

ASTERIX and 2.0 Knowledge Management: Exploring the Appropriation of 2.0 KMS via the Myth of the Gaulish Village

Aurélie Duzert, Pierre Fayard, and Ewan Oiry

Laboratoire CEREGE, Institut d'Administration des Entreprises de Poitiers,
Université de Poitiers, Poitiers, France
{ADuzert, PFayard, EOiry}@iae.univ-poitiers.fr

Abstract. Knowledge Management Systems (KMS) in companies have profoundly changed in recent years. They have become KMS 2.0 that aim to transform the firm and are driven by a new relationship to knowledge in line with 2.0 organisations. These 2.0 KMS have implemented modes of organisation that disrupt those that previously guided firms' performance. This can sometimes lead to paradoxical organizational dysfunctions as witnessed by the difficulties faced by some traditionally hierarchical French companies. Through a case study of *Constructor* and a theoretical background on IS appropriation in organizations and myths in management, we show how the Asterix myth contributes to understanding how 2.0. KMS are appropriated in such companies. We find evidence of similarities regarding knowledge and Knowledge Management between the Asterix' myth and the behaviours and practices concerning knowledge management within *Constructor*. As a result, the Asterix' myth may be a relevant perspective for understanding the obstacles, advantages and appropriations of 2.0. KMS within French organizations.

Keywords: knowledge management · knowledge management systems · organization 2.0 · appropriation · myths

1 Introduction

Approaches to Knowledge Management within firms have evolved considerably over the past few years. From practices focused on setting up Knowledge Management Systems (KMS) as “types of information systems devoted to the management of organisational knowledge” [1, p. 114], (i.e., IS for the support and improvement of the process of creating, stocking, transferring and using/exploiting knowledge), they have become KM 2.0 processes, seeking an overall transformation of the firm and affirming a new relationship to knowledge [2, 3].

This translates into a change in the nature of KMS. They appear today less as information systems enabling knowledge to be managed as a resource or exploited as a “traditional” asset, and more as platforms for interactions involving knowledge (social net-

works) at the service of a total mutation of the organisation towards a knowledge market: KMS 2.0 [4]. These processes also translate into a profound demand for transforming the organisation which is now supposed to correspond to a 2.0 model inspired by the culture and literature of the IT world at the origin of an “organizing vision” [5]. This perspective relies on four characteristics: (1) an individual view of knowledge where employees are seen as entrepreneurs of their own knowledge. (2); a group project defined according to ad hoc requirements, structured as an organic network that is subject to constant reconfiguration (3); new forms of work supervision based on actors’ collaboration and self-organisation and (4) group action no longer regulated by hierarchical supervision but by social control [4, 6-8].

By setting up the processes of knowledge management known as 2.0, firms were obliged to transform themselves according to modes of organisation that sometimes disrupted those that had, until then, constituted the basis of their performance. As mentioned in works on the appropriation of IS in organisations [9; 10], introducing IS naturally resulted in questioning and transforming modes of collective action; however it also gave rise to questioning the very meaning of that action (structuring meaning). When introducing KMS 2.0, this questioning may run particularly deep, because KMS 2.0 means not only recreating sense through collective action but also, at times, changing the way the firm conceives of organisational knowledge and its management. When KM 2.0 processes are set up in organisations that do not possess this relationship to knowledge, such firms may suffer many paradoxes in their work practices [11, 12].

Unless firms are aware of these traps and if they do not make necessary and suitable transformations, KM 2.0 may lead to failure. This is the case of certain French companies that have been focused on industry for many years and whose modes of organisation are very hierarchical. Even if these firms have recently become strongly international, they exist within a specific historical and cultural context that mixes national objectives for development, State support and entrepreneurship. These industrial firms remain focused on mastering risk and optimising production; their conception of organisational knowledge is mainly collective, embodied in well-established routines and standards. However, for a number of them, entering the knowledge economy led them towards more service-focused activities. They were thus highly interested by modes of knowledge management that would make them more creative and innovative. Nevertheless, we have to observe the lack of any “handbook” to guide the essential organisational changes for these companies suspended between past and future. These firms realised that their past modes of organisation were unseaworthy in the deep global waters of the current economic scenario – a scenario that is highly competitive, highly uncertain and severed from past traditions. Our paper adopts their viewpoint and proposes the myth of Asterix as a means to understanding the emerging tensions in these companies as they engage in KM 2.0.

Since 1961 and the publication of the first book of the adventures of Asterix and Obelix, the Asterix myth has often been used to understand and decode certain behaviours and traits characteristic of the French, including their relationship to themselves and others. The myth has been summoned in the analysis of the French political character [13] and of leadership [14]; however, until now it has been little cited in the domain of management. Is this because Asterix was not judged “serious” enough for that

– especially since the strip cartoon is not exactly academic? We might also see the postulate of a managerial imperative where reason exists precisely to avoid actors being imprisoned by myths [15]. In fact, the works of [16] on myths and neo-institutionalist theory [17] do illustrate that the strength of such schemas of thought sometimes undermines actors' performance. However, myths are part of our lives and also contribute to the creation of meaning. As Burkert mentions:

Adults and children like them and, in a sense, need them. For these stories, by seeking to give things meaning, speak of a human world that is impossible to analyse as one could do for a mere collection of electronic components. [18, p. 9]

Myths contribute to understanding an environment that does not end at the company door. Sharing a myth can certainly be a prison for thought, but it may also be cathartic [19], serving as an intermediary translator for creating meaning in a process of appropriating an innovation or a transformation [20]; a shared myth may enable actors project their emotions, understand each other and share tacit but commonly held sensations, references and landmarks. How can we avoid seeing Asterix's village as a symbol of the "French cultural exception", besieged by the invading powers in the camps of Delierium, Laudanum, Compendium and Aquarium? After all, spontaneous opposition to any dominant view imposed without taking account of "French" specific characteristics is an integral part of the French cultural heritage. It matters not whether this imposition be from Rome (Julius Caesar), the House of Austria, Perfidious Albion or, closer to our times, North America. Whether mirror or reality, this myth structures French schemas of thought. The work of Goscinny and Uderzo is an expression of this "Frenchness" [21] inhabited by the Gauls, and it reflects constants of French geopolitics and strategic thinking [22].

In this phase of deep change, using a powerful myth like Asterix can help understand the emerging tensions in French firms when they implement KMS 2.0. This article proposes to study how far this myth constitutes a tool for exploring the appropriation of KMS 2.0 in these firms today.

This contribution is in five parts. The first discusses the theoretical bases of research and the problem of appropriating KMS 2.0 inside firms. The second develops how the Myth of the Asterix Village can be a tool for exploring the appropriation of KMS 2.0 in certain firms. The third part presents the research methodology based on a case study at Constructor. The fourth part analyses this case in the light of the Asterix Myth and the final part presents the contributions and implications of the research.

