Researchers, consultants and practitioners have argued that knowledge management is a key to meeting the formidable challenges of knowledge society. The emphasis given to knowledge in personal and particularly organisational life challenges us because clearly, on the one hand, knowledge is a liberating force that allows individuals to master their lives, and on the other hand, knowledge is part of a ‘production function’ in corporate life, where individuals are subordinated to the requirements of organisational interests. The practice of knowledge management is paradoxical because in a sense it may require individuals to subordinate themselves a-reflexively to organisational concerns that they will have to master reflexively.

As illustrated from the chapters of this book knowledge management tools and concepts are used under a variety of circumstances and in all areas of management. Knowledge management can be applied in the human resource area (e.g. chapter 6), in relation to customers (e.g. chapter 11) as a project management tool (e.g. chapter 12) and can be related to IT (e.g. chapter 3) or more generally through intellectual capital (e.g. chapter 7) to a broader concern for the development of the firm. Looking more detailed into the activities covered by knowledge management (e.g. chapter 5) it may be suggested that knowledge management is not only a set of new tools and techniques brought into the
managerial arena but also well-know management techniques applied in new combinations often facilitated by the use of IT-based management tools (e.g. chapters 8 and 10).

A part of knowledge management practices draws on lasting elements of the manager’s tool box that now in the light of the knowledge society have been systematized and used more deliberately. Many organizations have done this in new and creative ways but probably an equally large number of organizations could benefit from reconsidering their frameworks for knowledge management.

Knowledge management’s new question is how knowledge makes an impact, how it performs as a resource. Several chapters in this book show that knowledge management is a perspective in the managerial universe focusing on knowledge and knowledge resources. There are multiple possibilities, e.g. an analytical perspective within the framework of an intellectual capital statement (chapter 7) or focus on certain knowledge resources – e.g. employees (chapter 6) or project management (chapter 12) or even the concern for knowledge transfers between organizations.

This book shows that knowledge management is a process, which does not require the implementation and exploitation of one particular technological or technical instrument, even if one is often in place along concerns for both the individual’s cognitive ability and the organisational or social community.

But if knowledge is located in-between people, processes and technologies, how does management know that ‘something’ is valuable knowledge and how can management intervene to protect and share knowledge?

12.3 Elements of knowledge management

The primary elements of knowledge management can be divided into artefacts (chapter 2) such as information and IT-infrastructure (‘structural capital’) and the ‘creative individual’ (‘human capital’). The two elements are related (chapter 12) often through dialogue-based culture, a specific model for enabling creativity and a project management model that performs in the common production of knowledge.

This common production of knowledge can draw on various modes of information processing (chapter 9). A cognitive perspective is concerned with information processing and rule-based manipulation of symbols. Knowledge abstract is here abstract, task specific
and orientated towards problem solving, and the insights necessary for managers are formal representations processing information available to them in their external environment, which is stored and retrieved in knowledge management systems (see also chapters 2, 3 and 11).

Another mode of information processing is to see organisations are seen as self-organised networks composed of relationships while the third contrasting view was offered by autopoiesis (chapter 9). Knowledge is here closely connected to the specific situation of knowledge users who respond primarily to local pressures and modes of inquiry orientated to managing concrete activities more than the logical distinction of items of knowledge (see also chapter 12).

Irrespective of how the elements of knowledge management are pointed out, knowledge sharing is important to prevent resources from being wasted e.g. on inventing the same ‘thing’ twice (Inkpen 1996; Dixon 2000). Consequently, management must decide on the form of knowledge management that best suits the company. A focus on artefacts attempts to ensure efficient codification processes so that it is possible to retrieve documents, reports etc. e.g. on the Intranet. Such types of information have to be mobilised in organisational processes, however, and therefore the effectiveness of artefacts are dependent on complementary personal contacts, telephone conversations and organisational cultures, which help to make sense of IT systems. Knowledge creation and sharing is mobilised between individuals, groups, and organisations as well as within the organisations. It is noteworthy that knowledge when functioning as a resource forms a network of people, technologies, relations to customers and organisational processes and procedures. Items of knowledge in people or in technology may be separated for purposes of design and delegation of the implementation of knowledge management systems. But as knowledge management practises, they are always in juxtaposition and each element’s contribution cannot readily be singled out.

This is why there is some concern with the strong separation of types of knowledge management systems. The separation makes a lot of sense from a communication perspective but only limited sense from a management perspective. In Hansen et al.’s (1999) frequently quoted paper, the codification and the personalisation strategy are clearly separated. Even if they elegantly attach the two forms of knowledge management to two different types of strategies, it is worrisome that the complexities of the interrelationships
between the two knowledge management strategies are not considered, and if they were, it would be clear that codified knowledge is a problem of interpretation rather than solution and that personalisation probably produces too much creativity compared to coordination. This is a dilemma that has to be managed, but not by opposing the forces of knowledge but rather by relating those forces.

