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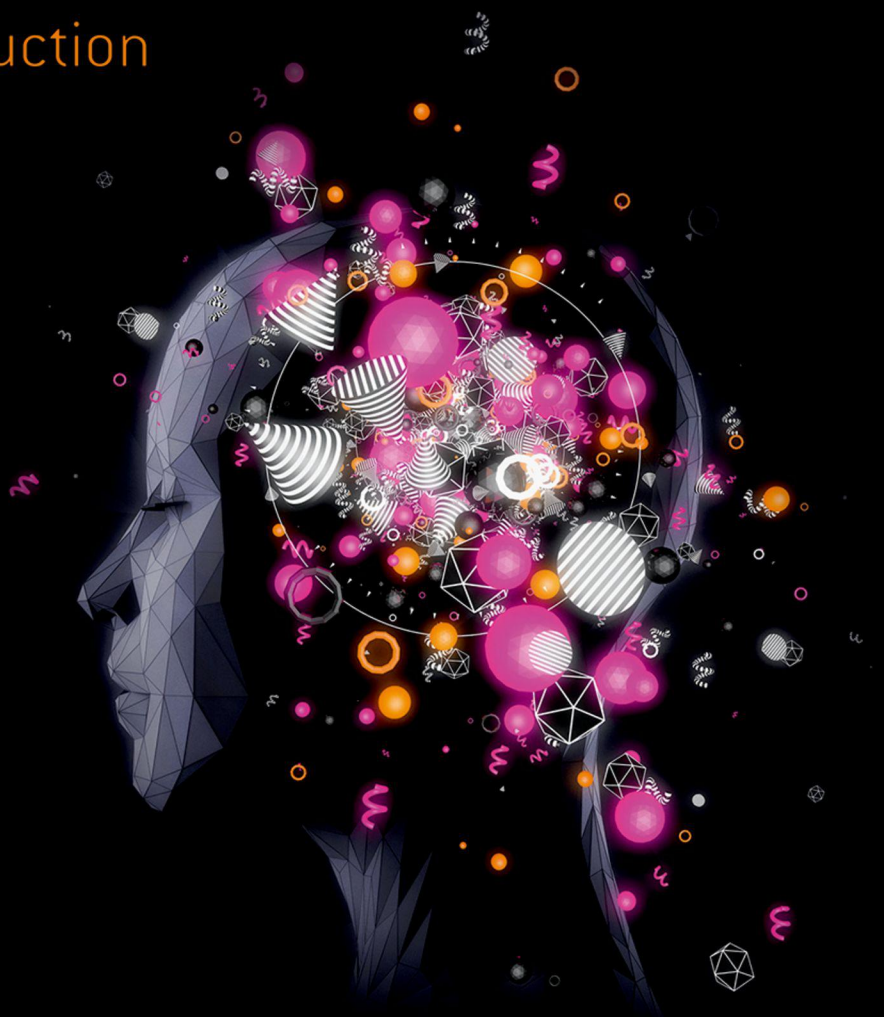
KNOWLEDGE MANAGEMENT IN ORGANIZATIONS

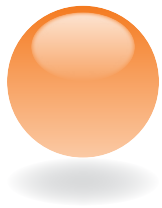
a critical introduction

fourth edition



DONALD HISLOP,
RACHELLE BOSUA,
AND REMKO HELMS

Knowledge Management in Organizations



Knowledge Management in Organizations

A Critical Introduction

FOURTH EDITION

Donald Hislop,
Rachelle Bosua, and
Remko Helms

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Donald: in memory of my beautiful sister Lesley
Rachelle: for my family
Remko: for my loved ones

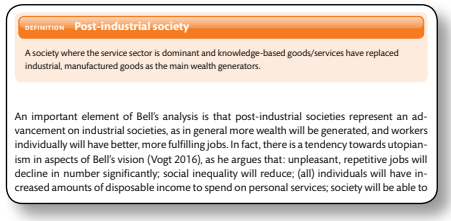
Brief Contents

Detailed Contents

Figures

Tables

Guide to the Book

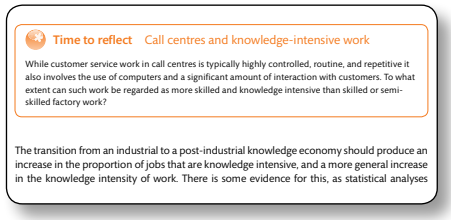

DEFINITION **Post-industrial society**

A society where the service sector is dominant and knowledge-based goods/services have replaced industrial, manufactured goods as the main wealth generators.

An important element of Bell's analysis is that post-industrial societies represent an advancement on industrial societies, as in general more wealth will be generated, and workers individually will have better, more fulfilling jobs. In fact, there is a tendency towards utopianism in aspects of Bell's vision (Vogt 2016), as he argues that: unpleasant, repetitive jobs will decline in number significantly; social inequality will reduce; (all) individuals will have increased amounts of disposable income to spend on personal services; society will be able to

Definitions

Definition boxes accompany the discussion of essential concepts, helping you to understand key terms.


Time to reflect Call centres and knowledge-intensive work

While customer service work in call centres is typically highly controlled, routine, and repetitive it also involves the use of computers and a significant amount of interaction with customers. To what extent can such work be regarded as more skilled and knowledge intensive than skilled or semi-skilled factory work?

The transition from an industrial to a post-industrial knowledge economy should produce an increase in the proportion of jobs that are knowledge intensive, and a more general increase in the knowledge intensity of work. There is some evidence for this, as statistical analyses

Time to reflect boxes

Pause and reflect on the material being discussed with these provocative questions, discussion points, and exercises, which are written to develop your critical thinking skills and deepen your understanding of the theory and practices of knowledge management.

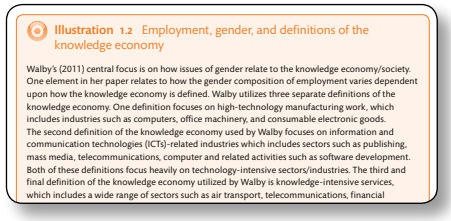
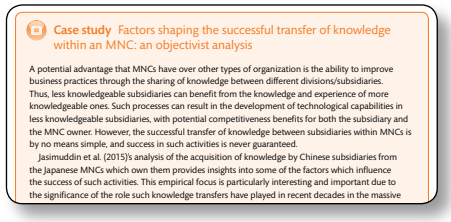


Illustration 1.2 Employment, gender, and definitions of the knowledge economy

Walby's (2011) central focus is on how issues of gender relate to the knowledge economy/society. One element in her paper relates to how the gender composition of employment varies dependent upon how the knowledge economy is defined. Walby utilizes three separate definitions of the knowledge economy. One definition focuses on high-technology manufacturing work, which includes industries such as computers, office machinery, and consumable electronic goods. The second definition of the knowledge economy used by Walby focuses on information and communication technologies (ICTs)-related industries which includes sectors such as publishing, mass media, telecommunications, computer and related activities such as software development. Both of these definitions focus heavily on technology-intensive sectors/industries. The third and final definition of the knowledge economy utilized by Walby is knowledge-intensive services, which includes a wide range of sectors such as air transport, telecommunications, financial

Illustrations

Contemporary, varied illustrations from research and the business world, with accompanying questions, illustrate the concepts discussed in the chapter and prompt you to analyse the knowledge management practices of a range of organizations.

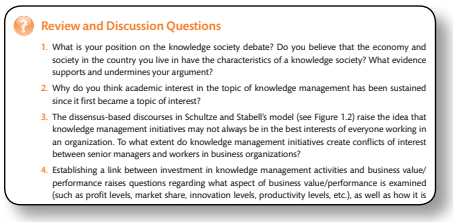

Case study Factors shaping the successful transfer of knowledge within an MNC: an objectivist analysis

A potential advantage that MNCs have over other types of organization is the ability to improve business practices through the sharing of knowledge between different divisions/subsidiaries. Thus, less knowledgeable subsidiaries can benefit from the knowledge and experience of more knowledgeable ones. Such processes can result in the development of technological capabilities in less knowledgeable subsidiaries, with potential competitiveness benefits for both the subsidiary and the MNC owner. However, the successful transfer of knowledge between subsidiaries within MNCs is by no means simple, and success in such activities is never guaranteed.

Jasimuddin et al. (2015)'s analysis of the acquisition of knowledge by Chinese subsidiaries from the Japanese MNCs which own them provides insights into some of the factors which influence the success of such activities. This empirical focus is particularly interesting and important due to the significance of the role such knowledge transfers have played in recent decades in the massive

Case studies

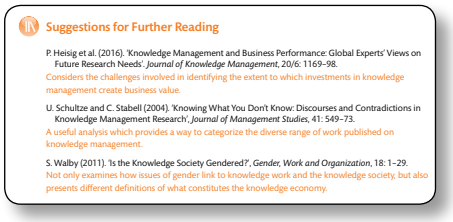
Longer, more integrative case studies at the end of chapters provide a further opportunity for you to apply what you have learnt from the chapter to practical knowledge management research or a real-life business example. Accompanying case study questions facilitate reflection and discussion.


Review and Discussion Questions

1. What is your position on the knowledge society debate? Do you believe that the economy and society in the country you live in have the characteristics of a knowledge society? What evidence supports and undermines your argument?
2. Why do you think academic interest in the topic of knowledge management has been sustained since it first became a topic of interest?
3. The dissensus-based discourses in Schultze and Stabell's model (see Figure 1.2) raise the idea that knowledge management initiatives may not always be in the best interests of everyone working in an organization. To what extent do knowledge management initiatives create conflicts of interest between senior managers and workers in business organizations?
4. Establishing a link between investment in knowledge management activities and business value/performance raises questions regarding what aspect of business value/performance is examined (such as profit levels, market share, innovation levels, productivity levels, etc.), as well as how it is

Review and discussion questions

Reinforce your learning, aid your revision, and share ideas with these end-of-chapter review and discussion questions, which cover the main themes and issues raised in the chapter.


Suggestions for Further Reading

P. Heisig et al. (2016). 'Knowledge Management and Business Performance: Global Experts' Views on Future Research Needs'. *Journal of Knowledge Management*, 20/6: 1169–98.
Considers the challenges involved in identifying the extent to which investments in knowledge management create business value.

U. Schultze and C. Stabell (2004). 'Knowing What You Don't Know: Discourses and Contradictions in Knowledge Management Research', *Journal of Management Studies*, 41: 549–73.
A useful analysis which provides a way to categorize the diverse range of work published on knowledge management.

S. Walby (2011). 'Is the Knowledge Society Gendered?', *Gender, Work and Organization*, 18: 1–29.
Not only examines how issues of gender link to knowledge work and the knowledge society, but also presents different definitions of what constitutes the knowledge economy.