2 Theoretical Bases: Knowledge Management, KMS 2.0 and its Appropriation

If for some, knowledge is value added information [23, 24], for others, it is an asset of the firm [25], an individual cognitive process [26], know-how, an individual's particular experience and way of doing things that is hard to render explicit [27] or even a working practice developed by an individual in a given position [28-30]. This resource

that is crucial for the firm has multiple dimensions and therefore requires specific processes to encourage its development, exploitation and value. Knowledge management thus relates to a dynamic, continuous set of distinct but interdependent processes of creating, stocking, transferring and applying knowledge [1]. It is supported by information technologies whose objective is to (1) codify and share best practices, (2) map out internal expertise and (3) create networks of knowledge to facilitate knowledge exchange among individuals [1]. In the 1990's, KM primarily focused on the technologies enabling knowledge to be stocked in the form of structured documents (Knowledge bases). In the last few years, Knowledge Management practices have evolved in organizations. Due to the introduction of Web 2.0 technologies, new usages of information and knowledge sharing have emerged. A new generation of employees (Generation Y or Millennials) has new habits at work. They use everyday Web 2.0 technologies (Blogs, Wikis, RSSi, Folksonomy, social networking platforms, Mashups, Podcasting, etc.) in the private arena, and therefore, consider that such technologies for e-collaboration and self-organizing are the best means/methods to work. Thus, the concept of KM has been impacted and has evolved towards more human interactions management and interpersonal networking, in addition to traditional information and knowledge processing. Organizations are currently developing a new type of KM which is social-based using Web 2.0 technologies and called KM 2.0 [31]. Thus KMS evolved towards more collaborative technologies. Such deployment of KMS 2.0 implies that actors appropriate specific collective modes of action as well as a particular relationship to knowledge. The KM 2.0 perspective considers the firm as a knowledge market that is based on four characteristics: (1) an individual view of the firm where employees figured as entrepreneurs of their knowledge, in other words, individuals who had the capacity to create knowledge for their own account and whose main objective was to develop this knowledge (understood as an asset they should make the most of). (2) A collective project defined according to *ad hoc* requirements and structured as a constantly reconfigured network. (3) New forms of work supervision based on actors' self-organisation and collaboration. (4) Collective action no longer regulated by hierarchical supervision but by social control [6-8, 32-35].

KMS 2.0 are thus inspired by a vision of knowledge and management that is above all centred on individuals: the firm becomes a platform for relationships among knowing individuals. Collective or routine knowledge [36], is no longer considered important in KMSs focused on encouraging new forms of organisation that free knowledge creation. The prevailing view is then that the optimal organisation of work should not be strictly planned, organised and systematised from above, but self-organised by individuals according to requirements and their evolution. In this configuration, the only "stable structure" is the firm's social network, based on informal relationships and social exchange. This mode of organisation would be more efficient for generating knowledge contributing to competitive advantages for the firm. The philosophy of these KMSs holds that for efficient knowledge creation, collective action should no more be regulated by hierarchical supervision but only by social control [4].

Now, this relationship to knowledge inspired by KM 2.0 does not necessarily make sense in all firms whose specific history, job and values may have led them to construct a different relationship to knowledge. Like all approaches for deploying Information

Systems, setting up Knowledge Management Systems in organisations results in real organisational transformations requiring meaning to be reconstructed. Making use of the new technology (appropriation) arises from sense making resulting from a complex social construction whose outcome is often impossible to define a priori [37-39]. In studies more specifically focused on the introduction of KMS [10, 40], holds that this sensemaking [41] is essential to appropriating a KMS. This author underlines that when a KMS is introduced, the different practices in and around the technology reproduce or reinforce the firm's social structures. Those structures that hold meaning are particularly modified by the arrival of a new technology. The recent work of [12, 42, 43] underline the extent to which, when a KMS 2.0 is introduced into an organisation, collective sense making around the technology and its associated new modes of action, is crucial for successful implementation. For Fayard [22], this collective sense making around KMS implementation in firms is partly influenced by country's national myths that structure employees' relationship to knowledge. Thus in order that KMS 2.0 be appropriated in an organisation, it is relevant to explore the country's national myths that structure employees relationship to knowledge in an firm and identify the potential paradoxes/tensions between this relationship and that implied by 2.0 KMS.

3 Using the Myth of the Gaullish Village to Explore the Appropriation of KMS 2.0

Like all human communities, organisations convey imaginary stories and symbolic forms steeped in references to myths [44]. Neo-institutionalist approaches, especially in the works of [17] underline that organisations are the reflection of myths rationalised by their environment. Institutional rules function as myths which organisations incorporate, gaining legitimacy, resources and stability. Certain products, services, techniques and policies are institutionalised to the point of becoming tacit rules that speak for themselves spontaneously and are never questioned nor made explicit. These rules function like powerful myths that are omnipresent in the environment, and their integration into the organisation in turn strengthens the organisation's legitimacy.

3.1 Approaches to the Myth in Management

To understand how this works, a first approach is to deconstruct the myth as far as this is understood as a source of alienation for the individual and non-performance for the firm. Adopting these institutionalised objects is seen as potentially harmful to the criteria of efficiency and effectiveness. This approach joins the viewpoint of R. Barthes in *Mythologies* [16]. In this work, the author describes himself as a "*mythologist*" whose role is to decode myths in order to free individuals from the alienation they create. For Barthes, myths are driving forces. The analysis of "*petit bourgeois*" myths aims to make individuals aware of those myths' effects on actor-consumer behaviours. This is the perspective developed by March [15] in his works on management sciences that decode the great myths of management in order to encourage innovation (Rationality, the Hi-

erarchy, the Leader and Historical Efficiency). Along this line, Grimand [45] deconstructs organisational myths in Knowledge Management within organisations. He presents the myths and discourse constructed to diffuse Knowledge Management practices within firms. In fact, current discourse about 2.0 KMS can be seen as institutionalising these practices. This discourse develops an *organising view* (OV) around 2.0 KMS that interprets, legitimises and mobilises the actors of an organisation around the information System (IS) [5].

Myths can thus imprison the organisation in a logic that is not one of efficiency but of legitimacy. However, myths can also have virtues. When Jean-Pierre Vernant wrote *L'univers, les dieux, les hommes. Récits grecs des origines (The Universe, the Gods and Men. Greek Creation Myths)* in 1999 [46] he, like Barthes, also described himself as a mythologist, but one whose role was not to deconstruct, but rather to transmit ideas over time. He saw the need for this in a context when things change rapidly and references are lost. Transmitting ancient Greek myths was for him a way of making sense and reminding people of what has linked Western peoples for millennia. Burkert says the same thing when he writes, that in his opinion,

A myth is an “applied fairy tale”: not necessarily about origins, but a narrative that offers a meaning to our lives in a given society and an explanation of the world we live in. [18, p. 6]

Myths allow us to reconcile contradictions and are necessary to create meaning, solidarity and certainty [47]. According to Bowles [48], in an environment where Church and Religion do not play a structuring role anymore, myths have developed in work organization and are required to allow people to participate more fully in their work lives and social lives generally. In IT management, myths, symbolisms and cultural assumptions are thus naturally implicated [49]. Especially in IS Development, Hirschheim and Newman demonstrate that they offers simplifications, and allow actors to better cope with their world:

By patterning behavior and responses to others' behavior, symbolism reduces a messy, complicated world to a simpler one. It also facilitates cohesion, permitting individuals to become accepted members of a group. [50, p. 57]

In Knowledge Management practices and KMS appropriation, symbolisms, myths and metaphors play also a determinant role [51-53]. Country's national myths play in particular a determinant role in KMS appropriation in organizations. In a research work on KM practices and KMS in Asia, Fayard shows that the Samourai's myth structure employees' relationship to knowledge and KMS appropriation in Japan [22]. Chinese employees are for themselves quite influenced by the Mandarin's myth. In this research, Fayard suggests that the Asterix's myth may also influence the relationship to knowledge in French company and thus impact KMS implementation. This property of the myth of Asterix seems quite relevant for exploring the appropriation of KMS in French companys inclined to “*ethnocentrism*” [54].

