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TRENDS AND COMMENTS

Knowledge Management, Knowledge Capital and Knowledge Capitalism

Nico Stehr, *Knowledge Capitalism*,
Routledge, 2022, 392 pages.

Jin Chen, Ikujiro Nonaka (eds)
(2022), *The Routledge Companion to
Knowledge Management*, Routledge
Companions, 331 pages.

Knowledge is a key resource in our knowledge-based societies, for the competitive advantage of companies, for the productivity and wealth it entails, for the various forms of innovation it promotes and for the capacity it offers to respond to the grand challenges we face. It is indeed central in research dealing with the economics, engineering and management of innovation (Uzunidis *et al.*, 2021). The two books presented in this review offer the opportunity to show that knowledge is more than a resource. It is a “total social fact” as explains N. Stehr, in the sense that it implies and has consequences on the whole society. To understand this, we propose to begin with the study of knowledge at the micro level (with the book edited by Chen and Nonaka), and then to progressively reach the macro level. The concept of Knowledge Capital (Laperche, 2017), is according to us useful to link, thanks to the meso analysis it involves, the micro (Knowledge Management, KM) and macro (Knowledge Capitalism) levels.

The book edited by Jin Chen, professor of the Department of Innovation, Entrepreneurship and Strategy at Tsinghua University, China and Ikujiro Nonaka, Japanese organizational and professor Emeritus at Hitotsubashi

University, Japan deals with the longstanding topic of management of knowledge within companies. The 38 international contributors present the state of the art of KM in both theory and practice and develop the subject through various lenses: strategy, organization, resource, institutions and culture. Aimed at management scholars, researchers and graduate students, it is also a guide to understanding KM. This is a rich and useful book for all readers who wish not only to better understand the theoretical developments in KM, but also the transformations brought about by technological developments (particularly artificial intelligence). The contribution of other disciplines (such as philosophy) and the close look at the development of these ideas in Asia bring a welcome originality to this book. However, it is regrettable that I. Nonaka (one of the book's editors) is not one of the contributors. The book would also have been more coherent and easier to read if it had included an introduction and a conclusion.

The book is organized in three parts. Part I, made of 7 chapters, focuses on “theoretical perspectives in knowledge management”. The authors come back to the history of KM, linked to the firms' necessity to gain a competitive advantage over the others (chapter 1). They put forward the main evolutions of KM theories over the past 20 years. Del Giudice and Gillo (chapter 2) put forward three main issues: the importance of the types of knowledge (explicit, implicit, tacit) and their interactions to explain knowledge creation. The SECI model (Socialization, Externalization, Combination and Internalization) developed by Nonaka and Takeuchi (1995) is here the main contribution. The second issue concerns the balance between internal and external resources of organizations to deal with continuous innovation, and has been largely popularized by the “open innovation paradigm” (Chesbrough, 2003). The third issue regarding KM theory is related to the emerging risks and opportunities concerning information and communication technologies. Industry 4.0 marked by an increased digitization of industrial processes needs a KM 4.0 to manage them. Chapters in this part also relate to intellectual capital and its links to KM (chapter 3), to the importance of the concept of dynamic capabilities for a strategic KM (chapter 4) and to the definition of “learning organizations” (chapter 5). They also offer interesting perspectives of the Chinese knowledge-based view, involving the relationships between “knowing” and “doing” from Confucius to Mao Zedong (Chapter 6) and Japanese philosophical vision of knowledge and society (chapter 7).

Part 2 (6 chapters) specifically deals with “Knowledge management in the age of digital technology and new economy”. While one chapter (chapter 13) aims to reinforce the SECI model through a mathematic approach, most of the chapters in this part (chapter 8 to 12) detail the transformations