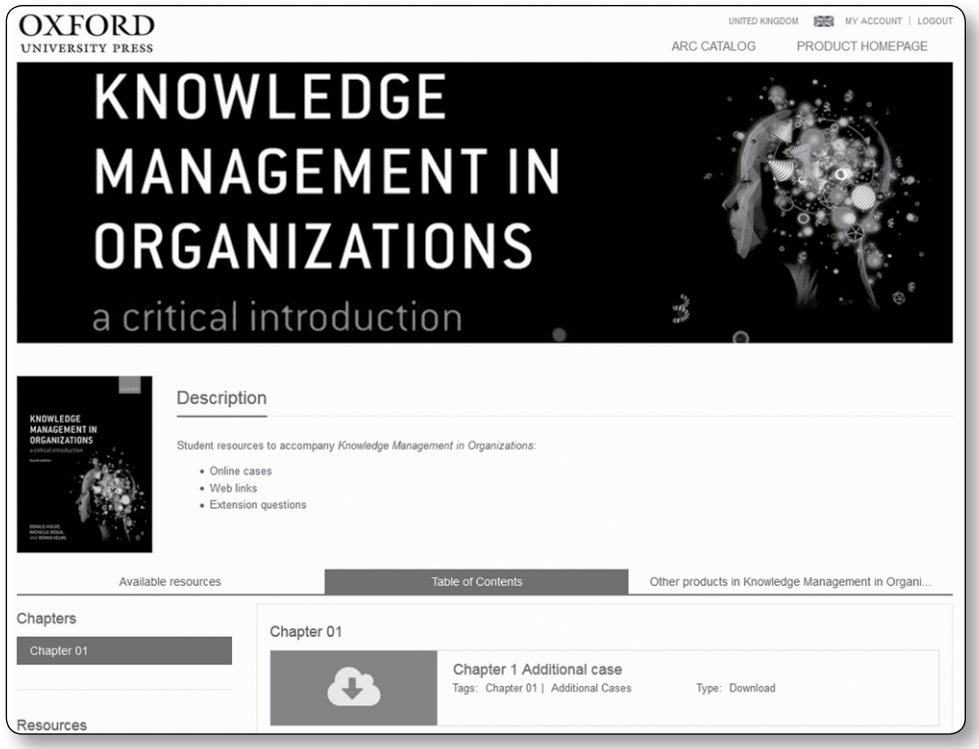
Suggestions for Further Reading

An annotated list of seminal books and journal articles that have contributed to the field of knowledge management are provided at the end of chapters. Use these lists to guide your reading around a particular topic, broaden your understanding, and provide useful leads for coursework and assignments.

Guide to the Online Resources

This book is accompanied by free online teaching and learning resources for both students and lecturers. Students can benefit from web links and additional case studies, while lecturers can make use of exam, essay, and coursework questions, and seminar activities.

Visit www.oup.com/uk/hislop4e/ to find out more.



The Contemporary Importance of Knowledge and Knowledge Management

Introduction

> Some think the 'knowledge turn' a matter of macro-historical change; citing Drucker, Bell, Arrow, Reich or Winter, they assert we have moved into an Information Age wherein knowledge has become the organization's principal asset.
>
> (Spender and Scherer 2007: 6)

> The physical toil of manufacturing is being replaced by a world where we work more with our heads than our hands.
>
> (Sewell 2005: 685–6)

> A firm's competitive advantage depends more than anything on its knowledge: on what it knows—how it uses what it knows—and how fast it can know something new.
>
> (*HR Magazine* 2009: 1)

In a textbook on knowledge management it is important to put the subject in context, as this helps explain the interest in it. The explosion of interest in knowledge management among academics, public policy makers, consultants, and business people began as recently as the mid-1990s. The level of interest in knowledge management since then is visible in a number of ways. First, the knowledge society/economy rhetoric is utilized by a wide range of governments and non-governmental organizations (Fleming et al. 2004; Warhurst and Thompson 2006; Mandelson 2009; Halme et al. 2014). While it is impossible to accurately quantify the number of business organizations which have attempted to develop and implement knowledge management systems, various surveys suggest that a significant number of organizations have undertaken such initiatives (KPMG 2000, 2003; Coakes et al. 2010; Griffiths and Moon 2011). Finally, a search of any search engine such as Google or Google Scholar using

the key term 'knowledge management' reveals the vast number of articles, books, and reports that have been written on the topic.

The late 1990s also witnessed an exponential increase in the number of academic articles and books published on the topic of knowledge management. Thus, surveys by both Scarbrough and Swan (2001) and Wilson (2002) revealed that prior to the mid-1990s interest in the topic was virtually non-existent, but from about 1996 onwards, the number of publications on knowledge management grew exponentially. Both these articles, however, suggested that there was a risk that knowledge management was a passing fad (Wilson is particularly scathing and talks of knowledge management as a bandwagon 'without wheels'), and predicted that there was likely to be an 'impending decline' of interest in the topic (Scarbrough and Swan 2001: 56). However, contemporary analysis suggests such a decline has not occurred, and that the early years of the twenty-first century saw a sustained interest in the topic (Ragab and Arisha 2013; Serenko and Bontis 2013). For example, Hislop (2010) found that between 2000 and 2008 the number of academic publications on the topic of knowledge management increased quite significantly.

The ongoing academic interest in knowledge management is also visible in a number of other ways, such as in the emergence of a number of conferences on the topic which have become regular annual events, as well as the topic of learning and knowledge now becoming regular themes at many long-standing management and organization conferences. Finally, there has also been the birth of a number of journals specifically concerned with issues of learning and knowledge management. Serenko et al. (2010) suggest that there are at least twenty peer-reviewed academic journals in this field.

Key assumptions in the knowledge management literature

The central idea uniting and underpinning the vast majority of the knowledge management literature, that it is important for organizations to manage their workforce's knowledge, flows from a number of key assumptions embodied in the three quotations which open the chapter. First, Spender and Scherer's quotation illustrates the assumption that the end of the twentieth century witnessed an enormous social and economic transformation which resulted in knowledge becoming the key asset for organizations to manage. A second key assumption, flowing from the first one, and illustrated by Sewell's quotation, is that the nature of work has also changed significantly, with the importance of intellectual work increasing significantly. The third, related key assumption, illustrated by the third quotation, is that the effective management by an organization of its knowledge base is likely to provide a source of competitive advantage (see also Swart 2011; Andreeva and Kianto 2012; Mehra et al. 2014). See Illustration 1.1 for reflections on this.

Illustration 1.1 Knowledge management and the link to business performance

Heisig et al. (2016) examined the views of knowledge management academics on the link between knowledge management activities and business performance. The main conclusion was that, despite a number of claims being made about a positive linkage existing between investment in knowledge

management activities and business performance, further research is necessary on this complex topic. More specifically, it was concluded that research into the link between knowledge management and organizational decision-making processes, organizational learning, innovation levels, and productivity levels as well as business strategy were some key areas for investigation.

Question

What challenges are likely to exist in attempting to establish a causal relationship between an investment in knowledge management and improved business performance?

While the growth of interest in knowledge management only took off during the mid-1990s the theoretical foundation for the assumptions it makes resonate with, and to some extent flow from Daniel Bell's (1973) post-industrial society concept. Thus it is useful to examine his work in a little detail.

The knowledge society concept and its links to Bell's post-industrial society concept

The knowledge management literature is typically based on an analysis which suggests that since approximately the mid-1970s, economies and society in general have become more information and knowledge intensive, with information-/knowledge-intensive industries replacing manufacturing industry as the key wealth generators (see, for example, Neef 1999; DeFillippi et al. 2006). Arguably, the main source of inspiration for this vision was, and is, Daniel Bell's seminal book *The Coming of Post-Industrial Society*, which was first published in 1973. While earlier writers, notably von Hayek (1945) and one of his pupils, Machlup (1962), developed a similar analysis, Bell's work has provided the main inspiration for contemporary writers in the area of knowledge management. As a consequence, Bell's post-industrial society (see Definition) and contemporary conceptualizations of knowledge society bear more than a passing resemblance to each other. Further, Bell himself has, over time, used the terms knowledge and information societies interchangeably with the post-industrial society concept (Webster 1996).

Bell's analysis is based on a typology of societies characterized by their predominant mode of employment (Webster 1996). Thus, an industrial society is characterized by an emphasis on manufacturing and fabrication: the building of things. In a post-industrial society, however, which is argued to evolve out of an industrial society, the service sector has replaced the manufacturing sector as the biggest source of employment (see Figure 1.1). Another crucial characteristic of Bell's post-industrial society is that knowledge and information play a much more significant role in economic and social life than during industrial society, as work in the service sector is argued to be significantly more information and knowledge intensive than industrial work.

Finally, Bell suggests that not only has there been a quantitative increase in the role and importance of knowledge and information, but there has also been a qualitative change in the type of knowledge that is most important. In a post-industrial society, theoretical knowledge

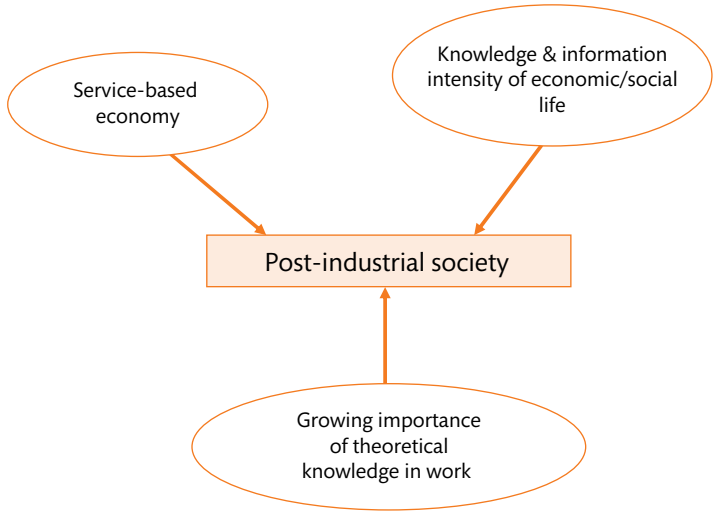


Figure 1.1 Characteristics of a Post-Industrial Society

has become the most important type of knowledge. Theoretical knowledge represents abstract knowledge and principles, which can be codified, or at least embedded in systems of rules and frameworks for action. This is to a large extent because for Bell, in post-industrial societies professional service work is of central importance, and this type of work typically involves the development, use, and application of abstract, theoretical knowledge more than manual work ever did. This relates not just to technical knowledge, such as may be used in research and development (R&D) processes, but also encompasses a large and growing diversity of jobs which increasingly require the application and use of such knowledge—for example, formulation of government policy, architecture, medicine, software design, etc. This topic is returned to and elaborated in Chapter 5, when the debates regarding how to define knowledge work, and knowledge-intensive firms, are examined.

DEFINITION Post-industrial society

A society where the service sector is dominant and knowledge-based goods/services have replaced industrial, manufactured goods as the main wealth generators.

An important element of Bell's analysis is that post-industrial societies represent an advancement on industrial societies, as in general more wealth will be generated, and workers individually will have better, more fulfilling jobs. In fact, there is a tendency towards utopianism in aspects of Bell's vision (Vogt 2016), as he argues that: unpleasant, repetitive jobs will decline in number significantly; social inequality will reduce; (all) individuals will have increased amounts of disposable income to spend on personal services; society will be able to

better plan for itself; and social relations will become less individualistic and provide greater scope for community development and collective support.

In order to empirically test and substantiate such claims, statistical evidence is typically mobilized to show the increasing importance of service work, and the simultaneous decline of manufacturing employment (see Illustration 1.2). Thus, statistics on the US economy in the mid-1970s were argued to show that 46 per cent of its economic output was from the information sector, and 47 per cent of the total workforce was employed in this sector (Kumar 1995). Castells (1998), in articulating his vision of a network/information society, mobilized an impressive amount of evidence from a wide range of economies which showed the long-term, historical shift from industry to services, and from goods handling to information handling work.