3.2 ASTERIX and the Gaulish Village: A Myth for Exploring the Appropriation of 2.0 KMS

Asterix was born in 1959 by pure chance. The businessman Georges Dargaud asked René Goscinny and Albert Uderzo to create a cartoon for childrens' magazine entitled "*Pilote*". The authors created two emblematic key characters Asterix and Obelix; the series quickly became successful. Readers were easily won over because the series corresponded to the aspirations of post-war France. By embodying the "David and Goliath" ideal of the weak versus the strong, resistance against imperialism (the Roman Empire), totalitarianism (the Goths and the Normans) and the defence of individual freedom against any form of uniformisation and oppression, Asterix contributed to a new French myth: France would be no longer sovereign of its overseas empire, but an independent non-aligned nation standing for anti-colonialism and anti-imperialism, a force between the two cold-war blocs [21, 55].

Based on comedy and satire, the series relies on a stereotype of a national mentality that is less important for its basis in reality than for its effect on the social integration of readers [55]. The "Frenchness" evoked by Rouvière highlights the image of a Franco-Gallic population, that is jovial, quick to object and easy to provoke, that expresses its taste for conviviality through good food and love. The success of Asterix over the years show that Asterix remains a myth that is a powerful creator of meaning in France. So much so, that for Igalens [20] it partially reflects French strategic thought and may lie behind the meaning of collective action, the relationship to knowledge and the type of Knowledge Management Systems set up in firms whose background is historically and culturally French. This is why it can be used as a framework of analysis for exploring the appropriation of KMS in companies.

Knowledge and Knowledge Management in the Gaullish Village. Our analysis of Knowledge and KM draws extensively on Rouvière's in-depth studies about the Gaullish Village.

Firstly this is a world that is anti-elitist¹. In Asterix, nothing separates the elite of those with superpowers from the rest of the tribe. *Asterix* and *Obelix* are not heroes, but "*a couple of villagers*"² who can't do anything without each other. *Asterix* is certainly intelligent, but not strong. *Obelix* is strong, but not intelligent. As for the village chief, *Vitalstatistix*, he is no hero either: although he has the attributes of a true leader, the villagers treat him as one of them. *Cacofonix*, the bard who claims an elitism related to his art, is regularly gagged for making the distinction between "highbrow culture" and the festive, noisy and popular culture of his compatriots, the Gauls! As for *Getafix* the Druid, if his wisdom and his magic potion seem mysterious, his vast knowledge and magic powers do not make him a character separate from the rest of the villagers. He is not infallible and his tendency to self satisfaction, fanned by his inflated ego is rapidly called into question³.

¹ Which is quite surprising, given that France is a country marked by its world of elites

² See frontespiece of each album

³ See *Asterix and the Big Fight* or *The Mansions of the Gods*

Thus in this village, each person's specific knowledge is valued. The villagers respect others' knowledge, but refuse to allow knowledge to become a basis for the superiority of one member of the community over another. As soon as any of the characters take themselves too seriously, they are immediately ridiculed and put in their place.

In the Gaullish village, community life is built on the basis of common values: convivial and good-natured equality. Individual knowledge is valued, but only in the context of shared conditions. In the village, conviviality and the respect of the community create knowledge and valued group routines such as banquets, quarrels, making-up, attacks by Romans and the anniversary of the Battle of Gergovia⁴. This knowledge is developed around a shared common project ("ba" [56]) which is long term and structured by profound values. The squabbles are ever present, but everyone gets together to defend the common values of equality and respect of freedom from oppression for individuals and the group. These values and shared meaning uphold the whole Village throughout the series of volumes, and this despite any changes in the outside environment. The collective is supported by the community structure; there is a strong distinction between those who are both physically and culturally part of this community and....the others, all the others, who are not part of the Gaullish Village group. The fence that protects the village's life space is significant from this point of view for raises a distinction between the Village community and the rest of the world. Thus, the arrival of outsiders such as *Geriatrix* and his wife in *Asterix and Cesar's Gift* or *Justforkix* in *Asterix and the Normans* is not immediately seen as positive. The community needs time to accept other lifestyles.

Beyond this, the Village refuses to accept any project that is not its own idea. This does not mean that it is hermetically sealed: it does not hesitate to share its values and competences with other peoples outside Gaul who appear to suffer from absolutist⁵ or totalitarian⁶ oppression. Given time, the village welcomes members outside the community and respects their integrity. In *Asterix in Corsica*, all those who arrive in the Village from outside, or whom members of the village community have met, are warmly welcomed to celebrate the anniversary of the battle of Gergovia. Even Caesar and the Romans are not rejected as individuals. As [55], the Village is not against Caesar in order to eliminate him and does not propose itself as the liberator of Gaul; for the Village, resistance is simply a matter of honour. It is a matter of infuriating Caesar by preventing him from claiming to have conquered the whole of Gaul! History is on the march, and the Gaulish resistance is not trying to halt the general process of modernity: even the villagers know it is inevitable. However, they want to have time to adapt so that this modernity can be accepted on their own terms and reconciled with their profound values of equality and the respect of freedom.

The third structural feature in this world is the leadership of collective action by a democratically elected hierarchy. In the Gauls' Village, not everything relies on indi-

⁴ See *Asterix in Corsica*

⁵ See *Asterix in Switzerland*, *Asterix in Britain*, *Asterix in Spain*

⁶ See *Asterix and the Normans*, *Asterix and the Goths*, *Asterix and the Picts*, *Asterix and the Magic Carpet*

vidual decisions; this does not mean that people do exactly as they please, but that everyone is respected. In particular, the democratically elected⁷ Chief (*Vitalstatistix*); even if he is sometimes ridiculed, he is accepted as the leader of group action. Whenever there is a problem, a meeting takes place in his hut to decide what the group should do. The leader listens to the different protagonists, makes comments based on his own knowledge of the situation, puts things into perspective taking account of the Village values and way of life, then decides and gives the orders for action. *Vitalstatistix* shows and possesses all the attributes and qualities of a true leader, he knows about the outside political situation, takes responsibility in times of crisis and acts in the collective interest⁸. He possesses the symbols of authority, responsibility and unity in his legendary shield and the armchair/throne in his house. In return, the community cannot imagine life without him and when he goes on a health cure for his liver⁹, *Asterix* and *Obelix* go with him to make sure he returns safe and sound.

