The Impact of Artificial Knowledge on Designing Knowledge Strategies

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Abstract

The emergence of artificial intelligence, as the primary product of artificial knowledge, has a profound impact on the structure and operation of knowledge management systems. That leads to new challenges of integrating human knowledge with artificial knowledge in a meaningful way in making decisions and designing knowledge strategies. The purpose of this paper is to explore the impact of artificial knowledge on knowledge processes and to design strategies for knowledge management systems. These strategies have a different understanding and formulation from business strategies. Artificial knowledge is rational and has nothing to do with a certain truth or adequate representation of reality, like human knowledge. It is just an outcome of the Large Language Models (LLMs) of artificial intelligence (AI). The paper investigates how artificial knowledge can be integrated within the generic knowledge strategies of a company, keeping in mind its advantages and limitations by comparison with those of human knowledge. The paper analyses the exploitation knowledge strategy, the acquisition knowledge strategy, the knowledge sharing strategy, and the knowledge exploration strategy.

Keywords: *human knowledge, artificial knowledge, artificial intelligence, business strategy, knowledge management systems*

JEL classification: D80, D81, L10

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1. Introduction

The disruptive development of artificial intelligence (AI) in recent years, as a result of integrating neural networks and Large Language Models (LLMs), has led to the creation of ChatGPT and other chatbots with their capability of generating a human-like dialogue (Baker, 2023, 2025; Russell & Norvig, 2022). "In November 2022, Open AI launched an interface called ChatGPT, which allowed the general public for the first time to easily interact with an LLM – a model known as GPT-3.5.

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Within two months, 100 million people had tried it, likely including you" (Kurzweil, 2024, p. 52).

The human-like dialogue is possible due to the generation of *artificial knowledge* (Bratianu & Paiuc, 2025), an emerging construct that challenges the knowledge management systems and top management in designing knowledge strategies. *Artificial knowledge* is a construct that belongs to the science of the artificial (Simon, 1996), and imitates human knowledge, like artificial intelligence does for human intelligence (Kurzweil, 2024). Artificial knowledge is an outcome of machine learning and the transformative capacity of the Large Language Models (LLMs) and consists of texts produced by ChatGPT and other chatbots based on complex algorithms that use multiple levels of neural networks. The paradox is that computers do not think and do not understand anything of what they process, yet they generate meaningful texts based on some syntactic rules and linear logic (Baker, 2023; Bratianu & Vasilache, 2010). While human knowledge is a result of human learning and information processing based on semantics and a value system, artificial knowledge is a result of machine learning and a set of syntactic rules.

The purpose of this paper is to explore the impact of artificial knowledge on the design of knowledge strategies, a topic that is almost wholly lacking from the literature, and to show how to integrate artificial knowledge with human knowledge. This is a conceptual paper based on a critical literature review, a semantic analysis of artificial knowledge, and an exploration of the known-unknown dynamics in designing knowledge strategies.

2. Artificial Knowledge versus Human Knowledge

Artificial knowledge is an emerging concept, and very few papers have focused on it (Di Vaio et al., 2024; Harfouche et al., 2017; Saviano et al., 2023). Moreover, there are some papers where it is called *synthetic knowledge* or *digital knowledge*. Following the coherence and the logic of metaphorical thinking (Lakoff & Johnson, 1999), if we have artificial intelligence (Russell & Norvig, 2022), then we should consider its outcome *artificial knowledge* (Bratianu & Paiuc, 2025). Also, that is in accordance with the principles explained by Herbert Simon in his seminal book *The Science of the Artificial* (1966). Therefore, artificial knowledge belongs to the artificial world that humans continuously create to complement the natural world. That is why it does not have the same fundamental role in reflecting reality as human knowledge. From an epistemological point of view (Audi, 2011), human knowledge is *a justified true belief* (Nonaka & Takeuchi, 1995). A *belief* is an opinion about something that you think is true (Oxford Advanced Learner's Dictionary), and knowledge is such a belief that can be justified.