Some empirical evidence on the growing skill intensity of much work also supports Bell's thesis. For example, Zuboff (1988) suggested that advances in computer technology had the potential to make work more knowledge and skill intensive, through the potential for problem solving and abstraction these technologies provide workers. This perspective is supported by research conducted by Gallie et al. (1998) in the UK in the mid-1990s, where almost 65 per cent of workers surveyed reported experiencing an increase in the skill levels of their jobs. Further evidence also reinforces these conclusions (Felstead et al. 2000; NSTF 2000).

Illustration 1.2 Employment, gender, and definitions of the knowledge economy

Walby's (2011) central focus is on how issues of gender relate to the knowledge economy/society. One element in her paper relates to how the gender composition of employment varies dependent upon how the knowledge economy is defined. Walby utilizes three separate definitions of the knowledge economy. One definition focuses on high-technology manufacturing work, which includes industries such as computers, office machinery, and consumable electronic goods. The second definition of the knowledge economy used by Walby focuses on information and communication technologies (ICTs)-related industries which includes sectors such as publishing, mass media, telecommunications, computer and related activities such as software development. Both of these definitions focus heavily on technology-intensive sectors/industries. The third and final definition of the knowledge economy utilized by Walby is knowledge-intensive services, which includes a wide range of sectors such as air transport, telecommunications, financial services, computers, and R&D. Walby presents data which shows that in the UK in 2005, 1 per cent of employment was in high-technology manufacturing, 4 per cent was in the information technology (IT) sector, and 42 per cent was in knowledge-intensive services. The proportions of employment in each area reflect the specificities of the UK economy, and are likely to vary significantly between countries.

Arguably, the knowledge economy could be defined as the aggregate total of these separate definitions/sectors. However, by disaggregating the knowledge economy Walby is able to highlight gender-related differences in each of the three sub-sectors. In examining the gender composition of employment in the knowledge economy, Walby again focuses solely on the UK, and utilizes data from the UK government's Labour Force Survey. This data shows that the gender composition of employment varies significantly in each sub-sector, with high-technology manufacturing industries being particularly male-dominated with only 32 per cent of jobs in these industries being done by women. While the information sector is also male-dominated in employment terms (36 per cent female employment), knowledge-intensive services are female dominated (61 per cent female employment). Walby's

conclusion is that the more centred definitions of the knowledge economy are on technology and manufacturing, the more male-dominated the knowledge economy is, and the more definitions focus on services, the more female-dominated the knowledge economy becomes.

Question

Which of Walby's definitions of a knowledge economy do you regard as the most useful, and why?

Overall therefore, aggregate statistical evidence appears to support the knowledge society/post-industrial society thesis. However, Bell's thesis has been the subject of a sustained, and not insignificant, critique, much of which has relevance to the knowledge society vision developed by contemporary writers on knowledge management. Further, the extent to which work is increasingly knowledge-based has also been challenged by alternative statistics and analysis. The following section changes focus to consider these criticisms.

A critical evaluation of the knowledge society concept

One of the main criticisms of the arguments made by knowledge society or post-industrial society theorists, is that they typically conflate knowledge work with service sector jobs. Thus, as outlined, aggregate statistics on the size of service sector employment is usually used to indicate the transition to a knowledge society (see Time to reflect). However, not all service sector work can be classified as knowledge work, as the service sector is a residual employment category for all types of work which are not either manufacturing or agricultural. Thus the service sector encompasses an enormously heterogeneous range of job types, including consultants and cleaners as well as scientists and security guards. As such, the service sector does not represent a coherent and uniform category of employment. While some service sector work such as consultancy, research, etc., can be classified as being knowledge intensive, other types of service work, such as security, office cleaning, and fast food restaurant work, is low-skilled, repetitive, and routine (Thompson et al. 2001). Therefore to suggest that all service sector employment is knowledge-intensive work does not acknowledge the reality of much service sector work.

Time to reflect Call centres and knowledge-intensive work

While customer service work in call centres is typically highly controlled, routine, and repetitive it also involves the use of computers and a significant amount of interaction with customers. To what extent can such work be regarded as more skilled and knowledge intensive than skilled or semi-skilled factory work?

The transition from an industrial to a post-industrial knowledge economy should produce an increase in the proportion of jobs that are knowledge intensive, and a more general increase in the knowledge intensity of work. There is some evidence for this, as statistical analyses

typically show that managerial and professional work, which is typically regarded as knowledge intensive, has been one of the fastest growing occupational groups since the 1980s (Elias and Gregory 1994; Fleming et al. 2004). However, focusing on this trajectory alone provides a partial and over-simplistic overview of the way work has been changing. Vogt (2016) argues that there has been a shift in the use of Bell's post-industrial society concept from Bell's original utopianism (making hopeful speculation about the future) towards a more ideological contemporary use, where the concept is used in a blinkered way to emphasize and celebrate certain aspects of change, while obscuring and ignoring others. The aspects of contemporary social change that are often ignored by those advocating the emergence of a knowledge society are now considered.

Simultaneous to the growth in professional and managerial work there has been an equally significant growth in low-skilled, service work (Thompson et al. 2001). This is leading to what Mansell and Steinmueller (2000: 403) suggest is 'a growing polarization of the labour market between highly skilled, highly paid jobs, and low skilled, lower paid jobs . . .', a conclusion reached by a growing number of writers (Littler and Innes 2003; Fleming et al. 2004; Warhurst and Thompson 2006; Alvesson 2014; Alvesson and Spicer 2016). Thus, rather than there being a single trajectory in the direction of upskilling and increasing knowledge intensity, there are two, simultaneous trends, moving in opposite directions. A detailed statistical analysis of employment statistics in Australia conducted by Fleming et al. (2004) provides empirical support for this 'polarization thesis'. Thus while such analyses provide some support for the knowledge society thesis, they also suggest that the idea that there is a universal increase in the knowledge intensity of work in general is simplistic and a little misleading.

Questions have also been raised regarding the way knowledge was conceptualized by Bell. His conception of theoretical knowledge as codifiable and objective draws on classical images of scientific knowledge. However, much contemporary analysis views knowledge as having substantially different characteristics, being partial, tacit, subjective, and context-dependent (see Chapters 2 and 3 for these debates).

While aspects of the analytical frameworks developed by post-industrial society and knowledge society theorists can be criticized and challenged, this does not mean that society and economies have remained unchanged, or that every aspect of these analyses is unfounded. Thus, it is undeniable that the last quarter of the twentieth century was a period of profound change. For the advanced, industrial economies there was not only a significant change in the type of products and services produced, and the nature of work itself, but the role of information and knowledge, in many aspects of social and economic life, also increased substantially. However, it is arguably going too far to suggest that these changes represent a fundamental rupture, witnessing the birth of a new type of society. This is because while much change has occurred, there have also been significant elements of continuity: organizations remain driven by the same imperatives of accumulation, and the general social relations of capitalism remain unchanged.

Such a conclusion is made by McKinlay (2005: 242), who suggests that one of the key drivers for knowledge-intensive firms, such as those in the pharmaceutical industry, to develop knowledge management systems is 'new competitive pressures within capitalism for perpetual innovation in products, services and organization by leveraging the tacit knowledge of their employees.' Thus to challenge Bell's conceptualization of a post-industrial society as representing a fundamental rupture with existing social and economic structures is not to

suggest that there has been no change. Equally, such critiques cannot be used to conclude that knowledge is not important to contemporary business organizations.

Aims, philosophy, and structure

The final objective of this chapter is to articulate the general aims and philosophy of this book, as well as outlining the themes and issues examined in each chapter. A useful way to articulate the aims and philosophy of this textbook is to sketch out an overview of the various perspectives on knowledge and knowledge management that exist in the academic literature and locate the perspective adopted here within this framework. As will be seen, one of the features of this academic literature is the diversity of quite different perspectives that exist. However, despite the heterogeneity of the literature on knowledge management, a number of broad perspectives can be identified.

A useful framework that helps to characterize the knowledge management literature, and simultaneously highlight issues which are typically neglected in it, was developed by Schultze and Stabell (2004), which is itself based on Burrell and Morgan's (1979) sociological paradigms framework. As with Burrell and Morgan's (1979) work on sociological paradigms, they articulate a two dimensional framework which produces four distinctive knowledge management discourses. Due to the different perspectives on epistemology in the knowledge management literature, this is one of the dimensions in Schultze and Stabell's framework. What is here labelled the objectivist perspective, Schultze and Stabell label the epistemology of dualism, and what is here referred to as the practice-based perspective, Schultze and Stabell label the epistemology of duality.

The second dimension in their framework relates to social order, with differences existing in the extent to which existing social relations are regarded as consensual and unproblematic. In relation to the social order dimensions Schulze and Stabell suggest two distinct perspectives dominate. The consensus perspective is where existing social relations are regarded as unproblematic and where challenging them is not considered. The dissensus perspective, by contrast, assumes that existing social relations are problematic and rife with conflict and that they typically reinforce power differentials that result in exploitation. The four discourses on knowledge management that emerge when these dimensions are put together are illustrated in Figure 1.2.

What this analysis reveals, and one of the key insights flowing from Schultze and Stabell's framework, is the extent to which the consensus-based perspective on social order predominates in the knowledge management literature. Thus most literature on the topic regards the management of organizational knowledge as being positive and progressive, and unquestioningly benefiting all organizational members, which consequently results in issues of conflict, power, and disagreement being marginalized, if not ignored.

Further, of the four discourses outlined by Schultze and Stabell the neo-functionalist one is by far the most dominant in the knowledge management literature (a conclusion also made by Goles and Hirscheim 2000). This literature not only assumes that the management of knowledge is positive and has potential benefits for all organizational members, but also that the object-like status of knowledge in organizations makes it a resource amenable to managerial control.

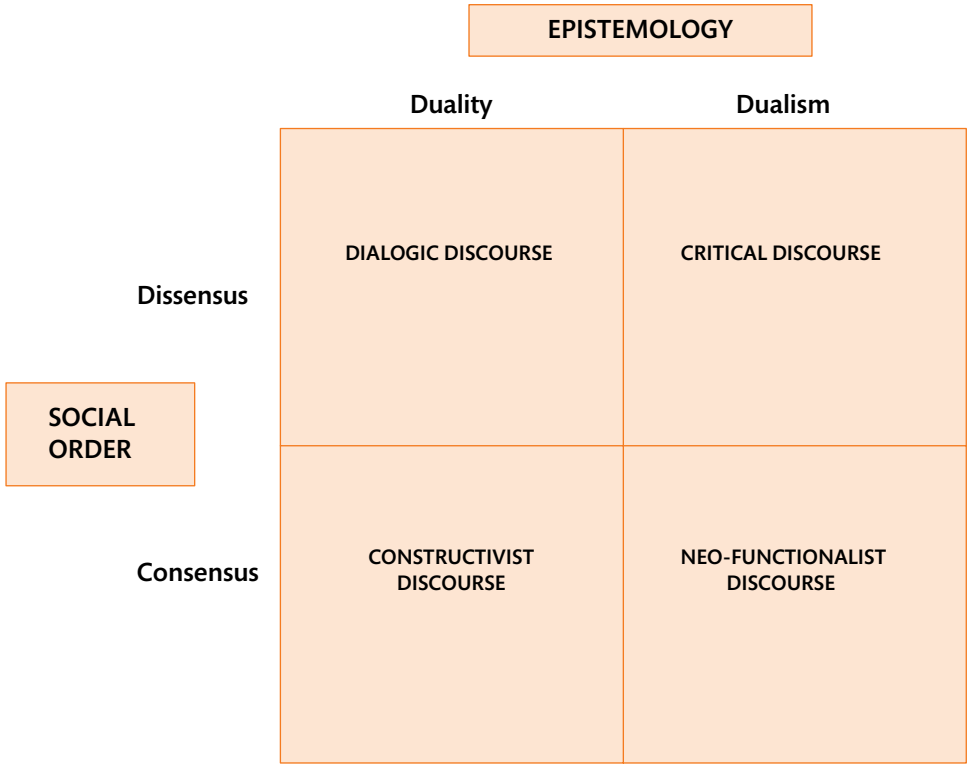


Figure 1.2 Schultze and Stabell's (2004) Four Discourses on Knowledge Management

Source: Schultze and Stabell (2004).