In fact, in the Gaulish Village, collective action is never regulated by an autonomous individual or on a self-organised basis; it relies on democratically established rules that are respected by all. The Gaulish Village is not a happy go lucky free for all where there are no rules. The Villager-citizens all respect established customs and habits. This is particularly evident in *Asterix and the Big Fight*. *Vitalstatistix* submits to the rules of electing a leader even if this is not to the Village's advantage. In contrast to this the Gauls reject out of hand ideas that seem absurd and that have not been established democratically. Thus in *Asterix the Legionary*, to save *Tragicomix*, *Panacea*'s fiancé, *Asterix* and *Obelix* enlist in the Roman army. At first, wishing to remain inconspicuous, they line up to enlist like everyone else, then accept the jobs they are given. However, when this absurd way of doing things recurs, they spontaneously make use of the French speciality known as "*system D*¹⁰". This means getting round any system of rules, or bending them to suit oneself.

As the myth of *Asterix* unfolds, we notice that certain principles are commonly considered basic to collective action: the respect of each individual and his/her qualities, respecting individual and collective freedom from oppression, anti-elitism, conviviality and neighbourliness, the leader's legitimacy combined with the rejection of absolutism, reliance on common sense and the importance of experience.

These principles of the *Asterix* myth offer a way to analyse the relationship to knowledge and knowledge management conveyed by KM2.0 practices in certain French firms.

The Gaulish Village and KM 2.0. With regard to the relationship to knowledge, in KM 2.0 approaches, what counts is less the respect of individual differences and actors' having an equal capacity to create knowledge, than individuals being able to create knowledge themselves. It appears that firms implementing KM 2.0 rarely emphasise

⁷ See *Asterix and the Big Fight*

⁸ See especially *Asterix and the Big Fight*

⁹ See *Asterix and the Chieftan's Shield*

¹⁰ The "D" in this French expression comes from the word "Débrouille" ("système Débrouille" has become "système D"). This expression means getting round any system of rules, or bending them to suit oneself.

the collective aspect of this implementation. Rather than being seen as a group project, KM 2.0 is usually set in motion as requirements come up – this is unlike the collective project of the Gaullish Village, which is long-term and based on deep values firmly grounded in custom. Then, KM 2.0 processes are based on the idea that efficiency supposes the absence of hierarchical supervision (the boss/chief). Instead of this, the “collaborative” process is led by a “facilitator” The functions of exercising authority, encouraging unity and taking responsibility are never invested permanently in one individual. Finally, the rules of social life conveyed by KMS 2.0, (inspired by the 2.0 organisation), are not pre-defined and democratically discussed, but come from social control that may result in oppression and the denial of individual freedoms. The rules are not constructed democratically. They are constructed around certain groups of actors who share a similar viewpoint. These rules are not explicitly expressed and are therefore not discussed in the whole group. They are rather informal, contract or market type arrangements based on the exchange of gifts and counter gifts (reciprocity/mutual gifts). We can see here that it is difficult to reconcile the relationship to knowledge and its management implied by a 2.0 KMS and the relationship to knowledge and its management conveyed by the Asterix myth when both are seen as important myths that influence the sense of collective action.

Table 1. Comparison of the relationship to knowledge and knowledge management in KM 2.0 processes and in the Asterix myth

	2.0 KM	ASTERIX MYTH
Knowledge	Knowledge issues Entrepreneur: An individual capable of creating knowledge for his/her own good	Village issues and group routines: Individuals’ own knowledge, respect of their specific characteristics and all considered equal (anti elitist) but also collective knowledge that structures the group.
Collective project	Defined according to ad hoc requirements Structured in a network	Upheld by the whole village over the long term, based on deep values. Structured around the community but not hermetically sealed off.
Leadership of collective action	Actors organise themselves collaboratively The manager is the “leader” of the collaboration	Leadership through a democratically elected chief who assumes responsibility authority and group unity.
Regulation of collective action	Social control: contractual arrangements among actors	Democracy: Explicit rules democratically decided with conviviality and neighbourliness Otherwise: “System D” (getting round/bending the rules to suit ones own purpose)

4 Research Methodology

As an illustration of how looking at the myth of the Gaullish Village of Asterix can help to analyse how KMS 2.0 are appropriated in firms with a French background and culture, we shall use a case study of the firm *Constructor*. Choosing a case study is justified by the exploratory nature of our research that aims to examine a contemporary phenomenon in its real context [57]. Focusing on a particular case enables us to make an in-depth analysis of the appropriation of KMS. This research aims to understand and translate the organisational reality as experienced by the actors.

4.1 *Constructor* and Knowledge Management

This industrial group *Constructor* was founded in 1952 and has been developed in a French historical and cultural context. In 1952, the founder took the opportunity offered by the country's post-war reconstruction, to found his company, specialised in the building industry in the Paris region. In 1955, he started to build social housing projects as part of the largely State funded programme to counter the housing shortage. In 1959, the firm developed industrial prefabrication while still enjoying public funding. In 1970, the company was floated on the stock market. In the following years, it diversified and developed new activities.

Constructor is now the French and European market leader of the construction industry and is present on every continent. The group employs over 54 000 collaborators worldwide over half of whom are outside France. Although originally a construction company, today *Constructor's* business model also extends to services such as communications, logistics etc.

Since 2005, the IS Department of *Constructor* had set up knowledge sharing tools and processes for the Group's collaborators. Several technologies were deployed amongst which a directory in 2006, a search engine in 2007 and a collaborative work platform between 2008 and 2012. *Constructor* doubled its number of collaborators between 2005 and 2013 by taking a deliberate step towards internationalisation. In May 2011, the head of Knowledge Management for the Group suggested exploring the idea of deploying a social networking tool internally in order to foster ties and improve knowledge sharing (KMS 2.0). In 2013 the knowledge sharing department changed. All its activities were combined into one skills centre. The KM tools were deployed, but little used by collaborators. In order to better meet needs and define new developments, *Constructor* decided to carry out an assessment of the Group's KM practices.

4.2 Collection and Analysis of Data

This research was undertaken in two phases. The first from May to October 2011; the second in January 2013. We used different methods of data collection (interviews, meetings, observations etc.). According to Eisenhardt [58], this variety in data collection methods is considered a necessary triangulation for the consolidation of research results [59].

The programme began in May 2011. It aimed at understanding how Group members perceived the idea of deploying a company social network. Data was collected through semi-directive face-to-face or telephone interviews. We questioned 26 participants for an average of about an hour each. The sample was made up of collaborators mostly working at the company's headquarter. The majority of those we met were familiar with IT, for example laptops, smartphones, VPN access, web based administration tools etc. Participants were distinguished by their type of expertise, level of responsibility and age group.

After informal exchanges during 2012, the project continued in 2013 in order to obtain a more precise idea of the needs and obstacles linked to adopting the 2.0 KMS. A second data collection phase took place in January 2013. This was led by the company's head of KM and concerned 17 participants. This panel consisted of directors and assistant directors, department heads, technical experts, engineers, site foremen and administrative assistants. All were executives from different hierarchical levels. The interviews lasted an average of one hour face-to-face or by phone and were transcribed in writing. Observation data were also collected.

We then coded these data using open coding [60]. Three researchers carried out a content analysis to explore the appropriation of the KMS in the organisation. The list of themes was enlarged as the coding process advanced. Two significant themes then emerged from the discourse:

- The expression of and claim to having a specific culture concerning work practices and knowledge.
- The expression of numerous paradoxes/tensions concerning the place and role of the KMS in work practices.

