

Futures of Journalism Profession: Scenario Analyses of Innovation Journalism Based on Critical Drivers in the Today's Media World

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Abstract

Journalism is a key profession in the modern information societies. In recent years, many new drivers have emerged and fundamentally changed the role of traditional "old-school" journalism. The professional requirements of journalism are in a process of complex tensions. This article analyses the futures of journalism as a profession from different perspectives, relevant for the futures of journalism profession (see e.g. Pavlik 1999).

First scenario analysis focuses on the tools and methods of journalism and on the content substance of journalism. In this section of the article, the author performs a scenario analysis (Scenario analysis 1), which indicates that there are many constraints for the innovation journalism, which typically requires high substance competences of journalism, but also methodological competences in the fields of innovation and foresight research.

In the second scenario analysis (Scenario analysis 2), the driving role of digital ICT technology and learning processes of journalists are analyzed in relation to the modern journalism profession. In this scenario analysis, the author uses Max Boisot's Information Space theory as a theoretical framework. This scenario analysis highlights a finding that the management of digital libraries is one key challenge for successful innovation journalism and dynamic innovation media.

In the third scenario analysis (Scenario analysis 3), the driving role of two innovation paradigms are analysed in relation to the modern journalism profession. The alternative paradigms are (1) closed innovation process paradigm and (2) open innovation process paradigm. Again, new interesting aspects are found for the development of modern innovation journalism. This section provides new theoretical perspective on how to analyze the role of public attention in innovation ecosystems, its stakeholders, and the interaction between them. This section also provides new, fresh perspective on how journalism and innovation interact in global context where economies are becoming more and more driven by innovation.

In the fourth scenario analysis (Scenario analysis 4), the author presents Knowledge Retrieval Matrix developed by Gammelgaard and Ritter (2004). The critical driving forces of this new theoretical knowledge management model are: (1) Organizational codification strategy and (2) personification strategy as knowledge management strategies of innovation journalism. In this scenario analysis, the role of (1) databases, (2) individual memory, (3) social capital and (4) virtual communities of practice are analyzed from the perspective of innovation journalism. In this section, the author points out that through the establishment of virtual communities of practice, the codification and personalization strategies can be combined, which is fundamentally advantageous for knowledge management among innovation journalism professionals.

All the provided scenario analyses are critical and provide new innovative thinking tools for new, more effective strategies of the modern innovation journalism and

innovation media. All the key analyses are performed in the form of problem-oriented scenario analyses. Analytical scenarios are based on (1) new information and knowledge management theories and (2) the most critical driving forces of media, media content and media technology.

1 Introduction

There are many articles where the history of journalism has been theorized, researched, studied and criticized worldwide by people coming from a wide variety of disciplines. Research about journalism and among journalists has been established as a widely acknowledged field. This research activity has taken place in the latter half of the 20th century. In the field of journalism, innovation journalism is a new concept and that is why there is less research about the history of innovation journalism. Even less articles are available about the future of conventional and innovation journalism. This article is methodologically based on scenario thinking and futures studies. The idea is to present different scenarios to help us understand the key driving forces of journalism and especially innovation journalism (Burt & van der Heijden 2003).

This article is focused on analyzing the future of innovation journalism and journalism profession in general. I personally hope that this research helps journalist to see their current situation from new perspectives. In recent decades, journalism has become a central social institution. However, there are many powers and tensions, which cause social, political, technical and economic pressures for journalists. Producing and performing good journalism is not easy in these turbulent times. In the conditions of economic recession, these powers are even stronger and tensions are becoming stronger, too. In professional circles, the challenges of the journalism profession are most often articulated as a threat to the autonomy of journalism professionals. The idea of journalistic autonomy has been an important device in carving out a strong social position for a journalism claiming to serve the “public good”. On the other hand, the definition of “public good” is not so self-evident and obvious thing it used to be before (see e.g. Kunelius 2006).

The key aim of this article is to help journalists and especially innovation journalists to understand the current situation of their profession and to identify some critical tensions of the journalism profession. A profession of journalism is a key profession in the modern information or knowledge societies. In recent years, many new drivers have emerged and fundamentally changed the role of traditional "old-school" journalism. In a time of rapid technological, social and economic development, traditional news journalism is undergoing some spectacular changes. Especially new

communication technologies (e.g. ubiquitous tech solution and digital technology), a globalizing media and intense commercial pressures have an impact on the way news organizations and journalists operate (Brichta & Johansson 2008). The professional requirements of journalism are in a process of complex tensions (Nerone & Barnhurst 2003). This article identifies some sources of critical tensions.

The sources of critical tensions are: (1) heavier demands for professional expert knowledge and higher demands for competences to use journalistically relevant research methods, (2) the changing dynamics of the Information Space, (3) the emergence of open innovation paradigm to challenge closed innovation paradigm and (4) the need to use different codification strategies in a more conscious way.

The analyses of the Information Space dynamics are based on Max Boisot's theoretical model of structuring knowledge and sharing knowledge (Boisot & Cox 1999, Boisot & MacMillan 2004). Structuring knowledge is a domain of knowledge where knowledge changes from uncoded knowledge to codified knowledge. The third dimension of the Social Learning Cycle is change of knowledge from concrete to abstract.

Sharing knowledge is a domain of knowledge where knowledge can be undiffused or diffused. According to Boisot's knowledge classification, knowledge is *experiential* when knowledge is uncoded and undiffused. Knowledge is *narrative* when knowledge is more codified and more diffused. *Abstract symbolic knowledge* is such knowledge, which is highly codified and highly diffused. This theoretical framework helps the journalism profession understand some key tensions in their profession, especially the challenges of innovation journalism. The concept of Social Learning Cycle (SLC) is an especially useful tool to analyze new challenges of innovation journalism. The SLC model introduces key methodologies of innovation journalism, which are (1) problem-solving, (2) codification, (3) diffusion, (4) absorption, (5) scanning and (6) impacting. In this sense, Boisot defines the key work methodology package of innovation journalism from theoretical standpoints.