This book, while it does describe the neo-functionalist discourse on knowledge management (see Chapter 2 in particular), is concerned with giving voice to and drawing on work from the other three knowledge management discourses. Thus, its primary purpose is to provide readers with a rich understanding of the debates and diversity of perspectives that exist within the knowledge management literature through drilling down below the surface assumptions that typically go unquestioned in the mainstream knowledge management literature (regarding both the manageability of knowledge and the extent to which knowledge management involves conflict, power, and politics). This necessarily means utilizing perspectives other than that which Schultze and Stabell label the neo-functionalist discourse. This will allow an in-depth exploration of the issues underlying the theme of knowledge management and provide students with an insight into the debates and disagreements that continue to characterize the knowledge management literature, which would remain invisible if the focus was narrowly on the neo-functionalist perspective.

Thus, the book provides a critical introduction to knowledge management through examining ideas and assumptions that typically are not questioned in the mainstream knowledge management literature. Undertaking such an analysis reveals fundamental and important questions which are likely to be of perennial interest, such as what is knowledge? Can it be

controlled? Can it be codified? What are the difficulties involved in sharing or codifying it? Why might people be unwilling to participate in knowledge management initiatives? How these issues are structured in the book is now described.

The book is organized into six separate parts, each of which is focused around a particular theme. Part 1 addresses one of the fundamental questions in the knowledge management literature, how knowledge is conceptualized. This issue is explored in detail in Chapters 2 and 3. These chapters separately examine the two dominant perspectives on epistemology that predominate in the knowledge management literature. Chapter 2 focuses on elaborating the objectivist perspective on knowledge, which Schultze and Stabell label the epistemology of dualism. Chapter 3 then elaborates the practice-based perspective on knowledge, which Schultze and Stabell label the epistemology of duality.

Part 2 is concerned with examining and elaborating key concepts and is organized into two chapters. Chapter 4 engages with the questions of what knowledge management is and shows that providing a simple definition is problematic. This is due to the wide range of strategies that have been advocated and adopted for managing knowledge in organizations. A number of different typologies and frameworks are then utilized to categorize and structure them. Chapter 5 focuses on the key and related concepts of knowledge work, knowledge workers, and knowledge-intensive firms. The chapter examines and explores the debates that have developed around all these concepts, which, as with the idea of knowledge management itself, makes providing a straightforward definition for them difficult.

The three chapters in Part 3 focus on processes of learning and innovation, with each examining quite different aspects of it. Chapter 6 engages with the topic of organizational learning and the learning organization, exploring how the concepts and practices of learning and knowledge management in organizations are closely related. The chapter also examines the contrasting viewpoints on the learning organization that have emerged, specifically engaging with the debate on whether the learning organization increases opportunities for self-development or simply represents a new method of control and exploitation of workers. Chapter 7 examines innovation through the creation and use of new knowledge. The central focus of this chapter is on Nonaka and his various collaborators, whose work on knowledge creation is arguably the most well-known and used of all writing on knowledge management. The chapter will provide a critical evaluation of his work highlighting a number of ways in which it has been criticized. The chapter also briefly considers other perspectives on innovation, emphasizing the extent to which innovation processes involves inter-organizational collaboration between partners, the bringing together of diverse bodies of knowledge, and the roles of absorptive capacity in facilitating such processes.

Chapter 8 examines an equally important aspect of organizational innovation processes, though one which is often neglected in the knowledge management literature, the process of unlearning or giving up knowledge which may be perceived as not having contemporary relevance.

Part 4 examines the role of ICTs in supporting and facilitating the management of knowledge. This part consists of two chapters. The first, Chapter 9, focuses on how those adopting an objectivist view on knowledge see the role of ICTs in knowledge management activities, which is centrally focused around the sharing of codified knowledge. The second chapter,

Chapter 10, examines the role for ICTs in supporting knowledge management activities advocated by those adopting a practice-based perspective on knowledge, which is primarily concerned with using ICTs to facilitate communication and relationship building between people who are geographically dispersed.

Part 5 of the book examines a diverse range of human and social issues related to managing knowledge in organizations, all of which have emerged as being important to organizational attempts at knowledge management. Part 5 begins with Chapter 11 which examines the question of how knowledge processes in organizations are intimately linked to the topic of motivation. The chapter challenges the assumption that people are likely to be willing to share their knowledge, and explores why this is the case. This chapter utilizes the now copious literature that argues for a greater sensitivity to human and social factors.

Chapters 12 and 13 look at the dynamics of knowledge sharing and knowledge generation in two distinctive types of group situation. These chapters both illustrate different aspects of the collective and shared nature of much organizational knowledge. Chapter 12 uses the community of practice concept to consider the dynamics of knowledge sharing and knowledge production in a homogenous group context, where the people working together have well-established social relations, a significant degree of common knowledge, and a sense of collective identity. It closes by examining the potential dark side of communities of practice, which has been relatively unexplored in the communities of practice literature. Chapter 13 considers knowledge processes in more heterogeneous group contexts, where there are limited social relations, a limited degree of common knowledge, and a limited sense of collective identity (for example, in international project teams). This chapter shows how the dynamics of knowledge sharing and production in such a context are significantly different from those that are typical within communities of practice.

Chapter 14 builds from some of the issues touched on in Chapter 13: how knowledge processes are shaped by the conflict and politics that are an inherent part of organizational life. In general, the chapter considers how and why knowledge and power are inextricably linked, and specifically examines how conflicts in the development and use of knowledge can also be linked to the fundamental character of the employment relationship. The chapter examines the contrasting perspectives on knowledge and power developed within what Schultze and Stabell label the critical and discursive discourses on knowledge management.

Finally, the book finishes with Part 6, which is focused on the ways in which management in organizations can manage and facilitate knowledge management activities. This part is organized into two separate chapters. Chapter 15 examines the way that organizations have attempted, and can attempt to shape the knowledge behaviours of their staff through utilizing specific human resource management (HRM) policies and practices such as recruitment, reward, and training. Chapter 16, the final chapter in Part 6, examines the topics of leadership and organizational culture. These topics are considered together due to the significant role that organizational leaders can play in shaping the culture within an organization. The chapter considers the role that senior management in organizations can play in facilitating and inhibiting knowledge management processes, and also how organizational culture can shape workers' attitudes towards the management of their knowledge.

Review and Discussion Questions

1. What is your position on the knowledge society debate? Do you believe that the economy and society in the country you live in have the characteristics of a knowledge society? What evidence supports and undermines your argument?
2. Why do you think academic interest in the topic of knowledge management has been sustained since it first became a topic of interest?
3. The dissensus-based discourses in Schultze and Stabell's model (see Figure 1.2) raise the idea that knowledge management initiatives may not always be in the best interests of everyone working in an organization. To what extent do knowledge management initiatives create conflicts of interest between senior managers and workers in business organizations?
4. Establishing a link between investment in knowledge management activities and business value/performance raises questions regarding what aspect of business value/performance is examined (such as profit levels, market share, innovation levels, productivity levels, etc.), as well as how it is measured. What area (or areas) of business performance is spending on knowledge management likely to facilitate?

Suggestions for Further Reading

P. Heisig et al. (2016). 'Knowledge Management and Business Performance: Global Experts' Views on Future Research Needs'. *Journal of Knowledge Management*, 20/6: 1169–98.
Considers the challenges involved in identifying the extent to which investments in knowledge management create business value.

U. Schultze and C. Stabell (2004). 'Knowing What You Don't Know: Discourses and Contradictions in Knowledge Management Research', *Journal of Management Studies*, 41: 549–73.
A useful analysis which provides a way to categorize the diverse range of work published on knowledge management.

S. Walby (2011). 'Is the Knowledge Society Gendered?', *Gender, Work and Organization*, 18: 1–29.
Not only examines how issues of gender link to knowledge work and the knowledge society, but also presents different definitions of what constitutes the knowledge economy.

To further your understanding of knowledge management in organizations explore the book's accompanying online resources at **www.oup.com/uk/hislop4e/**

PART 1

Epistemologies of Knowledge in the Knowledge Management Literature

Chapter 1 has introduced the idea that increasingly knowledge is seen as representing the most important asset organizations possess, and that society has witnessed a significant increase in the number of both knowledge workers and knowledge-intensive organizations. This begs a number of questions, not least of which is, what is knowledge? This represents one of the most fundamental questions that humanity has grappled with, and it has occupied the minds of philosophers for centuries. Furthermore, even in contemporary times, interest in the topic of knowledge stems from more than the growth of interest in knowledge management. For example, postmodern philosophy has raised questions about the assumed objectivity of knowledge, and in the process has sparked an enormous debate. Therefore, in engaging with the question of the fundamental character of knowledge it is tempting to look beyond the knowledge management literature and engage with the wider historical and philosophical literature on the topic. However, this temptation is resisted here, for two primary reasons.

First, it is way beyond the scope of this book to attempt to provide any kind of adequate review, however brief, of the debates regarding the nature of knowledge (such as what distinguishes knowledge from belief, opinion, etc.), or to describe, compare, and contrast the different perspectives on knowledge that have been developed by different writers (from Plato and Aristotle to nineteenth-century philosophers such as Hume, Kant, and Nietzsche to twentieth-century writers such as Merly-Ponteau,

Ryle, or Polanyi[1]). The second reason for not engaging with such issues and writers here is that few writers on knowledge management do so. Styhre (2003) suggests two reasons for this. First, writers on knowledge management appear less interested in knowledge per se, instead having a narrow focus on knowledge in workplaces that has practical utility and can contribute to an organization's competitive advantage. Further, he also suggests that writers on knowledge management appear unwilling to embrace the idea that knowledge is not ultimately amenable to management control. However, where knowledge management writers do engage directly with such issues and philosophers, such as the use of Polanyi's work in discussions of tacit knowledge or Foucault's (1980) concept of power/knowledge, reference will be made to the relevant philosophers.

Thus, this section of the book deliberately chooses to focus narrowly on how knowledge is conceptualized in the knowledge management literature. Even with this restricted focus, addressing the question of the nature of knowledge is by no means simple. This is to a large extent because in the contemporary literature on knowledge management there are an enormous range of definitions, and from the way knowledge is described by different writers it is obvious that it is conceptualized in hugely divergent ways. Thus, rather than suggest that there is one single 'true' definition of what knowledge is, the book reflects the fragmented nature of the contemporary debate on this topic and presents the differing definitions and descriptions. As will be seen, the competing conceptualizations examined are based on fundamentally different epistemologies (see Definition).