This analysis was given to *Constructor*. In a second phase and in order to better understand the tensions and paradoxes expressed, three researchers undertook a second coding of the data. This was based on the comparison between knowledge management 2.0 and the Asterix Myth presented above. Making use of this myth seems justified by the first analysis that showed the claim to a specific culture, but also because *Constructor* is a company strongly rooted in a French cultural and historical background.

5 Analysis of Tensions Emerging During the Appropriation of the KMS 2.0 at *Constructor* via the Myth of the Village of Asterix

5.1 Knowledge in the *Constructor* “Village”

The typical *Constructor* collaborator is described as a highly autonomous individual who finds meaning through maintaining social exchanges. These individuals are entrepreneurs who are proud of their company's achievements, always seeking success and pushing themselves ever further. As one participant put it, “On the sites, we redesign the world”. A typical *Constructor* collaborator considers that “Your value is largely related to what you know and the information you have”. *Constructor* collaborators

also tend to avoid being explicit about any problems they encounter; they are not very open to sharing knowledge about problems: “There is a certain pride in solving problems oneself” as one interviewee described it. This may lead some to brag about individual knowledge and this is not always looked upon favourably: “In traditional companies like this one, results and action are always combined with a lot of noise and movement”.

In fact at *Constructor* the knowledge described as being valuable and in need of management, is above all collective, technical and procedural (codified technical documents describing all the job processes, financial documents, job descriptions etc.). Consequently, knowledge management is seen by company actors as managing information in order to optimise information search, standardise work processes and capitalise on experience. This formalisation and sharing is largely carried out using tools that are deployed in the different entities of the Group: “The site documents are on an internal network...”; “In terms of formalisation of procedures, Constructor is one step ahead”; “We have a data base.... all the documents are there”.

The relationship to knowledge is thus very close to that found in the Asterix Village myth. Actors are left to be largely autonomous in order to develop expertise that is recognised, but that must not lead making any individual stand out. The knowledge that is valued is built up gradually and is at the service of the *Constructor* project, a project proudly upheld by these actors. It should be mentioned that outside contributions are not mentioned. Knowledge is conceived in the ring-fenced environment of the “*Constructor Village*”.

5.2 Project, Conviviality, Stockade: The Village Boundaries

Constructor employees have a culture of “sound workmanship”. The constructions are a success story shared by all company actors.

The organisation emphasises the conviviality and human dimension of the job: “It’s the characteristic of jobs in construction where the human element and team work are very important”; “I think you must not forget the heart of our job where relationships are very important...in construction, human contact is essential. We need to discuss things...” Collaborators value interactions and informal exchanges about (non virtual) social networks. For some of them, informal discussion is “a lot better” than the technology available: “In the company, when you’re talking about knowledge sharing, human contact is still the most important thing”; “we prefer to spend time with someone who explains something than be all alone in front of a screen” or “over a meal rather than with one of those long sagas written up and posted on Vega”. One of the symbols of the importance of knowledge transmission through informal exchange, human relationships and shared work practices is a company “guild” created by *Constructor*’s founder. It is an organisation internal to the Group whose objective is to encourage loyalty and reward the best workers. In 2010 the organisation had 1 105 members belonging to 17 Orders.

There is an absence of knowledge sharing practices among different entities: “Knowledge sharing is not at all in the company’s mentality. There are still a lot of

barriers between the different entities....information remains within each entity". Likewise, knowledge-sharing experiments between departments enabling transversal collaboration within the company are little used.

The result is that the collaborators we questioned do not spontaneously feel the need for a KMS 2.0 of the social network type, because they consider that they already have one that they know how to work. These networks are built up partly through each individual's professional experience, but also because the individuals concerned come from the same higher education establishment: "At *Constructor*, I know my colleagues well, but I also know friends of friends who work at *Constructor* and the alumni network of my university". This "old boy network" culture is maintained by the firm in as much as the company creates specific training processes whose objective is to group young graduates from *Grandes Ecoles* who have the potential to do well in the group (High Potentials). The fact that these graduates attend these courses together helps to maintain this social network.

In this context, the deployment of the 2.0 KMS is described as a necessary process but one that is nevertheless resisted. It is necessary in order to meet the needs of future collaborators: "Something has to be done on the level of intra company communication. Young people are more and more capable of having on-line exchanges and if 10 years from now everything is the way it is now, *Constructor* will no longer be an attractive company for recruits". According to the interviews, KMS have two other uses: getting information from the ground to reach those in charge of overall coordination, and avoiding "reinventing the wheel". Collaborators would like *Constructor* to go further technically speaking. They do not understand that the tools available are not 2.0, because they are used to using these tools outside the company: "We hear about Web 2.0 everywhere but in our company. It's a pity". Collaborators explain the "Problem of attractiveness" of KMS because these systems are technically inefficient compared with the tools they use outside in their private life: "What we need is a search engine a bit like Google, something efficient".

Here we find similarities with the Village of Asterix: a project upheld by the community for many years unites actors around strongly shared values such as teamwork and good workmanship. We also observe that this common viewpoint may lead to the erection of barriers between departments, and groups ("old boy" networks maintained by the organisation, strong identity of belonging to various entities within the organisation etc.) or even erecting stockades and having a knee-jerk rejection of what comes from outside (such as the social network). However, as in the Asterix Village, it is not so much a matter of fighting against modernity, (seen as inevitable given changes in the external environment), as finding a way to implement these modern processes while reconciling them with the *Constructor* Group values and way of functioning. Interviewees made remarks implying this. However, there is one notable difference with the Asterix Village: collaborators of *Constructor* do not mention their capacity to contribute knowledge from outside the company and/or to benefit from such an exchange. The climate evokes something more akin to wishing to remain safely behind the Village stockade and a fear that the outside world will disrupt the community inside.

5.3 Hierarchy and Explicit Rules – Recognised and Accepted to Lead and Regulate Collective Action

Constructor is a reassuring organisation described as having a highly structured hierarchy where managerial responsibilities are recognised and accepted. According to those interviewed, collaborators' level of acceptance of the KMS depends on how far Top Management encourages them to use the tool. As one interviewee put it: "If collaboration is not explicitly or officially recognised, people find it hard to take the time to get involved".

In *Constructor*, information flow processes are all highly formalised. In order to be relevant for collaborators, information has to be traceable and shared formally. The principal is "controlled sharing" of "worthwhile" information. This formalism of exchanges is considered to be a specific characteristic of the *Constructor* Group.

As a result, everyone interviewed mentioned the adverse effects of the KMS 2.0, evoking danger if the Group's informal functioning became visible: "If everyone could see everything, some entities or teams would try to make themselves look better than they really are to win prestige or even to get bonuses". This refers to the positions taken by some social groups towards others. With this type of KMS, the rule is no longer explicit and formalised, but depends on mutual adjustment and negotiation between groups of actors. The risk of disseminating information or losing control of it are evoked as factors that might destabilise the organisation, and this is also mentioned with regard to cases experienced on outside social networks. Thus one collaborator asked the following: "What would happen if a collaborator is fired and can transmit messages that are negative for the organisation on an information system like a social network? The same thing goes for salary reductions". Another expresses fears of "Information leaks to the competition". Finally, almost all of those interviewed emphasised the risk of confusion between private and professional life: "The idea of using a social networking tool is interesting and can be useful, but I have no clear view of how we can draw the line between what is private and what is work related." Another collaborator adds: "If you want to implement such a tool into a working milieu, there has to be a real distinction between private and professional life."