Because knowledge is an abstract concept without any direct physical representation in the real world, we can understand it by using metaphors (Andriessen, 2008). The most complex and adequate metaphorical model – The theory of knowledge fields (TOKF) - is based on the analogy of *knowledge* with *energy* (Bratianu, 2022; Bratianu & Bejinaru, 2023). TOKF considers three

fundamental knowledge fields: rational knowledge, emotional knowledge, and spiritual knowledge. *Rational knowledge* is the result of rational thinking and represents objective knowledge. It is the basis of science and technology, and it has roots in the concept of *episteme*, defined by Aristotle (1999). Rational knowledge is expressed by a natural or symbolic language, and as a result, it can be codified. It is the knowledge used in education and social communication. It is the knowledge used intensively by managers in their decision-making processes. *Emotional knowledge* is learned through direct practice and represents the reflection of the human body's reaction to the external environment. It is an experiential knowledge (Kolb, 2015). Emotional knowledge is worldless, and it cannot be codified. If rational knowledge shows *know-what* and *know-who*, emotional knowledge shows *know-how*, and it is the basis of tacit knowledge (Nonaka & Takeuchi, 1995, 2019; Polanyi, 1983). Emotional knowledge is strongly nonlinear and is processed by emotional intelligence (Damasio, 2012; Hill, 2008). *Spiritual knowledge* reflects the cultural and ethical values and principles we get through education and our own experience. Spiritual knowledge is processed by spiritual intelligence and constitutes the guiding framework in any decision we make (Kaiser, 2024; Rocha, 2021). The knowledge spectrum is illustrated in Figure 1.

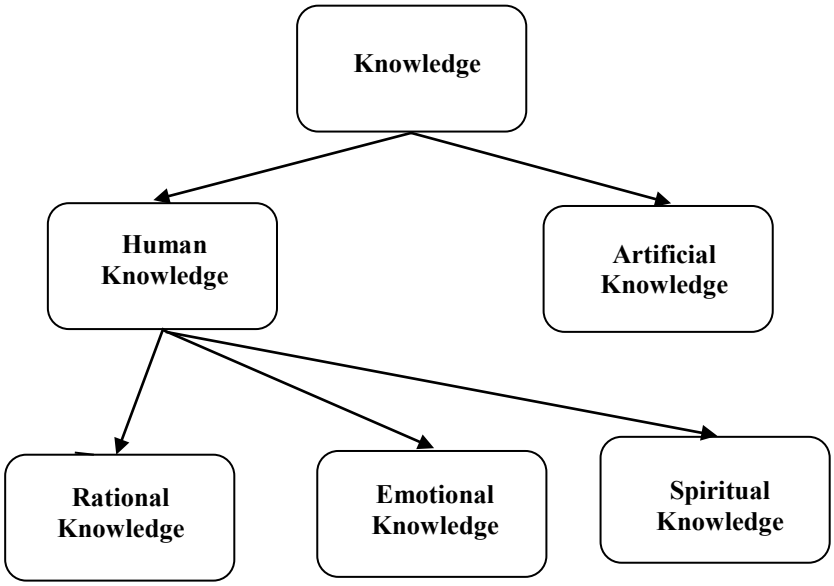

Figure 1. Knowledge spectrum
Source: Author's creation

By comparison with human knowledge, artificial knowledge has only the form of rational knowledge because it is a result of processing databases containing rational information and knowledge. Moreover, emotional and spiritual knowledge has a biological and spiritual support. They are incorporated knowledge that cannot be generated by a computer.

It is important to mention the difference between the meaning of the concept of *information* used in computer science and technology and the concept of *information* used in knowledge management systems. Shannon (1948) defined *information* as a pure mathematical concept to reflect a certain probability distribution within communication systems. In this mathematical framework, information is devoid of any meaning. In knowledge management systems, the concept of *information* reflects a result of data processing by human intelligence within a certain semantic system. Therefore, information is meaningful data (Bratianu & Bejinaru, 2023; Davenport & Prusak, 2000; Nonaka & Takeuchi, 1995). The paradox is that artificial knowledge is produced by algorithms using data and information in the Shannonian conceptual framework. Computers don't think, and they have no consciousness. They are not capable of processing semantic fields. They process huge databases containing human, technology or synthetic data, and Shannonian information and create patterns for new information and knowledge structures using LLMs. They produce artificial knowledge based on syntactic rules, using pattern predictions (Baker, 2023, 2025; Bratianu & Paiuc, 2025; Kurzweil, 2024; Russell & Norvig, 2022).

