facilitate the ways customers are accessing and searching their offerings. As consumers 'search' these platform organisations, businesses need to understand consumer search processes which can mean disassembling and reassembling their entire organisation. Since today everything begins with their search, the consumer is at the centre of the organisation. First, this includes developing a data-driven approach which requires gathering customer data from any interaction they have with the company's platforms. Second, search allows businesses to act pre-emptively towards customers. While previously marketing data was partial (e.g. gathered from face to face focus groups) or from the past (e.g. through surveys), the digital and social platforms facilitate access to customers' opinions in real-time. They attempt to generate 'forward-looking' insights through listening to customers and finding ways of engaging and interacting with them to create value.

2. Search means responding to platform changes. Businesses find they have to continuously respond to platform changes on which they have little control. They are developing learning capabilities to understand such changes in platforms' functions and algorithms in real-time. This research showed there is not a defined way of knowing such changes, rather they follow the platforms and their management leaders and other key influential actors to proactively creating this knowledge
3. The way businesses handle the search processes is through building new internal knowledge and expertise. In order to respond to these search processes (related to customers and platforms), businesses must develop *new knowledge and expertise*. This means that they should define multi-faceted roles with a central expertise in one area (e.g. social media, or social media advertising), an evolving knowledge of adjacent areas such as search engines and expanding knowledge of other fields such as data science. These experts are then capable of developing new techniques in understanding what consumers are searching for, how they are conducting searches, and on what platforms and devices they are searching. In addition, this versatility facilitates the communication and collaborations across marketing, product design and engineering. In addition, the search activities that organisations are advancing are not addressing specific and defined problems, rather they learn and develop their knowledge of situations as they arise. The research showed that digital organisations should avoid standardising their processes and practices because the new technological developments do not facilitate pre-existing processes. In contrast, they should create a mindset that questions the existing assumptions and is open to change in adapting to ongoing digital advances. This is possible by working based on tests and experimentations. Through coordinated iterations, experts run small-scale experiments to constantly try-out new things, learn and develop their knowledge, unlearn and run more tests. Therefore, search is a process of constant discovery and change.