The people we met call for the definition of "procedures" and "directives" in order to guide and standardise knowledge sharing practices. Some think that knowledge sharing practices should be written within a formal framework like other existing work procedures. The collaborators of *Constructor* feel that they are drowning in information and lost when faced with the multiple KMS currently available: "There's too much information for us to have time to read it"; "Too much information kills information." Today, the high number of sources of data and overload are an obstacle to integrating knowledge as well as to seeking and sharing it: "The problem is that once all these tools become available, they ask collaborators to work more and more." However, these KMS are also described as "Potential gold mines".

Collaborators are prepared to use KMS, but they also want to continue working in the current mode. The KMS has to be integrated into existing practices without threatening these: "I'm in favour of this type of tool because they mean you are proactive. However, the tool's implementation can only be successful if it is focused on work, on

professional needs and if it is easy to use with plenty of guidance”. Appropriating this tool requires specific training so that the technologies can be effectively integrated into work practices. Collaborators count on training sessions: “There is a lack of publicity and communication so that people know about these tools. There is also a lack of training so that problems can be communicated. Sometimes there’s nobody available to train people about new tools”. They emphasise that the appropriation of the tool also depends on the Group’s capacity to prove that using it is an advantage.

Table 2. Relationship between knowledge and knowledge management evoked by collaborators at *Constructor*

	KM 2.0	Constructor	ASTERIX Myth
Knowledge	Knowledge issues Entrepreneur: An individual capable of creating knowledge for his/her own good	Individual issues and group routines (collective, technical and procedural knowledge). Individuals should not make themselves stand out too much.	Village issues and group routines: Individuals’ own knowledge, respect of their specific characteristics and all considered equal (anti elitist) but also collective knowledge that structures the group.
Collective project	Defined according to ad hoc requirements Structured in a network	Upheld by a group of actors over the long term structured around strong community values (teamwork, good workmanship etc.)	Upheld by the whole village over the long term, based on deep values. Structured around the community but not hermetically sealed off.
Leadership of collective action	Actors organise themselves collaboratively The manager is the “leader” of the collaboration	Lead by a respected supervisory hierarchy	Lead by a democratically elected chief who assumes responsibility authority and group unity.
Regulation of collective action	Social control: contractual arrangements among actors	Procedures: a form of democratic construction of decision-making and action. Explicit controllable rules desired – which can if necessary be opposed. Otherwise: System D.	Democracy: Explicit rules democratically decided with conviviality and neighbourliness Otherwise: System D (getting round/bending the rules to suit one’s own purpose)

Since the training mentioned above is not very clearly proposed today, many collaborators tend to return to former knowledge management practices (system D/getting round the rules with a “personalised” solution), especially by stocking their files on personal servers or archiving them in their computers: “A lot of departments capitalise their experience by creating files on their personal servers, under their name, where they could just as well put them on Vega”; “There is such a lot there and what we are looking for doesn’t come up; so I just archive it myself on my computer and I classify

all the files that are relevant.....I must have over ten thousand files”. Confronted with information overload, many people also prefer human contact for managing knowledge: “It seems easier to find the right person than to find the information yourself.” Seeking and exchanging information might be done face to face, by telephone and/or email: “A lot of subjects are exchanged and discussed informally with mail or phone discussions.”

The respect of hierarchy and what it implies, such as that clear rules on knowledge sharing will be made explicit, echo the modes of leadership and group regulation described in the myth of the Asterix Village. Hierarchical supervision is accepted and recognised as the means of leading collective action. Moreover, these procedures are desired. They are mentioned as explicit rules that can be controlled or even opposed in what is a form of democratic decision-making. They are decisions for action that are constructed together.

Finally, the individuals we met do not reject the idea of change, but want change within the rules of the “*Constructor Village*” and not that imposed by the KM 2.0, inspired by the organisation. Confronted by the rules of KM 2.0, “system D” takes over: the *Constructor* Villagers construct their own mode of functioning on the basis of the new opportunities offered by KMS 2.0.

6 Contributions and Implications

This article explores the appropriation of KMS 2.0 through an analysis based on the Myth of the Village of Asterix. It contributes to understanding the gap found in certain companies (French companies in particular) between the adoption of KMS 2.0 by managerial or Information System departments and the appropriation of these KMS by collaborators. In line with the works of Feldman and March (Signal and Symbol Theory), it contributes to appreciating the symbolic dimension in IT Management and in IS appropriation [31, 38, 39, 49-52, 61, 62].

Using myths as tools of analysis can be useful for understanding the appropriation of KMS inside an organisation. By recalling what makes sense to the collective entity, this approach helps to better understand the tensions and objections expressed when a KMS is set up. In this article, we have chosen to analyse these tensions by referring to the “Gaulish Village” whose vision of knowledge and knowledge management differ from that conveyed by 2.0 organisations. These different viewpoints have different appreciations of collective action. Collective action in Asterix involves the reflection of social values which can be either an impetus for action or an obstacle. Through the case of the *Constructor*, we highlight the similarities between the attitudes, postures and functions of the Asterix Village inhabitants concerning knowledge, and those described by the company actors concerning knowledge management. These provide a supplementary key to understanding the obstacles to appropriating KMS 2.0.

The study carried out here in no way claims to be a generalisation. We do not consider the Myth of Asterix as a single analytical tool for decoding the behaviour of collaborators in all French companies introducing KMS 2.0. Each enterprise has its own

founding myths, history and imaginary narratives that structure the meaning of collective action in each case. The company studied here is very specific. Its history is one of a series of founding myths according to which the Asterix myth seems to provide a relevant basis for exploration. However, in some companies, the appropriation of KMS 2.0 probably depends on creating new hybrid forms of collective action, inspired by 2.0 organisations, but supporting pre-existing values, projects and structural modes of collective action. From this point of view, it may be interesting to use myths that structure collective action as tools for understanding. Beyond this, resorting to myths can also be a way of creating sense out of KMS deployment processes. For Barthes, the myth is a language that relies on discourse and words as well as on objects, forms and images. What is important is the value of the verbal or visual sign. The myth is a semiological system based on a signifier (the verbal or visual unit) a signified (what is meant by this sign) and finally a sign that combines and transcends the signified and the signifier to create meaning. Each of these is used to convey a “*mythical concept*”, for example “Frenchness” in Asterix [21]. When the concept becomes mythical, the meaning of its basic nature is immediately appropriated by each of those who bear it. Certainly, this meaning is not always identical for each individual – there are variations depending on different sensibilities. Nevertheless, a common meaning emerges that enables individuals to identify with their community [18], a discussion, a shared language and collective action. Resorting to this type of referential narrative can create a space for discussion about the tensions that arise when a KMS is set up; such discussion may then result in the emergence of ways of using the KMS that make it easier for actors to appropriate [63]. One of the perspectives of this work is thus to study the pertinence of employing myths as an instrument for dialogue and sensemaking relative to KMS

This work also underlines the importance of taking account of the values and culture of the organisation if its members are to appropriate the KMS. It is not only a matter of taking account of the so called “technological” culture and the climate of technology management [64] but more generally to taking into consideration the actors’ shared representations about their work practices and the organisation. This perspective is found in works on the social dynamics of appropriating IS, and particularly on socio-materiality [65]. However, such studies give scant attention to representations related to “belonging” to a country. Even if these are only one type of representation shared by organisational actors, it nevertheless seems important to take them into account. In particular, in the context of Knowledge Management, the works of Fayard [20] show how far Japanese and Chinese views of KM are influenced by shared national representations such as the myth of the samurai or the Mandarin. It would be interesting to look more deeply into the role played by shared national representations on KM practices in organisations.