Artificial knowledge is data-driven and reflects the structure of the database used in generating it. Changing that database leads to new content of the artificial knowledge. While human knowledge reflects a certain aspect of the reality we are living in, artificial knowledge has no correlation with that reality. It is a reflection of the database used for its training, and then by the database searched to provide answers to different human questions. Therefore, the accuracy of human knowledge is a result of experience, critical thinking and intuition of each individual, while the accuracy of artificial knowledge depends on the databases used for training and searching, and the logic of the algorithms. It is a fact that artificial knowledge contains errors called *hallucinations*. "Chat GPT is predicting which words will follow your prompt, fulfil your intent, and adhere to the context in the prompt. When it predicts – or guesses – incorrectly but has determined on its own that this wrong response has a high probability of being correct, it is said to be hallucinating" (Baker, 2023, p. 35). That is a serious drawback of artificial knowledge because hallucinations can induce wrong decisions with negative consequences, especially in the medical and justice domains.

Artificial knowledge and artificial intelligence lack moral thinking and ethical principles (Floridi, 2023). Combined with this feature, the power of computers in generating and disseminating artificial knowledge, the lack of ethics constitutes a significant vulnerability for any knowledge management system. Knowledge managers should be aware of this danger and use artificial knowledge with great attention and responsibility. Also, students and researchers should use artificial knowledge in their work as a learning support and not to produce homework, dissertations, or papers to be published in international journals. Table 1 presents a synthesis of the comparative analysis between human knowledge and artificial knowledge.

A synthetic comparative analysis between human knowledge and artificial knowledge

Table 1

Descriptor	Human Knowledge	Artificial Knowledge
Creation and generation	Created by experience and human learning. Experiential knowledge is the basis of tacit knowledge.	Generated by algorithms and Large Language Models (LLMs), based on human data or synthetic data.
Forms of manifestation	Rational knowledge, emotional knowledge, and spiritual knowledge. There is tacit and explicit knowledge.	Rational knowledge. There is no tacit knowledge.
Driven force	Reality and truth.	Data-driven.
Accuracy	Given by experience, critical thinking, logic, and quantitative investigation.	Accuracy is given by the accuracy of the data used for training and for search. Artificial knowledge may have hallucinations.
Codification	Rational knowledge can be codified using natural or symbolic language.	Artificial knowledge is a result of codification.
Integration	Based on semantics and cultural context.	Based on syntactic rules without any correlation with a cultural context.
Emotionality	There is an emotional field of knowledge that reflects the emotional states of a specific individual at a particular moment.	There is no correlation with emotionality because there is no biological and spiritual support.
Spirituality	There is a spiritual field of knowledge that contains values and principles.	There is no correlation with spirituality because there is no consciousness.
Ethics in usage	There are ethical principles that govern the use of human knowledge.	There are no general ethical principles that govern artificial knowledge.

Source: Author's creation

3. Designing Knowledge Strategies

It has been demonstrated that *knowledge* is a strategic resource (Massingham, 2020; Nonaka & Takeuchi, 1995, 2019) and that there is a real need to think strategically (Bratianu, 2002; Bratianu & Anagnoste, 2011; Bratianu & Lefter, 2001) in using it. *Knowledge strategies* are at the core of business strategies, although their roots are in the known-unknown matrix and not in Porter's competitive advantage analysis (Anagnoste, 2024; Cristache & Nastase, 2023;

Nicolescu & Nicolescu, 2022; Porter, 1985). The human knowing states defined by the known-unknown matrix are the following:

- ***I know what I know***. That state reflects a world of finite explicit knowledge and deterministic thinking. It is a result of our education and of an attitude of self-sufficiency. It is a state of certainty without any vulnerabilities and risks.
- ***I know what I don't know***. That is a complementary state of knowing that is under my consideration. I know what I need to learn to acquire new knowledge, and that gives me a feeling of certainty. The logic goes on the same line of deterministic thinking and a finite, explicit knowledge universe. That state is good when it acts as a driving force to continue learning and knowledge acquisition.
- ***I don't know what I know***. This state of knowing is more realistic because it is based on probabilistic thinking and an infinite universe of knowledge. It is a state that integrates both tacit and explicit knowledge. Tacit knowledge is primarily incorporated and processed through the unconscious part of the human brain. We are aware of having that knowledge, but never knowing how much of it. That uncertainty yields the feeling that I don't know what I know. That should be the most important state of knowing for any knowledge manager or leader.
- ***I don't know what I don't know***. That is apparently nonsense, but it describes the state of knowing the future. Strategic thinking should be able to uncover that state and to design strategies even when we don't know what might happen in the future. That state contains many vulnerabilities, and any decision-making involves some risks that we should be aware of.