DEFINITION Epistemology

Philosophy addressing the nature of knowledge. Concerned with questions such as: is knowledge objective and measurable? Can knowledge be acquired or is it experienced? What is regarded as valid knowledge, and why?

As outlined in Chapter 1, Schultze and Stabell (2004), drawing on Burrell and Morgan's (1979) analysis of sociological paradigms, suggested that two distinctive epistemologies exist in the knowledge management literature. This is a similar conclusion to that reached by a number of other writers who label their epistemologies differently from Schultze and Stabell (Scarbrough 1998; McAdam and McCreedy 2000; Werr and Stjernberg 2003). This part of the book is structured to reflect these findings, with a separate chapter being devoted to each epistemology, with Chapter 2 examining what is here labelled the objectivist perspective, and Chapter 3 examining what is here labelled the practice-based perspective.

These chapters examine not only how knowledge is conceptualized within each perspective, but also how the management and sharing of knowledge is characterized, based on their different assumptions about knowledge. Therefore, to best understand these competing perspectives, and to allow an effective comparison of their differences, it is useful to read these chapters in parallel, and consider them as being two halves of a debate.

While the objectivist epistemology represents the dominant perspective in the knowledge management literature (Schultze and Stabell 2004), as will be seen in Chapter 3 the popularity of the practice-based perspective has grown over time. These represent probably the most difficult chapters to read, as they are dealing with relatively abstract ideas. However, they provide a useful foundation to the issues addressed in the remainder of the book. Therefore a thorough grasp of these issues should facilitate a deeper understanding of what follows.

[1] Anyone interested in developing an understanding of such issues should find and read one/some of the many books which provide an introduction to, and overview of, the philosophy and theory of knowledge.

The Objectivist Perspective on Knowledge

Introduction

The purpose of this chapter is to fully articulate the objectivist perspective on knowledge. In this book the term 'objectivist' perspective is used because this label embodies and highlights what are here regarded as two of this perspective's foundational assumptions: first, that much organizational knowledge is typically considered as being objective in character; and, second, that such knowledge can be separated from people via codification into the form of an object, or entity (explicit knowledge).

This chapter is structured as follows. First, it begins by outlining the key assumptions and characteristics of the objectivist perspective on knowledge. The characteristics of this perspective are further elaborated in the second section which examines and gives examples of work utilizing the knowledge-based theory of the firm, which, as outlined, is one of the most important and well-known theories associated with the objectivist perspective on knowledge. The third section of the chapter examines the development of knowledge typologies that highlight and differentiate between distinctive categories of knowledge (the most well-known being tacit and explicit knowledge). The final section of the chapter concludes by considering how those adopting an objectivist perspective on knowledge typically conceptualize the sharing and management of organizational knowledge.

Objectivist perspectives on knowledge

The primary aim of this section is to describe the principles and characteristics of the objectivist epistemology of knowledge outlining the way it characterizes knowledge, which can be summarized as having four distinctive features (see Table 2.1). Cook and Brown (1999) refer to this perspective as the 'epistemology of possession' as knowledge is regarded as an entity that people or groups possess.

Within the objectivist perspective the entitative character of knowledge represents its primary characteristic. Knowledge is regarded as a (cognitive) entity/commodity that people possess, but which can exist independently of people, in a codifiable form. For example,

Table 2.1 The Objectivist Character of Knowledge

Character of Knowledge from an Objectivist Epistemology
Knowledge is an entity/object that can be separated from those who possess it
Based on a positivistic philosophy: knowledge can be objective
Explicit knowledge (objective) privileged over tacit knowledge (subjective)
Knowledge is a cognitive entity

Hartmann and Dorée (2015: 342) suggest that from this perspective knowledge is considered to be an 'objectifiable transferrable commodity'. Thus, knowledge can be codified, made explicit, and separated from the person who creates, develops, and/or utilizes it. Such knowledge can exist in a number of forms including documents, diagrams, computer systems, or embedded in physical artifacts such as machinery or tools. Thus, for example, a text-based manual of computer operating procedures, whether in the form of a document, compact disc (CD), or web page, represents a form of explicit knowledge. King and Marks Jr (2008) illustrate this assumption through talking about how information technology (IT) -based knowledge management systems 'capture' (p. 131) people's individual knowledge.

A further assumption about the nature of knowledge is that objective knowledge can be produced. The assumption is thus that it is possible to develop a type of knowledge and understanding that is free from individual subjectivity. This represents what McAdam and McCreedy (2000) described as the 'knowledge is truth' perspective, where explicit knowledge is seen as equivalent to a canonical body of scientific facts and laws which are consistent across cultures and time. The idea that explicit knowledge can exist in a textual form stems from a number of assumptions about the nature of language, including that language has fixed and objective meanings. These ideas are deeply rooted in the philosophy of positivism (see Definition), the idea that the social world can be studied scientifically, in other words that social phenomena can be quantified and measured, that general laws and principles can be established, and that objective knowledge is produced as a result.

DEFINITION Positivism

While Comte, a nineteenth-century French philosopher, founded what is now called positivism, Durkheim was arguably the first to translate these ideas into the realm of sociology. Durkheim was concerned to make sociology into a science, and advocated the use of a positivistic philosophy. This philosophy assumes that cause and effect can be established between social phenomena through the use of observation and testing, and that general laws and principles can be established. These general laws and principles constitute objective knowledge.

The third key element of the objectivist epistemology is that it privileges explicit knowledge over tacit knowledge (Marabelli and Newell 2014). This relates to and flows from the previous assumption, about the possibility to produce objective, codified knowledge. Primarily, explicit or codified knowledge is regarded as equivalent to objective knowledge. Tacit

knowledge on the other hand, knowledge which is difficult to articulate in an explicit form, is regarded as more informal, more personal and individualized, less rigorous, and highly subjective, being embedded within the cultural values and assumptions of those who possess and use it. Nonaka et al. (2000), for example, make this explicit by suggesting that

> explicit knowledge can be expressed in formal and systematic language and shared in the form of data, scientific formulae . . . In contrast, tacit knowledge is highly personal . . . Subjective insights, intuitions and hunches fall into this category of knowledge.

However, a key element of Nonaka's perspective on epistemology, as will be seen in Chapter 7, is that he challenges the privileging and prioritization of explicit knowledge, which he regards as being characteristic of the way knowledge is conceptualized in 'Western' societies, and suggests that greater attention should be paid to the role of tacit knowledge.

The final major assumption is that knowledge is regarded as a cognitive, intellectual entity. As Cook and Brown (1999: 384) suggest, knowledge 'is something that is held in the head'. From this perspective, the development and production of knowledge comes from a process of intellectual reflection (individual or collective), and is primarily a cognitive process. Newell (2015: 8) explains this aspect of the objectivist perspective by arguing that knowledge is a cognitive entity that people possess, with the mind being conceptualized as a personal repository or 'carrier of knowledge'.

The knowledge-based theory of the firm

The knowledge-based theory of the firm represents the dominant theory which adopts the objectivist perspective on knowledge. For example, Nonaka and Peltokorpi's (2006) analysis of the twenty most cited knowledge management articles found that articles using or developing the knowledge- (and/or resource-) based theory of the firm were prominent in this list. Hence it is worth spending time examining it in a little detail.

The knowledge-based theory of the firm, which represents a specific development from the resource-based view of the firm, was initially articulated and developed by a number of writers including Spender (1996), Kogut and Zander (1996), and Grant (1996). Over time the theory has been developed and refined partly through theoretical development, and partly through empirical testing (Nahapiet and Ghoshal 1998; Berman et al. 2002; Bogner and Bansal 2007; Haas and Hansen 2007; Wang et al. 2009; Cuervo-Cazurra and Un 2010; Sullivan and Marvel 2011; Judge et al. 2015; Agarwal et al. 2016). Finally, it is a perspective that underpins much knowledge management literature (Voelpel et al. 2005; King and Marks Jr 2008; Donate and Guadamilas 2010; Stock et al. 2010; Williams 2011; Harzing et al. 2016). There are two central tenets to the knowledge-based theory of the firm. First, it assumes that knowledge which is difficult to replicate and copy can be a significant source of competitive advantage for firms. Knowledge that is assumed to be difficult to replicate is firm-specific knowledge, which builds from and links to existing knowledge within an organization, and which is related to firm-specific products, services, or processes (Wang et al. 2009). Second, it assumes that organizations provide a more effective mechanism than markets do for the sharing and integration of knowledge between people. Thus, two of the key focuses of research which utilizes the knowledge-based theory of the firm are on the development of

firm-specific knowledge (see, for example, Nag and Gioia 2012), and the relationship between the development and use of such knowledge and firm performance (see, for example, Bognor and Bansall 2007).

The compatibility of the knowledge-based view of the firm with Schultze and Stabell's (2004) neo-functionalist discourse (see Chapter 1) is visible in the fundamental, unquestioned assumptions made by those adopting this perspective that organizational knowledge is an increasingly important source of competitive advantage for firms; and, further, that the interests of workers and organizational managers and owners in attempting to protect this are compatible and not contradictory.

The compatibility of the knowledge-based view of the firm with the characteristics of the objectivist perspective on knowledge just outlined is also typically quite apparent. For example, such work typically adopts an entitative view of knowledge (see, for example, Szulanski 1996), with Glazer (1998: 176) explicitly talking about 'knowledge as a commodity'. Second, this perspective is also founded on the idea that there are separate and distinctive types of knowledge, such as tacit and explicit, and group and individual knowledge (see, for example, Berman et al. 2002; Haas and Hansen 2007; Williams 2011). Finally, assumptions in this perspective regarding the objective character of knowledge are apparent in the view that the quality and character of organizational knowledge can be quantified and measured. For example, one of the key objectives of Glazer's (1998: 176) article is to facilitate efforts to 'develop reliable and valid measures of knowledge'. Further, Haas and Hansen (2007), in examining how the acquisition of tacit and explicit knowledge can improve task performance, assume unproblematically that it is possible to measure the quality of both types of knowledge (defined as 'rigour, soundness and insight' (p. 1137)) through asking relevant questions in a survey.

Finally, the compatibility of those utilizing and developing the knowledge-based theory of the firm with the objectivist perspective on knowledge is evident in the use of positivistic methods to investigate and analyse organizational knowledge and knowledge management processes (see, for example, Harzing et al. 2016). This is apparent in the assumptions that the variables under investigation can be objectively measured (typically via quantitative methods involving the collection of large bodies of statistical data), and that objective causal relationships between these variables can be revealed via the development and testing (via statistical analysis) of specific hypotheses. Such characteristics are visible in the various illustrated examples provided in this chapter.

Typologies of knowledge

As has been outlined, one of the primary features of the objectivist perspective on knowledge is the privileging of explicit/objective knowledge over tacit/subjective knowledge. This distinction between tacit and explicit knowledge, which are regarded as quite separate and distinct types of knowledge, flows from an either/or logic of binary oppositions which is a fundamental character of this perspective (discussed later). Thus, one feature of the writing of those adopting an objectivist perspective on knowledge is to make and develop typologies that identify and distinguish between fundamentally different types of knowledge. Two of the most common distinctions made which are

examined here are between tacit and explicit knowledge, and individual and collective or group knowledge.