Finally, this work highlights how far ITs convey meaning. These technologies can even be seen as a sign/vehicle of a myth. In the case presented here, 2.0 KMS convey a representation of work and collective action constructed in a specific “field” (in the sense of Meyer and Rowan). This representation or organising view could be developed around KMS by IS departments, computer service providers, consultants, journalists, professional associations and researchers, and might be helpful in involving actors and

legitimising KMS projects. In particular it makes explicit the objectives behind the deployment of KMS in terms of improving work processes. However, the representation of work and collective action conveyed by the KMS is an idealised mythical representation that may conflict with other representations of what collective action is, or should be within an organisation. This is even more so when the actors who choose to adopt the technology are not always aware of the representations it conveys. In the case presented above, the Information Systems Department was not aware that the KMS conveyed a representation of work and collective action inspired by the model of 2.0 organisations. For the IS Department of *Constructor*, it was a matter of providing users with the most recent technologies in order to provide the best response to their requirements. Also, *Constructor* was unaware of the conflicting representations that the deployment of the KMS aroused and hence did not understand the obstacles to its adoption. However, *Constructor* had understood that certain discourse should not be associated with the deployment of these IS. It thus explained that the expression “*Knowledge Management*” could not be used at *Constructor*; instead the KM deployment processes were referred to as “*knowledge sharing*”. This deliberate choice of vocabulary shows some understanding of the conundrum of introducing KMS 2.0 into previously non - 2.0 organisations. It would be interesting to explore further the links between IT appropriation, cultural myths and organisational transformation. Indeed, there may well be lessons to be learned from examining firms where this transformation has had less happy results than in the case of *Constructor*, and where the implementation of KMS 2.0 has ignored the paradox of the Asterix myth – a myth that is at once so quintessentially French, yet that is at the same time based on shared human values.

References

1. Alavi, M., Leidner, D.E.: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues. *MIS Quarterly* 25, 107-136 (2001)
2. Davenport, T.: Enterprise 2.0: The New, New Knowledge Management? Harvard Business Online (2008) <http://blogs.hbr.org/2008/02/enterprise-20-the-new-new-know/>
3. Boughzala, I., Duzdert, A.: Knowledge Management 2.0: Organizational Models and Enterprise Strategies. IGI Global, Hershey, PA (2011) doi:10.4018/978-1-61350-195-5
4. Duzdert, A.: La Connaissance dans les Entreprises. Éditions La Découverte, Paris (2013)
5. Swanson, E.B., Ramiller, N.C.: Innovating Mindfully with Information Technology. *MIS Quarterly* 28(4), 553-583 (2004)
6. Boughzala, I., De Vreede, G.-J.: Vers l'Organisation 2.0: Un Nouveau Modèle Basé sur l'Intelligence Collective. In: Actes de la 15ème Conférence Internationale de l'Association Information et Management, La Rochelle, France (2010)
7. Roulleaux Dugage, M.: Organisation 2.0: Le Knowledge Management Nouvelle Génération. Groupe Eyrolles, Paris (2008)
8. Deschamps, C.: Le Nouveau Management de l'Information. La Gestion des Connaissances au Coeur de l'Entreprise 2.0. FYP Éditions, Limoges (2009)
9. Orlikowski, W.J.: The Duality of Technology: Rethinking the Concept of Technology in Organizations. *Organization Science* 3(3), 398-427 (1992)
10. Orlikowski, W.J.: Improvising Organizational Transformation over Time: A Situated Change Perspective. *Information Systems Research* 7(1), 63-92 (1996)

11. Fayard, P., Blondeau, E.: *La Force du Paradoxe. En Faire une Stratégie?* Dunod, Paris (2014)
12. Gaumand, C.: *Système de Gestion des Connaissances Dédié à la Chaîne Logistique Intra-Organisationnelle: Une Recherche Intervention au Sein de l'Entreprise Bonfiglioli Transmission.* Thèse de Doctorat en Sciences de Gestion, Ecole Centrale Paris (2014)
13. Duhamel, A.: *Le Complexe d'Astérix. Essai sur le Caractère Politique des Français.* Gallimard, Paris (1985)
14. Enrègle, Y.: *Du Conflit à la Motivation.* Editions d'Organisation, Paris (1985)
15. March, J.: *Les Mythes du Management.* *Gérer et Comprendre* 57, 4-12 (1999)
16. Barthes, R.: *Mythologies.* Seuil, Paris (1957)
17. Meyer, J.W., Rowan, B.: *Institutionalized Organizations: Formal Structure as Myth and Ceremony.* *American Journal of Sociology* 83(2), 340-363 (1977)
18. Burkert, W.: *Qu'est-ce qu'un Mythe.* In: *Les Grands Mythes de l'Humanité. Le Monde des Religions, Hors Série no. 21,* 6-9 (2013)
19. Schmidt, J.: *Entretien: Nos Références Sont Mythologiques.* In: *Les Grands Mythes de l'Humanité. Le Monde des Religions, Hors Série no. 21,* 96-97 (2013)
20. Igalens, J.: *Le Talent du Griot: L'Art de Transmettre une Représentation, de Partager une Vision. Le Talent Majeur du Responsable Hypermoderne.* *Revue Internationale de Psychosociologie* 17(41), 131-145 (2011)
21. Rouvière, N.: *Astérix ou la Parodie des Identités.* Champs-Flammarion, Paris (2008)
22. Fayard, P.: *Le Réveil du Samouraï: Culture et Stratégie Japonaise dans la Société de la Connaissance.* Dunod/Polia Ed., Paris (2006)
23. Fahey, L., Prusak, L.: *The Eleven Deadliest Sins of Knowledge Management.* *California Management Review* 40(3), 265-276 (1998)
24. Grover, V., Davenport, T.: *General Perspectives on Knowledge Management: Fostering a Research Agenda.* *Journal of Management Information Systems* 18(1), 5-21 (2001)
25. Dzinkowski, R.: *The Measurement and Management of Intellectual Capital: An Introduction.* *Management Accounting* 78(2), 32-36 (2000)
26. Schubert, P., Lincke, D.-M., Schmid, B.: *A Global Knowledge Medium as a Virtual Community: The NetAcademy Concept.* In: *AMCIS 1998 Proceedings, Paper 207* (1998) <http://aisel.aisnet.org/amcis1998/207>
27. Nonaka, I., Takeuchi, H.: *The Knowledge-Creating Company.* Oxford University Press, New York (1995)
28. Cook, S., Brown, J.: *Bridging Epistemologies: The Generative Dance Between Organizational Knowledge and Organizational Knowing.* *Organization Science* 10(4), 381-400 (1999)
29. Brown, J-S., Duguid, P.: *Organizational Learning and Communities of Practice: Toward a Unified View of Working, Learning and Innovation.* *Organization Science* 2(1), 40-57 (1991)
30. Wenger, E.: *Communities of Practice: Learning, Meaning and Identity.* Cambridge University Press, Cambridge (1998)
31. McElroy, M.E.: *The New Knowledge Management: Complexity, Learning, and Sustainable Innovation.* Butterworth-Heinemann, New York (2002)
32. McAfee, A.: *Enterprise 2.0: The Dawn of Emergent Collaboration.* *IEEE Engineering Management Review* 34(3), 38 (2006)
33. McAfee, A.: *Enterprise 2.0: New Collaborative Tools for Your Organization's Toughest Challenges.* Harvard Business School Press, Boston, MA (2009)
34. Tapscott, D., Williams, A.D.: *Wikinomics: How Mass Collaboration Changes Everything.* Penguin, New York (2006)
35. Hamel, G.: *The Future of Management.* Harvard Business School Press, Boston, MA (2007)