Hansen et al.’s suggestion implies that knowledge under different circumstances has different fundamental properties and thus can be different things that require different forms of management. Each of the forms has its separate existence from the other. But even when inscribed in processes and strategies it is not possible to say that knowledge is an object, because when functioning in organisations – being productive – it becomes part of a network of producers, users, mediators, gatekeepers, formalisers, doers and destroyers all of which keep certain kinds of insights and information in place organisationally, technologically, politically and strategically.

No knowledge is ‘on hold’ even if it is supported by technology, and no knowledge can exist merely as feelings, emotions or cultural expressions. To suggest that the question of knowledge can be squeezed down to dichotomy, as is done in some of the literature on knowledge management, including Hansen et al.’s contribution, is to overlook the essential part of knowledge: the way it makes a difference. The further we take knowledge out of its context the less likely are we to understand how it works. Rather, attention could be directed towards the process and networks where tasks are accomplished and where knowledge is embedded in something – in a ‘leaky container of knowledge’ – to emphasise that knowledge cannot exist in the abstract but must be contained in something.

When knowledge unfolds its productive capabilities different forms of containers of knowledge operate on something else to make a difference. Knowledge is a process of applying, developing and stabilising certain insights at the same time. Latour (1987, p. 248) says this beautifully:

\[
\text{No one has ever observed a fact, theory or machine that could survive outside the networks that gave birth to them. Still more fragile than termites, facts and machines can travel along extended galleries, but they cannot survive one minute in this famous and mythical ‘out-thereness’ so vaunted by philosophers of science.}
\]
Knowledge is embedded, or it requires a network to be working. This network is heterogeneous incorporating elements such as people, facts, intranets, small-talk etc. The elements cannot exist separately as containers, and therefore the challenge is to create a perspective that allows the relationship between ‘leaky containers of knowledge’ to be developed. This perspective should not only pay attention to items of knowledge but surely also to the strategising involved in developing and maintaining a purpose of all the knowledge that has to be developed, applied and stabilised. Otherwise the network would have no orientation.

When knowledge is part of a productive process – a ‘production function’ – it is oriented towards certain effects that are not just the accumulation of knowledge. To make knowledge a managerial proposition is to realise that it functions in a network, where facts, aspirations, employees, clients, stabilised insight and other phenomena will travel together – and this is exactly that which makes knowledge powerful and able to travel far.

The chapters of this book all help to approach such a statement. Some of them illustrate how the integration between various kinds of elements look in practical knowledge management situations, and others debate what kinds of distinctions between these ‘leaky containers of knowledge’ that have to be related to each other. Obviously, the chapters do not share one definite theoretical perspective, but they help to problematise how knowledge can be made a resource in managing companies and possibly states and regions to make them more adept in adding value through insight, reflexivity and motivation. If these are integrated, perhaps we begin to understand the production function of knowledge based firms.

12.3 Postscript

Knowledge has come to characterise the decentralised company that emphasises empowerment and individual commitment. In such companies, action takes place at the borders of the networks where people continuously form new, fragile and provisional hierarchies. Such organisations were introduced in the mid-1990s as the future organisational form. The empowered individuals should define and solve the firm’s problems. A new commercial agenda (Munro & Hatherly, 1993) should be crafted. Here
top-managers are partly removed from the spaces of action where each individual finds that he or she provides services to others in a network of activities.

However, the chapters also show that even the most formalised and structured ‘ordinary firm’ needs knowledge. The difference between the dynamic and the stable company management techniques dissolves. The feeling is gradually developed that there has always been a relation between ‘soft’ and ‘hard’ factors; people and technology; dynamics and stability and between centralisation and decentralisation.

Such distinctions partly lose importance because the knowledge based company links individuals to each other and to innovations whose starting point may be far away. The individual is not alone in the knowledge company. Therefore, management should not only choose between two organisational principles. On the contrary, it must unite activities, technologies, customers and different ways of cooperating in a consistent whole.

Such a task is always more difficult than it seems at first glance. In order to ensure coordination, connections between the individual and the community must be made. Thus, activities in support of the individual are needed so that creativity will flourish when combined with that of others. Likewise, it is important to recognise that creativity is about breaking down established organisational practices and routines. This in itself will probably create certain dynamics, but it will also lead to inconsistency and crisis, as the rest of the company must be reorganised.

Knowledge management constitutes a clear management challenge, which unfortunately not always opens up the possibility of harmonious development. Knowledge is food for the mind. It is presumably the key to changing companies and society. Therefore, more knowledge contributes to changing the world. In this way, knowledge is a source of unrest and uncertainty. This statement brings us directly to the key management problems: How can companies be designed so that they take advantage of existing knowledge and at the same time maintain their ambitions of knowledge development? Some degree of uncertainty follows naturally with the ambition of managing by means of knowledge. How can this situation be handled so that people and companies do not find themselves in a constant existential crisis?
Literature