This article also discusses the role of new open innovation paradigm for journalism profession. This is done in Section 4. The emergence of the open innovation paradigm changes ecosystems of industries and economies. In this sense, the open innovation paradigm also challenges the whole journalism profession and innovation journalists.

2 Scenario analysis 1: Professional expert knowledge and competences to use journalistically relevant research methods

First scenario analysis is focused on the research tools and methods of journalism and on the content substance of journalism. In this section of the author performs the first scenario analysis (Scenario analysis 1), which indicates that there are many constraints for innovation journalism, which typically requires high substance competences of journalism, but also methodological competences in the fields of innovation and foresight research methodology.

In the first scenario analysis, vertical dimension of analysis is (1) the level of professional expert knowledge and (2) competence level to use journalistically relevant research methods. This scenario framework provides an interesting approach to think about the ideal form of innovation journalism. We can understand that every journalist must start from scenario C, where a journalist is a junior trainee. At this stage of professional development, s/he must decide how to develop herself/himself in the profession. Alternative scenario paths are: (1) A: An expert journalist is some issues, (2) B: Ideal professional in innovation journalism and (3) D: A journalist as a researcher and investigator. All these choices are possible for a junior journalist. Because journalists emphasize professional autonomy, all these career paths are possible, and each journalist thinks he/she must have autonomy to perform the journalism profession in an independent way. Furthermore, journalism education includes many orientation possibilities for journalists. On the basis of this scenario analysis, we can identify three different innovation journalism career paths: (1) Scenario path CAB, (2) scenario path CB and (3) scenario path CDB. In the scenario path CAB, journalist starts his/her career specializing on some special issues and, after that experience, studies research/investigating methods serving good journalism. In the scenario path CB, junior journalist gets a demanding training and education both in some special issues and adopts package of research and investigating tools in his/her professional career. In scenario path CDB, junior journalist studies first research methods fitting to journalism and then selects special issues where s/he applies these research methods. We can conclude that there are different ways to reach the ideal form of innovation journalism (point B in Fig. 1).

Figure 1. Professional expert knowledge (substance knowledge) and competence level to use journalistically relevant research methods