Tacit and explicit knowledge

The tacit–explicit dichotomy is largely ubiquitous in analyses into the characteristics of organizational knowledge. One feature of those utilizing an objectivist epistemology is that tacit and explicit knowledge are regarded as separate and distinct types of knowledge. Explicit knowledge, from an objectivist perspective, is synonymous with objective knowledge, therefore it is unnecessary to restate in detail its characteristics (see Table 2.2). Suffice to say first that explicit knowledge is regarded as objective, standing above and separate from both individual and social value systems; and, second, that it can be codified into a tangible form.

Tacit knowledge on the other hand represents knowledge that people possess, and which may importantly shape how they think and act, but which cannot be fully made explicit. It incorporates both physical/cognitive skills (such as the ability to juggle, to do mental arithmetic, to weld, or to create a successful advertising slogan) and cognitive frameworks (such as the value systems that people possess). The main characteristics of tacit knowledge are therefore that it is personal, and is difficult, if not impossible, to disembody and codify. This is because tacit knowledge may not only be difficult to articulate, it may even be subconscious (see Table 2.2). Two of the most commonly referred to examples of tacit knowledge are the ability to ride a bike or to swim, with the knowledge possessed by people of how to carry out these activities being difficult to communicate, articulate, and share. Examples of work-related tacit knowledge include the ability to write good computer software, the ability of a skilled craftsperson to produce high quality goods, the ability to be an effective leader, and the ability to solve complex problems (see Illustration 2.1).

This distinction between tacit and explicit knowledge is by no means unique to the objectivist epistemology of knowledge, but the specific way that the distinction is theorized within this perspective is quite particular. Importantly, as will be seen later in the chapter, some major implications flow from this depiction of the dichotomy in terms of the way knowledge sharing processes are conceptualized. Within the objectivist epistemological framework an either/or logic predominates, resulting in tacit and explicit knowledge being regarded as separate and distinctive types of knowledge. This characterization of the dichotomy is explicit in the following quotation: '[t]here are two types of knowledge: explicit knowledge and tacit knowledge' (Nonaka et al. 2000). Thus from this perspective tacit and explicit knowledge do

Table 2.2 The Characteristics of Tacit and Explicit Knowledge

Tacit Knowledge	Explicit Knowledge
Inexpressible in a codifiable form	Codifiable
Subjective	Objective
Personal	Impersonal
Context-specific	Context-independent
Difficult to share	Easy to share

not represent the extremes of a spectrum, but instead represent two pure and separate forms of knowledge.

Typically, this polarized dichotomy is argued to be based on the work of Michael Polanyi (1958, 1983). Nonaka for example makes this reference explicit. However, as will be shown in Chapter 3, there is another, distinctly different interpretation of Polanyi's work, which questions this conceptualization of the tacit–explicit dichotomy. More details on Nonaka's conceptualization of knowledge are presented in Chapter 7.

Illustration 2.1 The role played by the acquisition of tacit and explicit knowledge in improving task productivity

Haas and Hansen (2007) examined the impact that the acquisition by work groups of tacit and explicit knowledge from beyond their group/team had on what they called task productivity. This was done within the empirical context of sales teams in a large management consultancy firm in the USA. The management consultancy firm examined provided tax and audit advice to clients in a wide range of industries including energy, communications, healthcare, automotive, and financial services. The study focused narrowly on the acquisition and use of knowledge in the work done by sales teams in pitching for business with prospective clients. One of the key elements involved in preparing such bids, which was the knowledge sharing/acquisition process examined by Hass and Hansen, was to draw on and utilize knowledge or experience from previous bids that was felt to be relevant. The data on the knowledge and work processes they examined was acquired from surveys that were distributed to the team leaders of a random selection of sales bids carried out during the time of the research. Three dimensions of task productivity were examined including time saved, task quality, and the extent to which the bid team were considered to be competent by external stakeholders such as clients. In terms of knowledge sharing, two mechanisms were examined, with one being related to each type of knowledge that was examined. Fundamentally it was assumed that explicit knowledge was shared through the acquisition and use of documentation, whereas tacit knowledge was acquired through person-to-person interaction.

The most fundamental and general finding of their study was that the acquisition of both tacit and explicit knowledge from outside the bid teams did positively impact on task productivity, but in quite different ways. For example, the acquisition of explicit knowledge had positive time saving benefits, but the acquisition of tacit knowledge did not. Further, the higher the quality of the explicit/codified knowledge that was used, the greater the time saving. By contrast, the sharing of tacit knowledge improved both task quality and client's perception of competence, with both being positively related to the quality of the tacit knowledge that was shared. This study doesn't privilege tacit over explicit knowledge and shows that both tacit and explicit knowledge have their own distinctive benefits for task productivity.

Question

Does this empirical evidence undermine assumptions regarding the superiority of explicit over tacit knowledge?

Individual–group knowledge

While some argue that knowledge can only ever exist at the level of the individual, this idea is disputed by a range of writers. These writers argue that while much knowledge does reside within individuals, there is a sense in which knowledge can reside in social groups in the

Table 2.3 Generic Knowledge Types

	Individual	Social
Explicit	Conscious	Objectified
Tacit	Automatic	Collective

Source: Adapted from Spender (1996).

form of shared work practices and routines, and shared assumptions or perspectives (Collins 2007; Ebbers and Wijnberg 2009; Hecker 2012; Razmerita et al. 2014). This insight is used as the basis for a further dichotomy of knowledge types: into individual and group/social level knowledge. One of the most well-known advocates of such a perspective is Spender (1996), who combined the tacit–explicit dichotomy with the individual–group dichotomy to produce a two by two matrix with four generic types of knowledge (Table 2.3).

Objectified knowledge represents explicit group knowledge, for example a documented system of rules, operating procedures, or formalized organizational routines. *Collective* knowledge on the other hand represents tacit group knowledge, knowledge possessed by a group that is not codified. Examples of this include informal organizational routines and ways of working, stories, and shared systems of understanding. For example, the value systems that people possess have a collective element, as they are related to values and ideas that circulate in the particular social milieu that people work within. The massive expansion of the culture management industry that has occurred since the mid-1980s, which attempts to inculcate specific value systems within organizations, suggests that there is an optimism among organizational management that such shared systems of values can be developed.

However, collective knowledge can exist within different types of community, of different sizes and characteristics. For example, at a relatively small-scale level, collective knowledge can exist within teams or communities. One specific example of this small-scale level of community knowledge that is increasingly being referred to is that possessed and held within communities of practice (see Chapter 12). However, other types of group or community within which collective knowledge can be developed include departments, sites, organizations, or business units within multinational corporations (MNCs). At a more macro level, Lam (1997) also found that the national cultural context could play an important role in shaping the nature of organizational knowledge.

One of the most detailed analyses of collective knowledge was produced by Hecker (2012). Constraints of space make it impossible to fully articulate the model of collective knowledge developed by Hecker. However, it is worth highlighting the distinction Hecker makes between three types of collective knowledge (see Table 2.4). The first type of collective knowledge identified by Hecker is shared knowledge. This represents knowledge that is possessed by a range of different members within a community. For example, within a sales team, this may be shared knowledge regarding how to manage customer interactions. The second type of complementary knowledge identified by Hecker is complementary knowledge. This is where there is a knowledge-based division of labour within a community, where people possess different bodies of (overlapping) but specialized knowledge. The shared, complementary knowledge in this context is the knowledge and understanding people have about the distribution of expertise within the community, where community members' knowledge of each

Table 2.4 Hecker's (2012) Three Types of Collective Knowledge

Type of Collective Knowledge	Definition	Locus	Relationship to Individual Knowledge	Origin	Example
Shared knowledge	Knowledge held by individuals in a group	Individuals	Overlapping, common knowledge	Shared experiences	A set of rules and norms shared within a community, and which govern behaviour in social interactions, for example, shared organizational culture.
Complementary knowledge	Knowledge regarding the division of expertise within a group	Interdependencies between individual knowledge		Specialized division of knowledge within group	An organizational IT team, where separate individuals possess knowledge of different IT systems, and where team members understand the distribution of expertise among people, and can use this understanding to co-ordinate expertise to solve problems.
Artifactual knowledge	Knowledge embedded in collective, group artifacts	Artifact	Combinations of individual knowledge in an articulated form	Codification and articulation of knowledge	A computer database of sales information collectively produced and used by a team of sales people.

Source: Hecker (2012).

other's expertise helps them to effectively coordinate their work activities such that their collective efforts are greater than the sum of their individual knowledge and efforts (see Illustration 2.2). The third and final type of collective knowledge identified by Hecker is knowledge embedded in artifacts which are developed and used collectively by community members. Examples of such artifacts are documentation (such as a shared presentation or database), or technological artifacts such as collectively developed products. Razmerita et al. (2014) argue that knowledge management systems which consist of a repository of codified knowledge accessible to all organizational members allow the development of collective knowledge. In Hecker's terms, knowledge management repositories are an example of artifactual collective knowledge, which facilitates the development of shared collective knowledge through people's use of the knowledge management repository.

Illustration 2.2 Sharing collective knowledge: the role of the 'collective bridge'

Zhao and Anand (2013: 1513) define collective knowledge as 'knowledge embedded among individuals regarding how to coordinate, share, distribute, and recombine individual knowledge'. This is compatible with what Hecker (2012) defined as 'complementary knowledge' (see Table 2.4). Such knowledge is qualitatively different from individual knowledge possessed by a specific person, as it is mutually shared among a group of people. Zhao and Anand suggest that collective knowledge is important for organizations as it can be a source of competitive advantage, and its complexity makes it difficult to replicate. Collective knowledge includes not only routines, and shared language/syntax, but also how an individual's actions will impact on the work and knowledge of interdependent others. Zhao and Anand illustrate the benefits of collective knowledge in the context of an engineering, design, and manufacturing company, where the existence of collective knowledge between a design engineer and a manufacturing engineer would allow the design engineer to design a product that was straightforward to manufacture.

However, the complexity of collective knowledge also creates challenges for organizational attempts to share it internally, between different parts of an organization. The complexity of collective knowledge is related to the extent of the interdependencies that exist between different areas of specialist knowledge, with highly complex collective knowledge involving a significant degree of interdependency between different areas of expertise. The challenge of sharing highly complex, interdependent collective knowledge is that this process involves the transferral of not simply isolated, individual expertise between people, but also the interdependencies that exist between different bodies of specialist knowledge.

Zhao and Anand argue that the sharing of complex, interdependent collective knowledge involves the use of what they define as a 'collective bridge'. This is a direct set of inter-personal ties between a group of people in the two units that collective knowledge is to be shared between. Developing a collective bridge to facilitate such a knowledge transfer thus involves developing inter-personal relations between a range of people in the two units involved. A successful example of the development of such a bridge was achieved within Volkswagen, between the German and Chinese units of its research and development (R&D) department. This was achieved when a group of Chinese engineers underwent an extensive training programme in Germany. The participation of the Chinese engineers in this programme meant that when they returned to China they had developed an understanding of the collective knowledge of the German R&D unit, and were also able to effectively communicate with them when they needed any ongoing technical support.

Question

Can you identify other means, apart from training programmes, where a 'collective bridge' of social relationships can be developed between two separate groups of workers?

An objectivist perspective on the sharing and management of knowledge

Having examined both the fundamental character of knowledge, and the way knowledge can be categorized into different types, the final section of the chapter examines the implications of these ideas for the sharing and management of knowledge. This section begins by making explicit the general model of knowledge sharing which flows from objectivist

assumptions regarding knowledge, before concluding by outlining the way knowledge management processes are characterized.