The question we now need to answer is how to design knowledge strategies that expand our understanding, integrating both human knowledge and artificial knowledge, keeping in mind the specific features of each type of knowledge. Our focus will be on the *generic knowledge strategies* that can be adapted to any company, based on its needs and dynamic capabilities (Bolisani & Bratianu, 2018; Bratianu, 2022; Teece, 2009). Figure 2 presents these generic knowledge strategies, with inputs from both human knowledge and artificial knowledge. The challenge is to integrate optimally both types of knowledge.

For the knowing state, *I know what I know*, it is important to make optimal use of the existing data, information, and knowledge. Therefore, we will design a strategy of *knowledge exploitation* that is based on considering the whole spectrum of knowledge a company has at a given moment. That spectrum contains human knowledge incorporated in people, stored in databases, embedded in patents and operational procedures, as well as all the documents managers may have. Artificial knowledge contains all the databases created with the help of artificial intelligence.

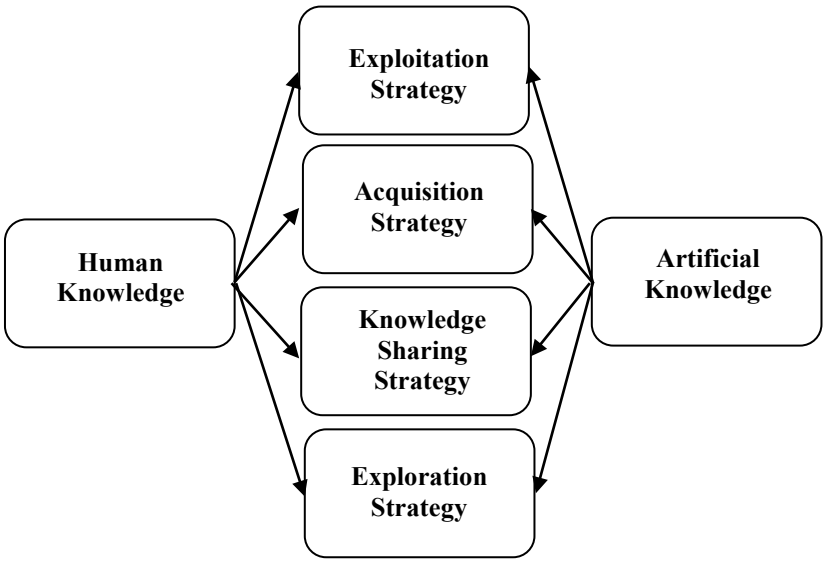

Figure 2. Generic knowledge strategies
Source: Author's creation

Knowledge exploitation strategy requires a knowledge map for the whole company, so that knowledge managers can easily find the needed knowledge.

For the knowing state, *I know what I don't know*, we will design a strategy of *knowledge acquisition*. That strategy is based on the idea of buying all the data, information and knowledge needed that can be afforded financially. That should be based on long-term thinking and the information offered by experts in business intelligence. Knowledge acquisition may take different forms: purchasing books, scientific journals, reports produced by consulting companies and agencies, software programs, databases, and hiring experts (i.e. buying their expertise). Artificial knowledge can be used by purchasing Generative Artificial Intelligence (GenAI) applications capable of humanlike dialogue. To increase the value of artificial knowledge, these applications should be trained using databases containing data specific for the business domain in case or from the buyer company. Artificial knowledge acquisition can be dominant in this strategy because even this knowledge extracts its content from the initial human knowledge.