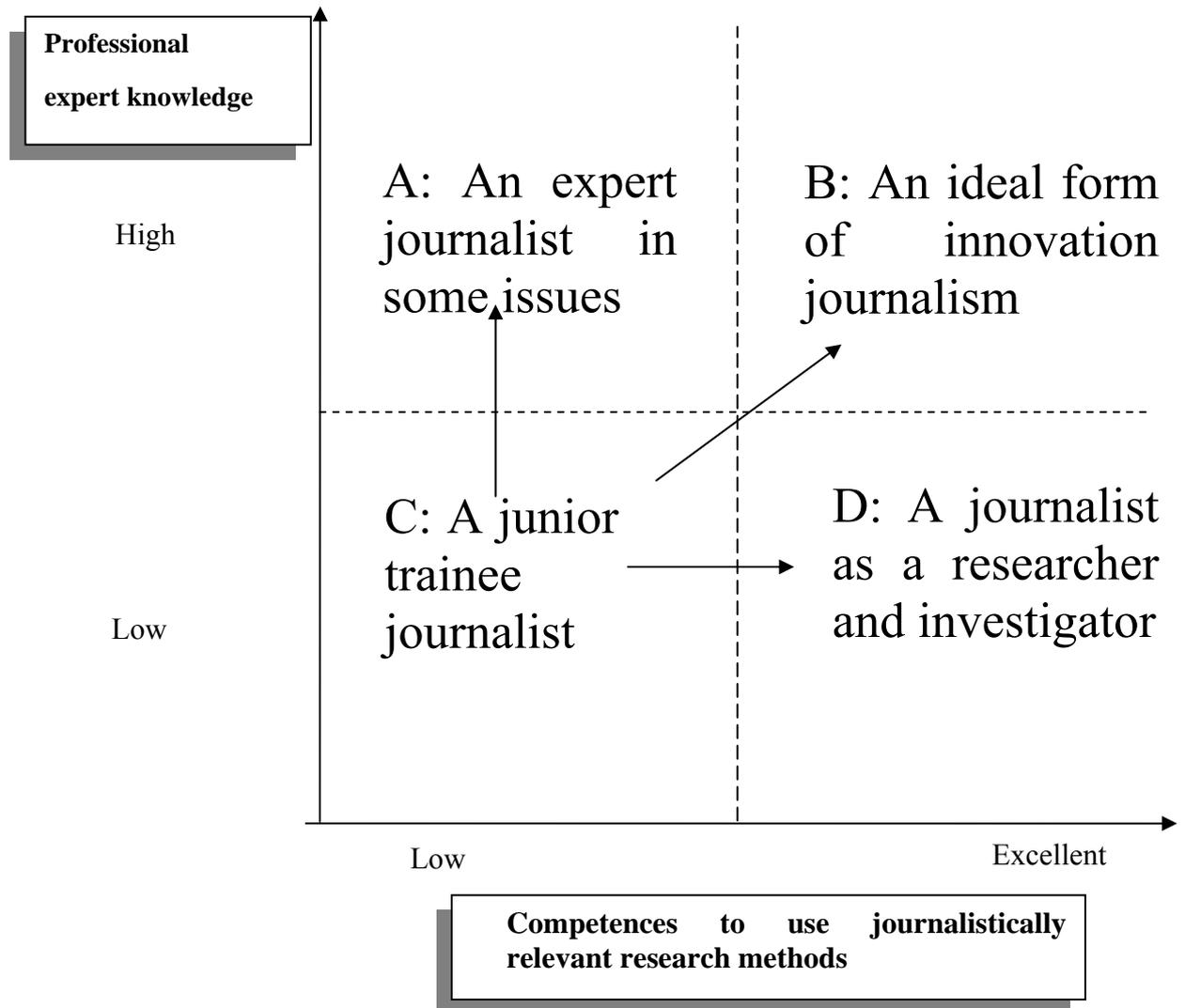


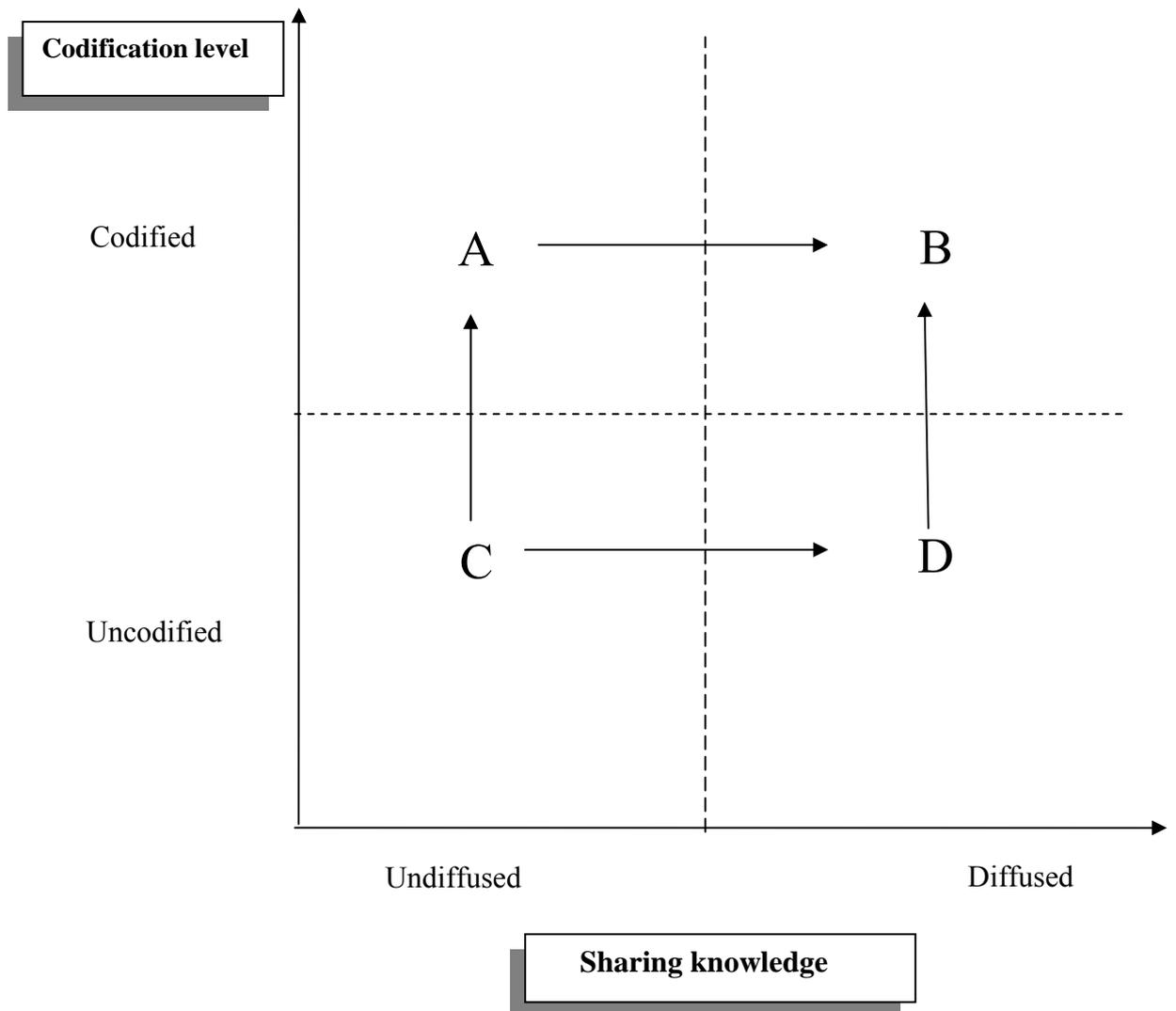
Figure 1 describes potential futures of the journalism profession. It is self-evident that in journalism all these futures are realized in various contexts of media. We can also note that the concepts of expert journalist and investigating journalist are close concepts to the concept of innovation journalist.

3. Scenario analysis 2: Boisot's Information Space analyses

In the second scenario analysis (Scenario analysis 2), the driving role of digital ICT technology and learning processes of journalists are analyzed in relation to the modern journalism profession. In this scenario analysis section, author uses Max Boisot's Information Space theory as a theoretical framework (Boisot 1995, Boisot & Cox 1999).

In Figure 2, the very basic framework of the SLC Model is presented. The trend of digitalization implies that the amount of codified knowledge is going to increase dramatically. Journalists typically start their work from uncoded and undiffused knowledge. They can, of course, also use highly codified and diffused knowledge. The key function of media is to produce news and other journalistically relevant material from point C and transform this knowledge to point A, point D or point B. We can conclude on the basis of Fig. 2 that key functions of journalism are codification and diffusion of knowledge. It is quite obvious that innovation journalism would lead to higher levels of codified and diffused knowledge in any society.