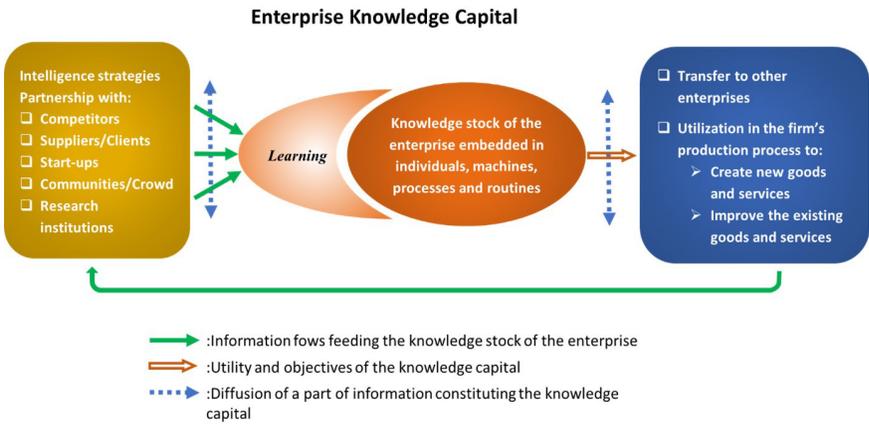
induced by data, big data and artificial intelligence for KM. The latter was traditionally associated to specific actions and strategies of humans. New digital tools are now able to replace human work even in the managing and creative activities. Moreover, as Dong and Yu signal in chapter 8, “*Knowledge no longer sits in databases waiting to be accessed but flows dynamically across the digital communication channels that now define working relationships*” (p. 116). Despite the growing role of non-human tools, authors in this part however put forward the importance of humans, for example of “contextual knowledge experts”, whose expertise is based on human experience and judgement (Venkitachalam, Bosua, chapter 9) and more generally on the interaction and collaboration between human beings and machines in order to create, analyze and use knowledge in a value creation aim. Collaboration is all the more important as artificial intelligence can have a positive impact on productivity and growth, but also entails ethical and social risks such as technological discrimination (Wang *et al.*, in chapter 11) due to the type of data used. In that case, a “smart” human intervention is needed to correct this limit¹.

Part 3 (7 chapters) studies “Knowledge management in practice”. Authors in this part study how various organizational and social aspects – thus at the micro or macro levels – influence KM: some focus on how national culture impact KM (chapter 14), others on how space and especially workspace can contribute to promote knowledge creation (chapter 16). These aspects should be taken into account for the elaboration of a “Knowledge management strategy”, studied in chapter 15 by Lenart-Gansiniec and defined as a “combination and amalgamation of objectives set for the system of knowledge management” (p.241). The importance of KM in practice – that is to say for the business operations and competition – lead, according to Qu *et al.* in chapter 20, to define a knowledge-based view of business models, considered as knowledge clusters. The three other chapters of this part study the evolution KM practice in Chinese firms from 2000 onwards (chapter 17), a KM model for communities of practice to foster social innovation in the context of the slow food movement in Italy (chapter 18) and propose a new classification of knowledge (scientific, technical, empirical) applied to the case of medical industry (chapter 19).

Knowledge is indeed a key resource for companies. But the implementation and the consequences of strategies aimed to create, appropriate, protect and use Knowledge, go far beyond their boundaries. The constitution of

1. On this point see also JEAN, A., La discrimination technologique, un des enjeux en intelligence artificielle, <https://blogs.alternatives-economiques.fr/reseauinnovation/2023/12/02/la-discrimination-technologique-un-des-enjeux-en-intelligence-artificielle>

what we call “Knowledge Capital” of the enterprise, defined as “*the set of scientific and technical information and knowledge produced, acquired, combined and systematized by one or more company within a particular productive aim, and more broadly, within a process of value creation*” (Laperche, 2017, p. 33) is embedded in its social context. This means that the whole society contributes - this was true in the past and is truer in the current context of open innovation – to its formation (Uzunidis, 2018): the State through its industrial, territorial, financial and innovation policies; the universities and other public institutions; all the innovative companies whatever their size that feed (through cooperation) the knowledge capital of the largest companies, organized in mature sectors into globalized oligopolies.



Source : Laperche, 2017

Knowledge Capital appears as an interesting conceptual tool to understand the innovative strategies and trajectories of companies, being large or small, their success and failure, and their attempts and difficulties to develop new economic models (see for example Laperche *et al.*, 2011, Boutillier *et al.*, 2023). But Knowledge Capital has a broader analytical scope, since its analysis provides explanations for the fact that, despite the many efforts to develop our “knowledge-based societies”, the economic, political, social and environmental challenges remain or even seem to grow faster.

As a matter of fact, the collective innovation processes coexist with those aimed at protecting and appropriating the value produced by directly commercializing or using this Knowledge Capital in production. These strategies, notably based on intellectual property rights but also dialectically supported by the whole social set, are designed to maintain and strengthen the market power of the strongest companies. They lead to inequalities in the distribution of knowledge and, more often than not, to knowledge being used

for short-term profit rather than as a response to the major challenges facing society today (climate change, public health, peace, etc.).