Conduit model of knowledge sharing

Building from previous assumptions, the sharing of knowledge from an objectivist perspective represents what has been referred to as the conduit or transmitter/receiver model (see Figure 2.1). This model suggests that knowledge is shared by being transferred from an independent sender, to a separate receiver, via a specific transmission channel/mechanism. Thus, the key components in this model of knowledge transfer/sharing are: a sender, a receiver, a transmission channel/mechanism, the knowledge being transferred, and a context in which the transfer occurs. Further, the success of such transfers are assumed to be based on a number of conditions including that the sender is knowledgeable and willing to transfer knowledge, that an appropriate transmission channel is used (which is related to the character of the knowledge being transferred—discussed later), and that the receiver has the capacity to absorb and utilize the knowledge being transferred (Hartmann and Dorée 2015).

Such assumptions are often made explicit. For example, Szulanski (1996: 28) suggests that knowledge sharing involves 'the exchange of organizational knowledge between a source and a recipient'. Khan et al.'s (2015: 659) analysis of knowledge transfer processes with local suppliers in international joint ventures also reveals such assumptions, using terms such as 'knowledge sender', 'transfer mechanism', and 'recipient'. Finally, Williams (2011: 338), who utilizes the knowledge-based view of the firm to analyse the sharing of knowledge between some clients and offshore engineers they work with, says that 'knowledge transfer involves both [the] transmission of knowledge from sender to recipient, as well as its integration and application by the recipient'.

While the basic principles and components of this knowledge transfer model are relatively simple, research in this area has resulted in the development of complex models and analyses, which examine the interactions between the model's different components, as well as conceptualizing the components of the model in complex ways (Szulanski et al. 2016), with the end of chapter Case study being a good example of such an analysis.

For example, a key element in the success of such knowledge transfer processes is the ability of the receiver to absorb and utilize the knowledge being sent. This capability to absorb external knowledge, integrate it with existing knowledge, and effectively apply and utilize it is defined as a receiver's absorptive capacity. This concept was initially developed by Cohen and Levinthal (1990), but has subsequently expanded to be a significant area of research, with complex analyses being developed regarding the factors influencing it, and its impact on organizational performance and innovation (Marabelli and Newell 2014). (This concept will be returned to in Chapter 7 on innovation, where it will be discussed more fully.)

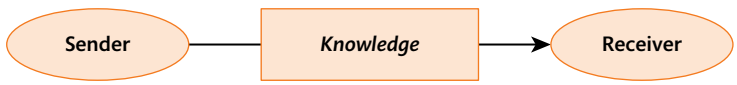


Figure 2.1 **The Conduit Model of Knowledge Sharing**

As outlined earlier, a key component of the objectivist perspective on knowledge is that tacit and explicit knowledge represent separate and distinct types of knowledge. This assumption is reflected in analyses regarding the character of knowledge transfer processes, with it being assumed that the effective transferral of tacit and explicit knowledge requires different transfer mechanisms. In broad terms, those utilizing this perspective on knowledge assume that the transferral of explicit knowledge is more straightforward than the transferral of tacit knowledge. With respect to codified knowledge, which is typically shared via information and communication technologies (ICTs) and documentation, it is assumed that the sender, in isolation from the receiver, can produce some fully codified knowledge and then transfer it remotely to the receiver. The receiver then takes this knowledge and is able to understand it and use it without any other form of interaction with the sender. Further, it is assumed that no important aspects of this explicit knowledge are lost in the transfer process, and that both sender and receiver derive the same meaning from the knowledge. With respect to the sharing of tacit knowledge, it is typically assumed that this involves more inter-personal interaction and communication (such as via meetings and one-to-one dialogue). However it is still assumed that such tacit knowledge is an entity which can be directly transferred from one person to another.

Knowledge management processes

Building from these assumptions regarding the sharing of knowledge, we can now examine the nature of knowledge management processes from an objectivist perspective (Table 2.5).

Based on the strict dichotomy on which the objectivist perspective is founded, where tacit and explicit knowledge are regarded as distinctive and separate types of knowledge with quite specific characteristics, the sharing of tacit and explicit knowledge are also regarded as being fundamentally different (the case study by Haas and Hansen is a good illustration of this, as is the study by Williams 2011). From this perspective, while the sharing of tacit knowledge is acknowledged to be difficult, complex, and time-consuming, the sharing of explicit knowledge, by contrast, is regarded as much more straightforward. In fact, from the objectivist perspective, the easy transferability of explicit knowledge represents one of its defining characteristics. For example, Grant (1996: 111) suggests that 'explicit knowledge is revealed by its communication. This ease of communication is its fundamental property.'

The typical starting point in objectivist conceptualizations of knowledge management is the processes of codifying relevant knowledge, converting tacit to explicit knowledge (a process which Nonaka and his collaborators refer to as 'externalization'—see Chapter 7). From this

Table 2.5 An Objectivist Perspective on Knowledge Management

Knowledge Management: Objectivist Perspective
Convert tacit to explicit knowledge (codification)
Collect knowledge in centralized repository
Structure/systematize knowledge (into discrete categories)
ICT plays a key role

perspective there is an acknowledgement that much organizational knowledge may be tacit. But this is accompanied by an optimism that it is possible to convert much of this knowledge to an explicit form. For example, while all the assembly instructions for putting together a car, or all the stages in a telesales customer interaction, may not be totally explicit, with effort and work it is assumed to be possible to make all this knowledge explicit, and codify it into a complete set of instructions/body of knowledge. This can be achieved by getting relevant workers to articulate all their knowledge about such processes, making explicit all the assumptions, behaviours, and actions they utilize in accomplishing the task being examined.

Thus, the first stage in any knowledge management initiative, from this perspective, is to identify what knowledge is important and then make it explicit. The typical optimism that exists with regard to the extent to which tacit knowledge can be made at least partially explicit means that the difficulties involved in sharing tacit knowledge and the nature of such processes are not typically central to objectivist models of knowledge management (see Time to reflect).

Time to reflect 'Externalizing' tacit knowledge

Think about an example of tacit knowledge that you possess. To what extent could this knowledge be converted into an explicit form? Could it be codified such that someone else could utilize it? Further, how easy and how time-consuming is this process likely to be?

The next stage in the knowledge management process involves collecting all the codified knowledge together into a central repository, and then structuring it in a systematic way to make it easily accessible to others (Durcikova and Gray 2009; Taskin and Van Bunnen 2015). Thus for example, the knowledge may be collected in a central database, where it is not only stored, but also categorized, indexed, and cross-referenced. The importance of doing this effectively is related to the next part of the knowledge management process: making this knowledge accessible to all people who may want to use it. One of the primary rationales for organizations managing their knowledge is to allow knowledge to be more widely and effectively shared within organizations (Fadel and Durcikova 2014; Taskin and Van Bunnen 2015). This makes organizing knowledge, and making it accessible, as important as the codification process. The knowledge management system examined by King and Marks Jr (2008) fits with these objectives, being described as a 'repository' whose purpose is to facilitate the dissemination of best-practice knowledge among the case study organization's globally dispersed workforce.

Finally, ICTs typically play a key role in knowledge management processes utilizing the objectivist perspective. For example, ICTs can play an important role in almost every element of the knowledge management process (Gilbert et al. 2010). First, they can provide a repository (for example, databases) in which codified knowledge can be stored (Cha et al. 2008). Second, they can play a role in the organizing of knowledge (for example, with electronic cross-referencing systems). Finally, they can provide conduits and mechanisms through which knowledge can be transferred into, or extracted from, a central repository (for example, through an intranet system or search engine). It is thus no surprise that many studies into the role of ICTs in knowledge management initiatives utilize an objectivist perspective on knowledge (see, for example, Voelpel et al. 2005; King and Marks Jr 2008). The role of ICTs in knowledge management processes, from an objectivist perspective, is examined more fully in Chapter 9.

Conclusion

This chapter has outlined the defining characteristics of the objectivist perspective on knowledge, which represents the mainstream perspective in the knowledge management literature on how to conceptualize knowledge. The most fundamental assumptions of this perspective on knowledge are that knowledge can take the form of a discrete entity, separate from people who may understand or use it; and that knowledge can take different forms, distinguishing most importantly between tacit and explicit knowledge. Within this perspective there is also typically an assumption and optimism that much of the organizational knowledge possessed by workers can be codified into an explicit form. Some subsidiary features of this perspective on knowledge are that tacit and explicit knowledge are regarded as quite separate and distinctive types of knowledge, with explicit knowledge typically being privileged and prioritized over tacit knowledge. This is largely because explicit or codified knowledge is typically characterized as being objective, while tacit knowledge is, in contrast, assumed to be more personal, subjective, and context-specific.

These assumptions about the nature of knowledge have significant implications for how the management and sharing of knowledge is conceptualized. The privileging of explicit knowledge within this perspective means that there is a bias towards and focus upon the management and sharing of explicit, codified knowledge. The emphasis on codified knowledge is also due to assumptions that it is much easier to manage and share codified knowledge than it is to manage and share tacit knowledge. The optimism regarding the codifiability of knowledge means that those adopting an objectivist perspective on knowledge typically emphasize processes of codification. Thus, from this perspective, an initial step in the management and sharing of knowledge is to codify as much knowledge as possible. The sharing of such knowledge between people has the characteristics of a 'transmitter–receiver' model, where it is assumed codified, explicit knowledge can be passed from one person to another unmodified. This perspective on knowledge typically also suggests that computer and communication technologies can play a key role in knowledge management processes through providing one important medium, or conduit, via which codified knowledge can be shared.

Case study Factors shaping the successful transfer of knowledge within an MNC: an objectivist analysis

A potential advantage that MNCs have over other types of organization is the ability to improve business practices through the sharing of knowledge between different divisions/subsidiaries. Thus, less knowledgeable subsidiaries can benefit from the knowledge and experience of more knowledgeable ones. Such processes can result in the development of technological capabilities in less knowledgeable subsidiaries, with potential competitiveness benefits for both the subsidiary and the MNC owner. However, the successful transfer of knowledge between subsidiaries within MNCs is by no means simple, and success in such activities is never guaranteed.

Jasimuddin et al. (2015)'s analysis of the acquisition of knowledge by Chinese subsidiaries from the Japanese MNCs which own them provides insights into some of the factors which influence the success of such activities. This empirical focus is particularly interesting and important due to the significance of the role such knowledge transfers have played in recent decades in the massive economic development and growth of China. In their analysis, the specific focus is on the role played by the Chinese subsidiary in the acquisition of knowledge. More specifically, Jasimuddin et al. (2015) examine how some key characteristics of these subsidiaries affects the acquisition of knowledge, as well as how the type of transfer mechanisms used mediate the relationship between these characteristics and the success of the focal knowledge acquisition processes.

The fact that Jasimuddin et al.'s (2015: 465) analysis utilizes an objectivist perspective on knowledge is visible in two primary ways. First, it explicitly utilizes the sender/receiver model of knowledge sharing/transfer, talking about how knowledge transfer processes involve a 'source' and 'recipient'. Second, in considering the different mechanisms via which knowledge can be transferred it talks of tacit and codified knowledge as distinct and separate types of knowledge, with different transfer mechanisms being appropriate for the transfer of each.