Figure 2. Codification level and diffusion levels of knowledge: Key functions of innovation journalism: better knowledge codification and promotion of diffusion process

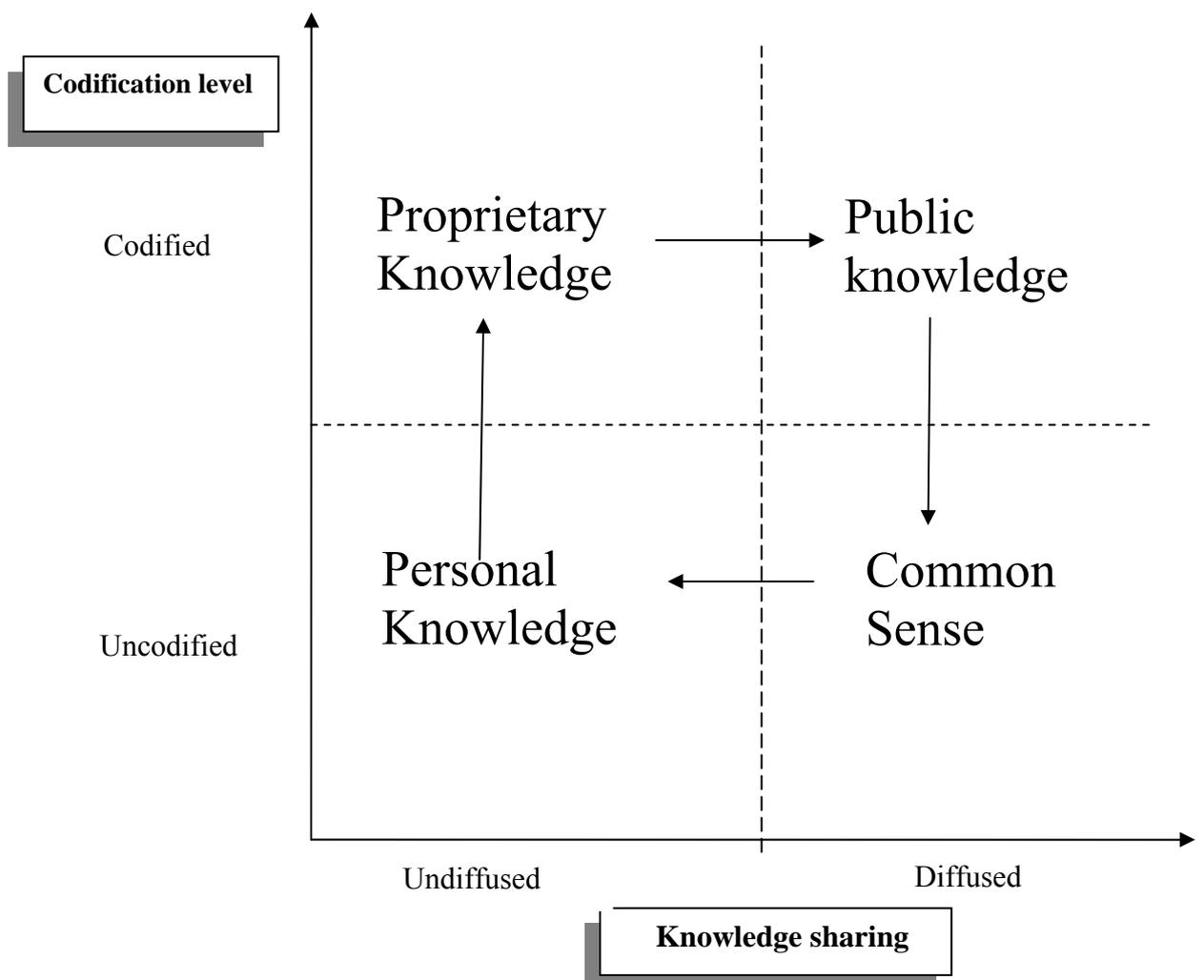


Codification measures the speed and ease with which a phenomenon or object of experience can be unambiguously assigned to given perceptual or conceptual categories. The act of assignment itself is typically called “coding”. Diffusion measures the percentage of a given population of data processing agents, individuals, groups, companies etc. for whom an item of information has relevance that can gain access to an information event in a given time period. Abstraction measures the number of perceptual and conceptual categories required to capture a phenomenon. Science and research activities are focused on abstraction activities.

Recent advantages in the design of computer architectures and the exponential growth of computer networks have led to new innovative ways