For the knowing state, *I don't know what I know*, tacit knowledge is fundamental. People should make the effort to be aware of their own experience and of its value. Knowledge sharing can become an adequate strategy if people with valuable experience are motivated by the management system. *Knowledge sharing strategy* is very important in increasing organizational knowledge entropy, which stimulates innovation (North & Kumpta, 2018). Computers cannot share tacit knowledge because they don't have any experience from a human perspective. They can disseminate very fast both human knowledge and artificial knowledge within the whole organization. Also, GenAI applications can become useful in disseminating

huge volumes of data, information, and artificial knowledge across the company's borders. There is a dynamic process between knowledge sharing and knowledge hiding that is influenced by the cultural context and leadership vision. "Typically, employees may not want to share what they know, fearing that once they share their specialised knowledge, they may not be needed" (Thatchenkery, 2005, p. 16). Artificial intelligence can amplify the sharing component through the dissemination of artificial knowledge and retained knowledge from the people who have retired. Knowledge sharing remains a fundamental human process because it is based on inner motivation and tacit knowledge.

For the knowing state, *I don't know what I don't know*, the best strategy is *knowledge exploration*. "Knowledge exploration is designed to help managers create conditions for generating knowledge along the main trends in science, technology, economics, business, and consumer behavior" (Bratianu, 2022, p. 49). The strategy of knowledge exploration refers to knowledge creation, where we don't have it. While all the previous strategies focus on operational knowledge management, knowledge exploration focuses on the future, where the absence of knowledge is the rule (Spender, 2014). This strategy needs a different approach and thinking. Human knowledge creation within operational knowledge management has been explained and modelled by Nonaka and Takeuchi (1995, 2019). The famous SECI (Socialization, Externalization, Combination, Internalization) cycle is well-known to all knowledge managers and researchers. The four stages of this cycle reveal conversion processes between tacit and explicit knowledge. However, strategising for the future needs a switch from deterministic to probabilistic thinking and replacing the experiential mode of knowledge creation with intuition (Klein, 2003). Computers do not have intuition, and they cannot think at all, especially for the company's future. Then, how can managers integrate artificial knowledge with human knowledge? That is a hard question, and we can only think of the prediction patterns constructed by GenAI, which should be able to show the kind of artificial knowledge we need. Knowledge exploration strategy remains more an art than a science in knowledge management systems.

4. Conclusion

The emergence of *artificial knowledge* and GenAI has a significant impact on knowledge management systems. All the theories and practices developed in knowledge management are based on human knowledge, and the manager's ability to deal with intangible resources. Knowledge-intensive companies are dominated by intangible resources, and classical management cannot be effective for them anymore (Grant, 1996, 1997). Now, the artificial knowledge that is an outcome of GenAI is a reality, and managers should be able to understand its nature and structure to integrate it with human knowledge in knowledge management. Things are not so easy because artificial knowledge differs in many aspects from human knowledge. The most important fact is that *artificial knowledge* is not, and it cannot be, *a justified true belief* like human knowledge, because computers don't have

consciousness and therefore cannot have beliefs. Also, while human knowledge should converge toward truth, artificial knowledge is produced by mathematical algorithms and has no correlation with any truth.

Although GenAI applications like ChatGPT generate human-like dialogues, artificial knowledge is produced based on syntactic rules, and when it is generated, computers don't understand semantics, but only how the neural networks work with probability distributions of words. Their algorithms select words based on the highest probability of their match within a certain text content.

Human knowledge manifests through three fundamental fields of rational, emotional, and spiritual knowledge. Each form of knowledge can be transformed into any of the other fields of knowledge. Artificial knowledge is exclusively rational and has no other form into which to be transformed. Therefore, human knowledge dynamics cannot be applied to artificial knowledge. Having in mind all these similarities and dissimilarities between human and artificial knowledge, we should be able to see how to design knowledge strategies such that we integrate both types of knowledge. The present paper shows how artificial knowledge impacts the generic knowledge strategies: the exploitation knowledge strategy, the acquisition knowledge strategy, the knowledge sharing strategy, and the exploration knowledge strategy.

Artificial knowledge can be integrated with success in the exploitation and acquisition of knowledge strategies, but it is much difficult to be integrated in the knowledge sharing and knowledge exploration strategies because they are fundamentally based on human knowledge and thinking.

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