In examining how the characteristics of the Chinese subsidiary (the receiver) affects the acquisition of knowledge from the Japanese MNCs which own them (the source of knowledge), Jasimuddin et al. (2015) distinguish between two variables: the motivation to acquire knowledge, and the ability to acquire knowledge. The ability to acquire knowledge is conceptualized as the absorptive capacity. This refers to 'an organizations ability to understand, absorb, and use new knowledge' (p. 466). (This represents one of the key concepts underpinning processes of innovation and knowledge creation, and is discussed again in Chapter 7 on innovation). Jasimuddin et al. (2015) hypothesize that both the motivation and the ability of a subsidiary to acquire knowledge will be related to the success of knowledge acquisition processes.

Jasimuddin et al. (2015) also examine the role played by the type of transfer mechanism in mediating the success of knowledge acquisition processes. In doing so they distinguish between tacit and codified knowledge, and suggest that different transfer mechanisms are likely to be effective for the acquisition of both types. For the acquisition of codified knowledge, they hypothesize that the use of ICTs will be the most effective acquisition mechanism (codification-based strategies), while in contrast they hypothesize that the acquisition of tacit knowledge will require the use of more inter-personal communication, via face-to-face interactions (personalization-based strategies).

Jasimuddin et al. (2015) tested the validity of their hypotheses via the statistical analysis of a survey that was distributed among Chinese subsidiaries of Japanese MNCs in the Dalian region of China. Their analysis found that all hypotheses tested were supported. Thus, the successful acquisition of knowledge by Chinese subsidiaries was related not only to their motivation to engage in such activities, but also to their ability to absorb and utilize external knowledge. Second, they also found that the success of these knowledge acquisition processes was mediated by the extent to which both codification and personalization-based knowledge acquisition strategies were utilized.

These findings have a number of practical implications for those interested in facilitating the successful transfer of knowledge in such contexts. The first, and arguably the most important, practical implication is that the successful acquisition of knowledge by subsidiaries is not solely dependent on them being motivated and willing to acquire external knowledge, but also, crucially, by their ability to absorb such knowledge. Thus, organizations interested in the success of such activities should not only be willing to absorb eternal knowledge, but be committed to devoting effort in developing their ability to do so (absorptive capacity). Second, to ensure the success of knowledge acquisition processes organizations should also utilize a mixture of codification-based and personalization-based strategies.

Source: Jasimuddin, S., Li, J., and Perdikis, N. (2015). 'Knowledge Recipients, Acquisition Mechanisms, and Knowledge Transfer at Japanese Subsidiaries: An Empirical Study in China', *Thunderbird International Business Review*, 57/6: 463–79.

Questions

1. If the ability to absorb external knowledge (absorptive capacity) is so crucial to knowledge transfer processes, what can be done to develop it?
2. If the sharing of tacit knowledge requires face-to-face interaction between people, how are such processes shaped by the extent to which people are culturally different?

Review and Discussion Questions

1. The objectivist perspective assumes that 'pure' explicit knowledge exists, where tasks, activities, or jobs can be fully codified. Can you think of any jobs or activities where knowledge is highly (or totally) codified?
2. Think about your experience of social/group knowledge. Is it largely tacit or explicit? Did it exist in the form of systems of rules, routines, stories, etc.?
3. National culture and communities of practice have been discussed as two types of social context/setting where collective knowledge can be seen to exist. In what other social contexts have you witnessed collective knowledge to exist—organization, family, geographic region, peer group, friendship network, profession?
4. Based on any work experiences you have, is it common that explicit/codified knowledge tends to be privileged and regarded as more objective than tacit knowledge?

Suggestions for Further Reading

R. Grant (1996). 'Towards a Knowledge Based Theory of the Firm', *Strategic Management Journal*, 17, Winter Special Issue: 109–22.
One of the earliest papers explicitly concerning itself with articulating and theoretically developing the knowledge-based view of the firm.

A-W. Harzing, M. Pudelko, and S. Reiche (2016). 'The Bridging Role of Expatriates and Inpatriates in Knowledge Transfer in Multinational Corporations', *Human Resource Management*, 55: 679–95.
Makes an empirical and conceptual contribution to the development of the knowledge-based view of the firm by examining the role of expatriates and inpatriates in knowledge transfer processes within MNCs.

K.J. Fadel and A. Durcikova (2014). 'If It's Fair, I'll Share: The Effect of Perceived Knowledge Validation Justice on Contributions to an Organizational Knowledge Repository', *Information and Management*, 51: 511–19.
An examination of the factors influencing workers' willingness to contribute knowledge to a knowledge management repository.

A. Hecker (2012). 'Knowledge Beyond the Individual? Making Sense of a Notion of Collective Knowledge in Organization Theory', *Organization Studies*, 33/3: 423–45.
A conceptual paper which considers the different ways in which collective knowledge is conceptualized.

To further your understanding of knowledge management in organizations explore the book's accompanying online resources at **www.oup.com/uk/hislop4e/**

The Practice-Based Perspective on Knowledge

Introduction

Chapter 2 provided one specific answer to the question 'what is knowledge?' However, the objectivist perspective has been widely challenged, and for a number of different reasons. Arguably the most fundamental challenge and critique of it is that it is based on flawed epistemological assumptions. Chapter 3 therefore presents an alternative answer to the question 'what is knowledge?' This chapter is based on fundamentally different epistemological assumptions and, as will be seen, characterizes knowledge and knowledge management practices quite differently from the objectivist perspective.

The practice-based perspective conceptualizes knowledge not as a codifiable object/entity, but instead emphasizes the extent to which it is embedded within and inseparable from work activities or practices (see Definition). Cook and Brown (1999) labelled this perspective an 'epistemology of practice' due to the centrality of human activity to its conception of knowledge. Ripamonti and Scaratti adopted a similar perspective, talking about knowledge being 'action-oriented and implicit . . . [and] acquired by experience in a specific context' (2011: 185). Thus, the embeddedness of knowledge in human activity (practice) represents one of the central characteristics of this epistemological perspective. Finally, Tooman et al. (2016: 19) go a little further, arguing that knowledge is not only embodied in people, and inseparable from the activities they undertake, but also embedded in the contexts in which activity takes place, arguing, 'what is known, the one who knows it, and the context of action are bound together'.

The practice-based view on knowledge is indicative of a wider acknowledgement of the importance of practices in work, in management and organization studies, and in the social sciences more broadly (Marshall 2014; Zeynep et al. 2014), In the domain of knowledge management, interest in practice-based perspectives on knowledge is visible in the number of books (such as Gherardi and Strati 2012; Nicolini 2013; Orr et al. 2016), and research publications (see the remains of this chapter), which have utilized it.

DEFINITION **Practice**

Practice refers to purposeful human activity. It is based on the assumption that activity includes both physical and cognitive elements, and that these elements are inseparable. Knowledge use and development is therefore regarded as a fundamental aspect of activity.

While the objectivist perspective was closely aligned with a positivistic philosophy, the practice-based one is compatible with a number of different theorists and philosophical perspectives (Nicolini 2011). For example, the work of Heidegger, Wittgenstein, and the American pragmatists, Pierce and Dewey, underpins much contemporary writing, and more contemporary theorists such as Bourdieu and Garfinkel are also utilized (Bain and Mueller 2016; Rivera and Cox 2016). In the domain of knowledge management, the work of Nicolini, Gherardi, and Strati is the most prominent (Strati 2007; Gherardi 2009; Nicolini 2011, 2013; Gherardi and Rodeschini 2016), with Lave and Wenger's work on communities of practice also utilizing a practice-based perspective (see Chapter 12). However, constraints of space make it impossible to describe and compare these diverse perspectives here.

The chapter follows a similar structure to Chapter 2 and begins by outlining the way knowledge is characterized within the practice-based perspective. The chapter then examines how knowledge management processes are conceptualized. As the chapter proceeds, the vast differences that exist between the practice-based and the objectivist perspectives on knowledge will become more apparent.

Features of a practice-based perspective on knowledge

The practice-based epistemology can be understood in terms of five specific, but interrelated, factors each of which are now examined in turn (Table 3.1).

The embeddedness of knowledge in practice

Perhaps the most important difference between the objectivist and practice-based epistemologies of knowledge is that the practice-based perspective challenges the entitative conception of knowledge. From this perspective, knowledge is not regarded as a discrete entity/object that can be codified and separated from people. Instead, knowledge, or as some of the writers from this perspective prefer, knowing, is inseparable from human activity (Orlikowski 2002; Gherardi 2006; Corradi et al. 2010). Nicolini (2011: 604) summed this up as follows: 'knowledge is inherently tied to the pursuit of an activity and is constituted

Table 3.1 Practice-Based Characteristics of Knowledge

Characteristics of Knowledge from Practice-Based Epistemology
1. Knowledge is embedded in practice
2. Knowledge is multidimensional and non-dichotomous
3. Knowledge is embodied in people
4. Knowledge is socially constructed
5. Knowledge is culturally embedded
6. Knowledge is contestable

and renovated as actors engage with the organizational world in practice'. Thus all activity is, to some extent, knowledgeable, involving the use and/or development of knowledge (see Illustration 3.1.).

As well as challenging the knowing–doing dichotomy, this perspective also challenges the mind–body dichotomy that is inherent in the objectivist perspective (see more detail in the later 'Knowledge is embodied' section). As outlined, the objectivist perspective, drawing on the classical images of science, conceptualizes knowledge as being primarily derived from cognitive processes, something involving the brain but not the body. The practice-based perspective instead views knowing and the development of knowledge as occurring on an ongoing basis through the routine activities that people undertake. Knowing thus can be seen as less of a purely cognitive process and more of a holistic one involving the whole body (Hindmarsh and Pilnick 2007; Strati 2007). From this perspective, thinking and doing are fused in knowledgeable activity, the development and use of embodied knowledge in undertaking specific activities/tasks.

Strati (2007) conceptualized the role of the body in practices of knowing via the development of the term 'sensible knowledge'. Central to Strati's conceptualization of knowledge is the idea that knowing is not an activity conducted purely within the brain, with knowing involving the whole body. For Strati (2007: 67), work practices and processes of knowing in organizations are 'not only mental and logical-analytical but also corporeal and multi-sensorial'. The concept of sensible knowledge relates to knowing that involves workers using the human senses of touch, sight, taste, hearing, and smell, with a number of empirical examples being given to illustrate the arguments being made. One of these examples concerned sawmill workers from the north-east of Italy (Strati 2007: 67–9). In this example, the workers in the mill (who did not wear gloves) were able to identify the thickness of the planks they were moving without formally measuring them, simply through the process of lifting and feeling them. Their sense of touch was such that they were able to differentiate between planks whose thicknesses varied by half a centimetre. For Strati this represented an example of sensible knowing, where the sawmill workers' hands, through their sense of touch, were intimately involved in knowing how thick the planks they handled were.

Illustration 3.1 A practice-based perspective on telemedicine

Nicolini (2011) utilizes a practice-based epistemology to analyse the work of nurses looking after patients with heart problems who required continuous monitoring in between regular hospital visits, with the monitoring process being carried out via regular calls to the patients to check up on them. Nicolini's focus was the various interrelated practices the nurses undertook, and the knowing that was embedded within them. The focus here is narrowly on one practice, the nurses' phone calls to patients. These phone calls represented the primary way that patient care was managed in between formal visits. These phone calls involved checking on the general health of the patients, identifying any problems they were experiencing, and checking whether they were taking their medication as prescribed and whether this medication was causing any problems. With these phone calls knowing was embedded within and emerged through what the nurses and patients said to each other, and how the nurse made sense of and responded to what the patients