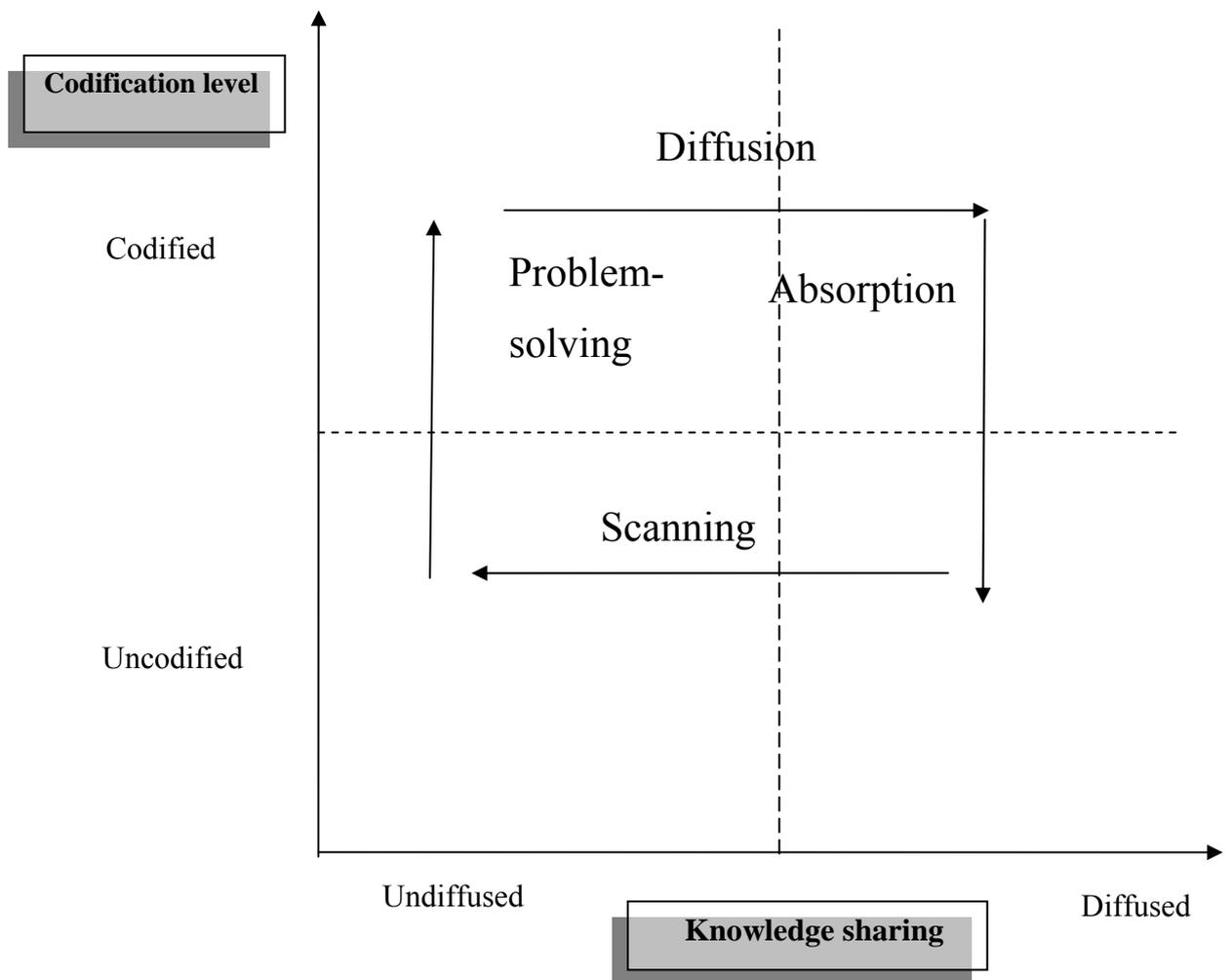
to representing, creating, manipulating and distributing knowledge. As a result of this process, the distinction between human and machine processing has become less clear as human activity is an integral part of networked computing instead of merely an input-output mechanism at its extremes. This progress has many implications for the representation of learning, the management of computational complexity, knowledge flows of journalism and intellectual property rights. Knowledge assets and their management currently constitute a major source of competitive advantage for industries and firms but also a major problem. In this kind of societal context, modern innovation journalism works. In Figure 3, different types of knowledge are presented. Innovation journalism must manage all these four types of knowledge to function well. It is self-evident that media produces public knowledge, but also it produces proprietary knowledge and common sense.

Figure 3. Different types of knowledge in the Social Learning Cycle (SLC) Model



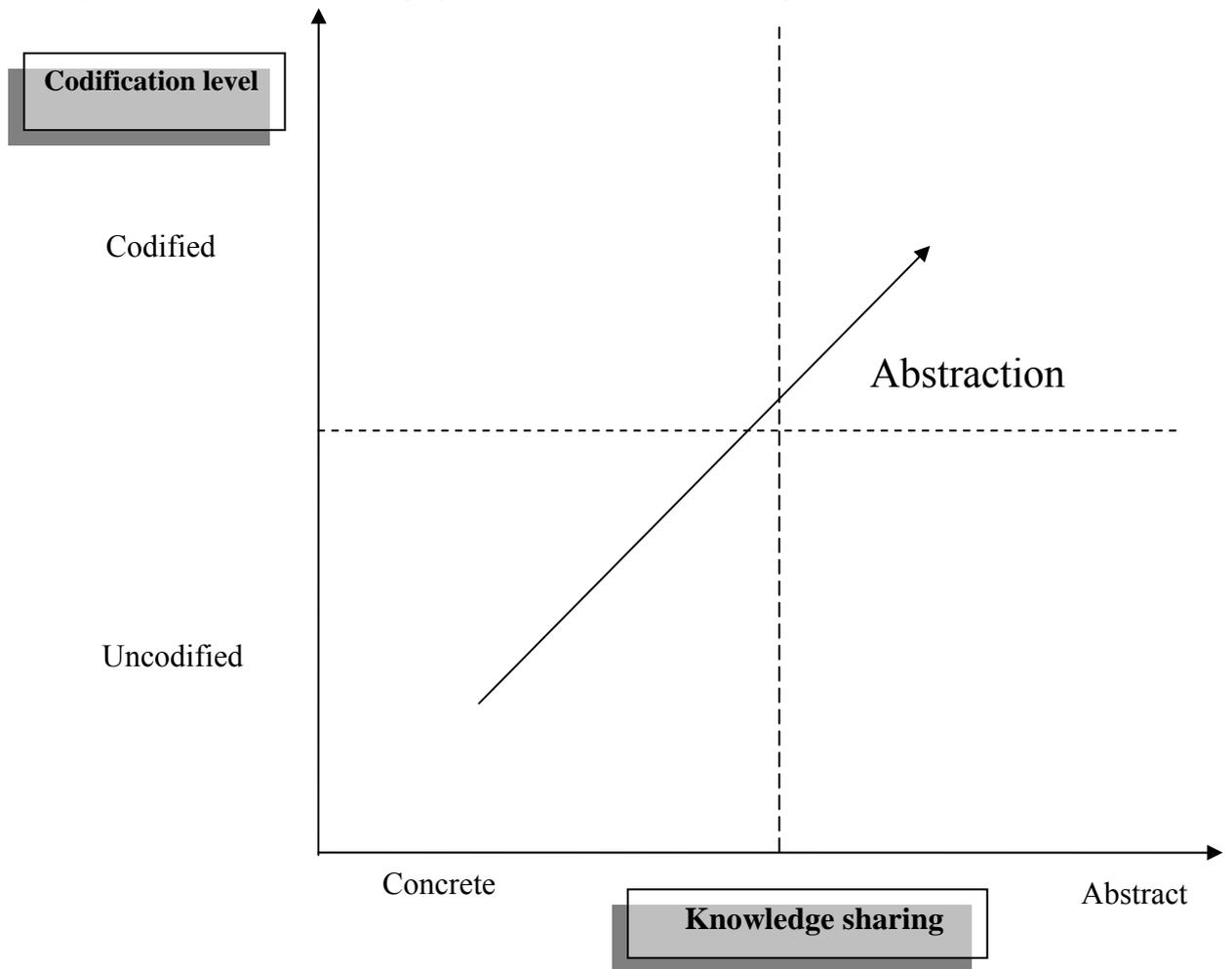
In Figure 4, the Social Learning Cycle (SLC) model is presented in codification and diffusion levels. In societies, the SLC is a purposive activity. It requires resources and management of knowledge assets. From the perspective of innovation journalism, Figure 4 is interesting and challenging.