36. Nelson, R.R., Winter, S.G.: *An Evolutionary Theory of Economic Change*. Belknap Press of Harvard University Press, Cambridge, MA (1982)
37. Pinch, T.J., Bijker, W.E.: The Social Construction of Facts and Artefacts: Or How The Sociology of Science and the Sociology of Technology Might Benefit Each Other. *Social Studies of Science* 14(3), 399-441 (1984)
38. Pinch, T.J., Bijker, W.E.: The Social Construction of Facts and Artifacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other. In: Bijker, W.E., Hughes, T.P., Pinch, T.J. (eds.) *The Social Constructions of Technological Systems: New Directions in the Sociology and History of Technology*, pp. 17-50. MIT Press, Cambridge, MA (1987)
39. De Vaujany, F.X.: Pour une Théorie de l'Appropriation des Outils de Gestion: Vers un Dépassement de l'Opposition Conception-Usage. *Management & Avenir* 3(9), 109-126 (2006)
40. Orlikowski, W.: Using Technology and Constituting Structures: A Practice Lens for Studying Technology in Organizations. *Organization Science* 11(4), 404-428 (2000)
41. Weick, K.: *Sensemaking in Organizations*. Sage, Thousand Oaks, CA (1995)
42. Sellin, C.K.: *Des Organisations Centrées Processus aux Organisations Centrées Connaissance: La Cartographie de Connaissances Comme Levier de Transformation des Organisations. Le Cas de la Démarche de "Transfert de Savoir-Faire" Chez Total*. Thèse de Doctorat en Sciences de Gestion, Ecole Centrale Paris (2011)
43. Khalil, C., Duzert, A.: Entre Autonomie et Contrôle: Quelle Régulation pour les Systèmes de Gestion des Connaissances. 18ème Conférence Internationale de l'Association Information et Management (AIM), Lyon (2013)
44. Cabin, P.: Les Mythes de l'Entreprise. In: Cabin, P. (ed.) *Les Organisations: État des Savoirs*, pp. 279-284. Éditions Sciences Humaines, Paris (1999)
45. Grimand, A.: De l'Emergence de Mythes Gestionnaires: Une Déconstruction du Knowledge Management au Travers de la Philosophie de Roland Barthes. Actes de la 14ème Conférence Internationale de Management Stratégique (AIMS), Angers (2005)
46. Vernant, J.-P.: *L'Univers, les Dieux, les Hommes*. Le Seuil, Paris, (1999)
47. Bolman, L., Deal, T.: *Modern Approaches to Understanding and Managing Organizations*. Jossey-Bass, San Francisco (1984)
48. Bowles, M.: Myth, Meaning and Work Organization. *Organization Studies* 10(3), 405-421 (1989)
49. Kaarst-Brown, M.L., Robey, D.: More on Myth, Magic and Metaphor: Cultural Insights into the Management of Information Technology in Organizations. *Information Technology & People* 12(2), 192-218 (1999)
50. Hirschheim, R., Newman, M.: Symbolism and Information Systems Development: Myth, Metaphor and Magic. *Information Systems Research* 2(1), 29-62 (1999)
51. Andriessen, D.G.: Stuff or Love? How Metaphors Direct Our Efforts to Manage Knowledge in Organisations. *Knowledge Management Research and Practice* 6, 5-12 (2008)
52. Andriessen, D.G.: Metaphors in Knowledge Management. *Systems Research and Behavioral Science* 28, 133-137 (2011)
53. Nonaka, I.: The Knowledge-Creating Company. *Harvard Business Review* 69(6), 96-104 (1991)
54. Perlmutter, H.: The Tortuous Evolution of Multinational Enterprises. *Columbia Journal of World Business* 1, 9-18 (1969)
55. Rouvière, N.: La France des Lumières Est Tout Entière dans Astérix. In: *Astérix, Notre Héros: La Saga*. Le Point, Hors Série Novembre-Décembre, 42-47 (2013)

56. Nonaka I., Konno, N.: The Concept of "Ba": Building a Foundation for Knowledge Creation. *California Management Review* 40(3), 40-54 (1998)
57. Yin, R.K.: *Case Study Research: Design and Methods*, 3rd edn. Sage, Newbury Park, CA (2002)
58. Eisenhardt, K.M.: Building Theories from Case Study Research. *Academy of Management Review* 14(4), 532-550 (1989)
59. Benbasat, I., Goldstein, D.K., Mead, M.: The Case Research Strategy in Studies of Information Systems. *MIS Quarterly* 11(3), 369-386 (1987)
60. Corbin, J., Strauss, A.: Grounded Theory Research: Procedures, Canons, and Evaluative Criteria. *Qualitative Sociology* 13(1), 3-21 (1990)
61. Dudezert, A., Leidner, D.: Illusions of Control and Social Domination Strategies in Knowledge Mapping System Use. *European Journal of Information Systems* 20(5), 574-588 (2011)
62. Karoui, M., Dudezert, A.: Capital Social et Enjeux de Pouvoir: Une Perspective Socio-Politique de l'Appropriation d'une Technologie de Réseaux Sociaux au Sein d'une Collectivité Territoriale. *Systèmes d'Information et Management* 17(1), 49-80 (2012)
63. Callon, M., Latour, B. (eds.): *La Science Telle qu'elle se Fait. Anthologie de la Sociologie des Sciences de Langue Anglaise (Nouvelle Édition Amplifiée et Remaniée)*. La Découverte, Paris (1991)
64. Boynton, A.C., Zmud, R.W., Jacobs, G.C.: The Influence of IT Management Practice on IT Use in Large Organizations. *MIS Quarterly* 18(3), 299-318 (1994)
65. Orlikowski, W.: Sociomaterial Practices: Exploring Technology at Work. *Organization Studies* 28(9), 1493-1448 (2007)