In his most recent book, Nico Stehr, who is Karl Mannheim Professor of Cultural Studies Emeritus at the Zeppelin University (Friedrichshafen, Germany), brilliantly develops the argument of the current transformation of knowledge societies (Stehr, 1994) in “knowledge capitalism” and investigates the sociological features of the latter. He shows how knowledge, often assimilated to information and thus considered as being produced at a marginal cost near to zero is transformed into a tradable and profitable good, captured by intellectual monopolies. If the thesis is not new, the role of digital giants is scrutinized and the author puts forward their use of intellectual property rights in order to capture and regulate the diffusion of knowledge, and in consequence shape social behavior toward profit accumulation. At the same time, knowledge considered as an individual and a collective capacity to act, offers opportunities for changes and transformation, toward a more democratic and sustainable society but also toward more uncertainty and risks.

The book is organized in four chapters: the first chapter traces the history of ideas about the theories of society and the transition of societies from the age of Enlightenment to industrial modern societies, the post-industrial one and the knowledge society. These evolutions of capitalism are not abrupt and do not involve a radical abolition of structural attributes of the societal formations they replace. In this context, the emergence of the knowledge society appears as being an *“ongoing development in which the core attributes (in the plural) of society – for example the economy – are changing and the gradual identity of the new society emerges more fully”* (p. 40).

The second chapter proposes a comprehensive account of our knowledge about knowledge. Knowledge is defined as a capacity to act and a total social fact, embedded in individuals and the whole society. The author comes back to the characteristics as a public, non-rival, non-perishable good but highlights the fact that it can be turned into a rival commodity due to the use of patents. The author refers to Bacon’s observation *scientia potentia est*, to show that knowledge is power and more precisely has the ability to change reality. Knowledge has become according to the author an “immediate” productive force, without need to being embodied in machines (frozen work) or in labor. This is especially the case of data and programs, which are components or even constitutive for society.

The third chapter analyzes the evolution from knowledge societies to knowledge capitalism. These major characteristics of knowledge turn knowledge societies into “knowledge monopoly capitalism” which *“refers to an economy based of course on the resource (non-rival) knowledge in production*

that is partially excludable (patentable) and affects a larger number of sectors of the economy that then are dominated by 'superstar' firms" (p. 163). The author comes back to the intellectual history of knowledge society comparing his vision to (and building on) the ones of Peter Drucker (1968), Daniel Bell (1964), Radovan Richta *et al.* (1969) etc. and defines its current/modern attributes (they refer to the role and characteristics of knowledge as explained in chapter one, to its role in the transformation of societies and the social inequality of income and wealth it creates). According to N. Stehr, the tipping point for the emergence of knowledge capitalism "*can be traced to a time when investments in human capital not only exceed investments in physical capital but investments in human capital became more productive and profitable than investments in physical capital*" (p. 198). The 1990s appears to be this turning point but the author recalls that change is not linear and that the indicators for such measurement are still imperfect.

In the fourth chapter, titled "The politics of knowledge capitalism", the author develops on the attempts and strategy meant to control knowledge. The enlargement and globalization of intellectual property rights is a central aspect of these strategies. The agreement on Trade -related Aspects of Intellectual Property Rights in the 1990s has given an increased power to global corporations, especially to digital ones. The growing control of knowledge induces inequalities and the possible emergence of social conflicts. Debates and controversies are numerous about the role of intellectual property rights in knowledge societies and hence, on the fact that the restrictions in the distribution of knowledge have negative impacts on productivity, growth and the capacity to find solutions to great challenges like climate change. According to the author, issues related to the necessity of IPRs (in which condition, for which kind of knowledge, etc.) should be tackled seriously, due to their impressive role in a society based on knowledge. In the conclusion the author comes back to the ambivalent consequences that knowledge, as a capacity to act, entails. As a matter of fact, knowledge, as a capacity to act, expands the scope of action for members of society, being they powerful or weak. As a consequence, "*the extension of this ability to act is both a risk and a virtue for the knowledge society, that is growing capacities lead to both toxic populism and necessary sustainability*" (p. 327).

In sum, these books enter the black box of innovation and scrutinize the economics, sociology and management of knowledge. They show the "political" nature of Knowledge, that is to say that knowledge is at the same time a social construct and the way it is produced, exchanged and used reveals the characteristics of the society. It is our responsibility as scholars, especially in economics, engineering and management of innovation, to curb it toward common well-being.

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