Figure 4. The social learning cycle (SLC) and key knowledge management activities of innovation journalism: Scanning, diffusion, absorption and problem-solving



In Figure 5, a process of abstraction is described.

Figure 5. The social learning cycle (SLC) and abstraction process



In Figure 6, a process of impacting is described. There are six different steps in an SLC: (1) Scanning, (2) codification, (3) abstraction, (4) diffusion, (5) absorption and (6) impacting. All these steps are needed in the SLC process. If innovation journalism school wants to promote the Social Learning Cycle, it must promote these six steps in a society (Higgs 2002):

Key Action 1: A scanning process typically identifies threats and opportunities. Signals are often fuzzy. That is why detection is slow and uncertain. Data is often public, but interpretations are not. Interpretations are often unique. One problem for innovation journalism is that group pressure can distort the scanning process.

Key Action 2: Codification is a response to what is scanned. Codification gives structure and coherence to the response. Codification is an important action, because it reduces uncertainty and ambiguity.

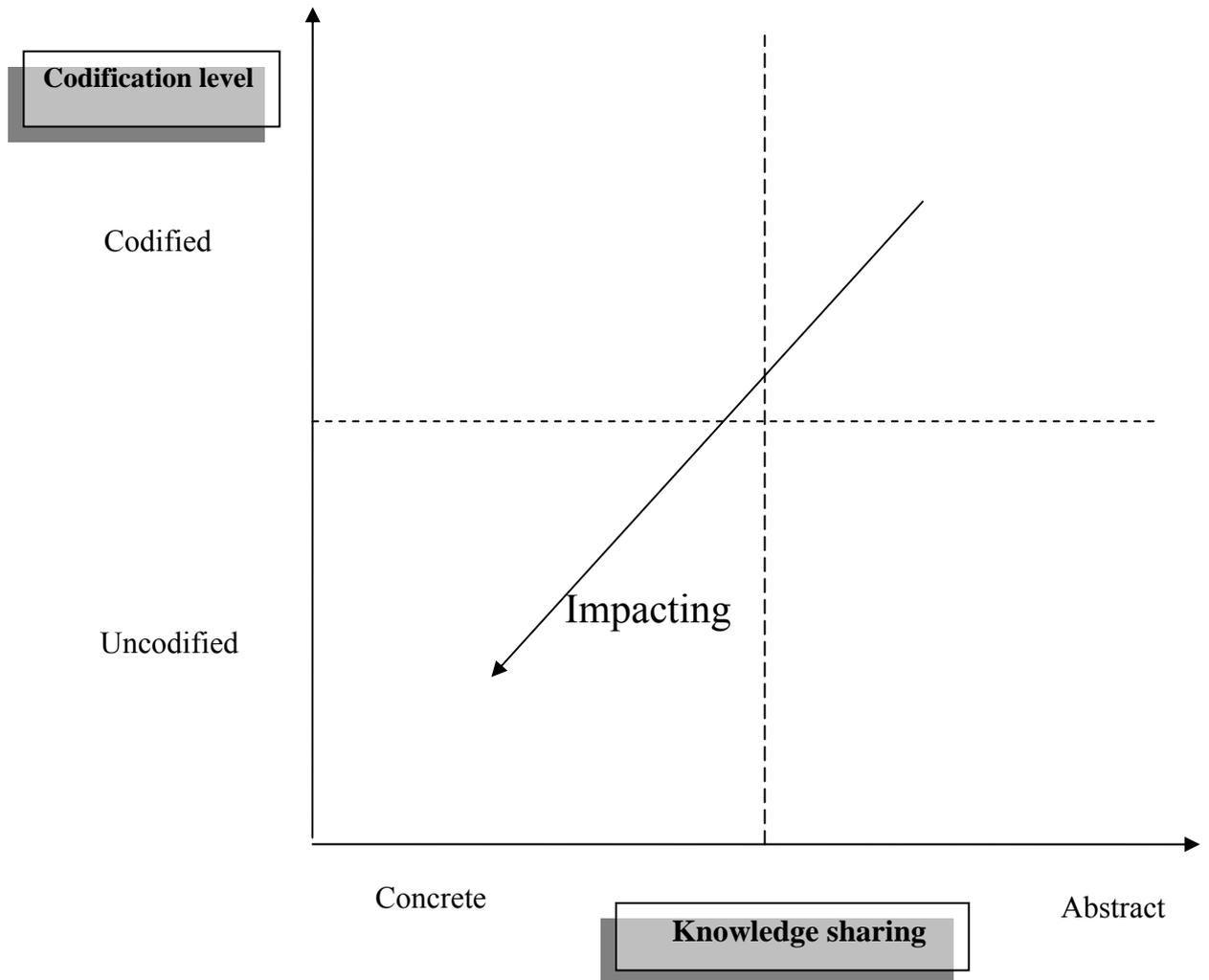
Key Action 3: Abstraction is a move from the specific and concrete to the general and abstract. It reduces the number of concepts and categories that one has to deal with. Abstraction also saves data processing by agents. Abstraction has a hypothetical character, which seeks out the structure that underlies appearances.

Key Action 4: Diffusion is an important process, because codified data diffuses rapidly unless controlled. It will only register with those who know the codes. The data is de-contextualized when it is codified and abstract. It is also important to understand that diffusing data reduces its scarcity value.

Key Action 5: Absorption means that newly diffused data is applied in learning by doing “fashion”. An uncoded stock of practical experience builds up around the codified data. Typically the codified data may or may not match the “common sense” world of the knowledge user.

Key Action 6: Impacting is a move from the general and abstract to the specific and concrete. Impacting contextualizes knowledge and this character of knowledge management action is very important for innovation journalism. Impacting is problematic action because it increases the number of concepts and categories one has to deal with. Impacting also tests abstract hypotheses.

Figure 6. The social learning cycle (SLC) and impacting process



All these scenario analyses indicate the strategic importance of codified knowledge, which can be developed by digital technology. This scenario analysis highlights a finding that management of digital libraries is one key challenge for successful innovation journalism and dynamic innovation media.

Finally, in Figure 7, key stakeholders relevant for innovation journalism are presented.

Figure 7. Cultural aspects of learning and key stakeholders of innovation journalism

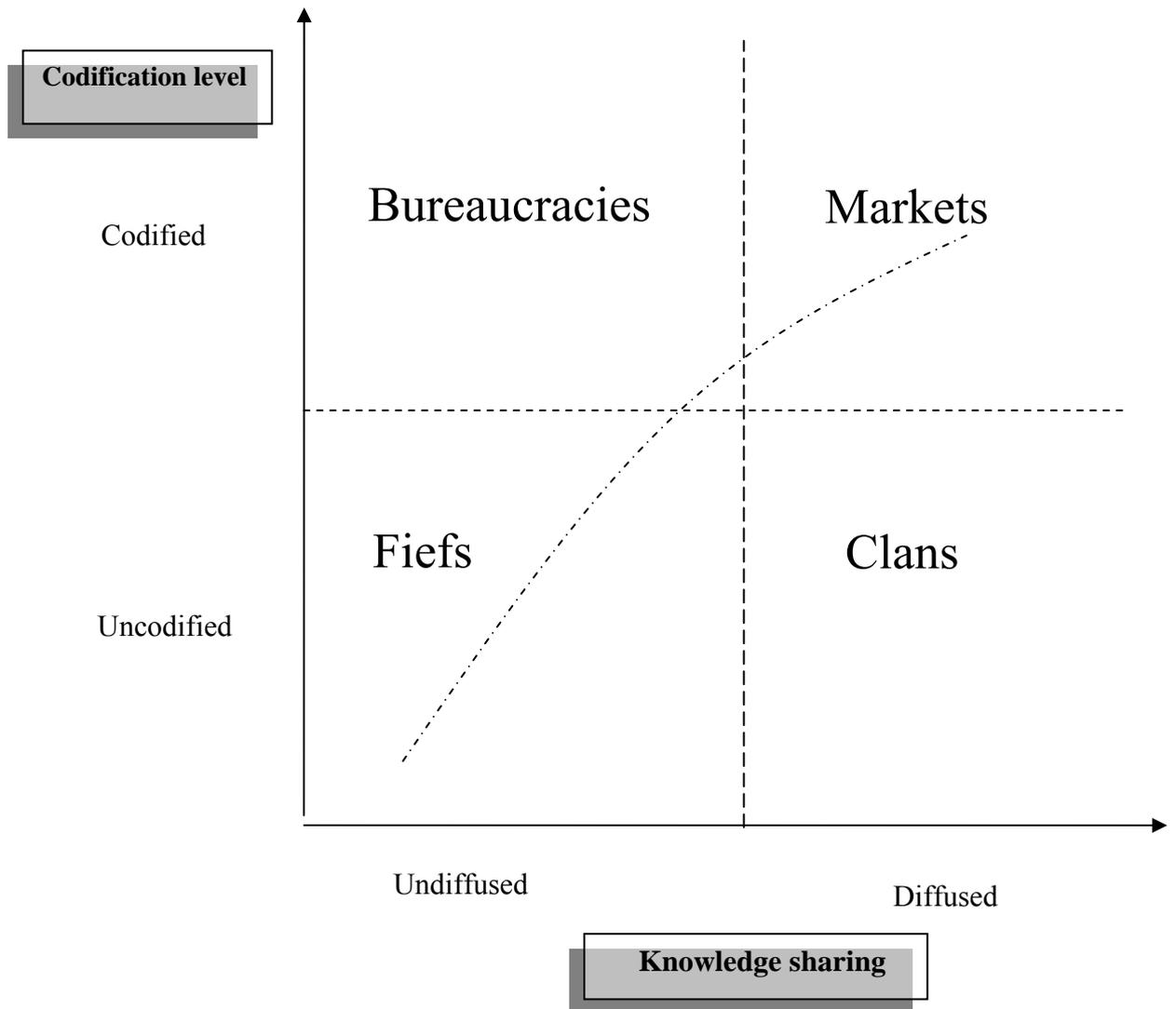
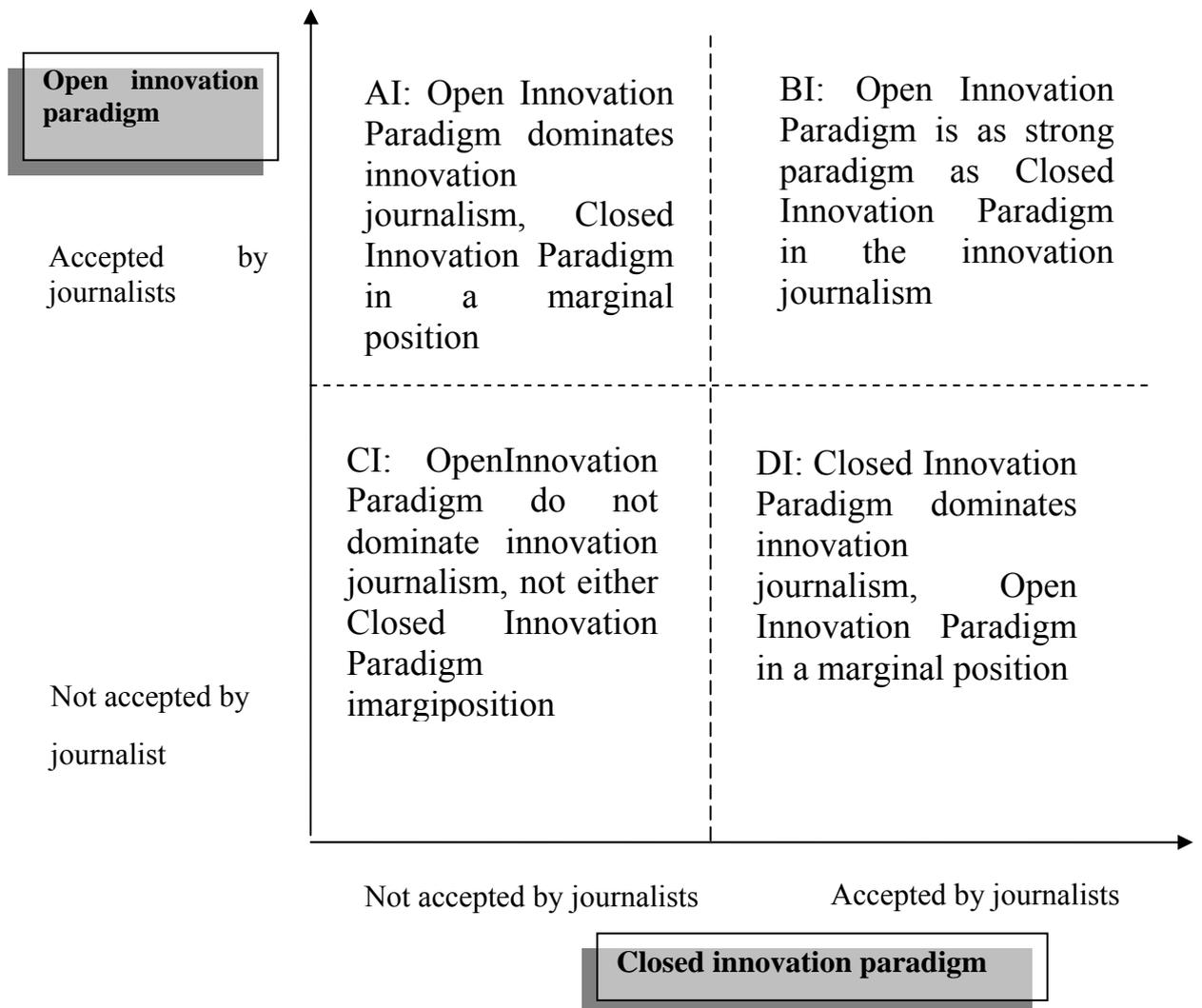


Figure 7 connects knowledge management actions to some key stakeholders of society. One important aspect is that the utility of knowledge assets is a function of their degree of codification. The more an item of knowledge can be formalized, standardized or simplified, the more easily and reliably it can be manipulated and subsequently combined with other items of knowledge. From this perspective codification activities associated with innovation journalism are strategically important. This visualization is useful for media because it indicates that audiences of innovation media can be segmented to these basic groups.

4. Scenario analysis 3: Closed vs. open innovation paradigm frameworks

In the third scenario analysis (Scenario analysis 3), the driving role of two innovation paradigms are analysed in relation to the modern journalism profession. These alternative paradigms are (1) closed innovation process paradigm and (2) open innovation process paradigm. (Chesbrough 2003a, Chesbrough 2003b, Chesbrough, Vanhaverbeke & West 2005).

Figure 8. Open innovation paradigm and closed innovation paradigm as challenges of innovation journalism



On the basis of scenario analysis we can identify four different scenarios where open innovation and closed innovation paradigms play different roles. In scenario AI, open innovation paradigm dominates the logic of media instead on closed innovation paradigm. In scenario BI, both the open and the closed innovation paradigm are strong ones. In scenario CI, neither the open nor the closed innovation paradigm dominates the logic of media. In scenario DI, the closed innovation paradigm is strong in the media world, and the open innovation paradigm is in a marginal position. We can conclude that orientation of journalism profession in relation to the open and closed innovation paradigms determines the logic of journalism profession.

Again, new interesting aspects are found for the development of modern innovation journalism. This section provides new theoretical perspective on how to analyze the role of public attention in innovation ecosystems, its stakeholders, and the interaction between them. This section provides also fresh perspective on how journalism and innovation interact in global context where economies are becoming more and more driven by open innovation.

5. Scenario analysis 4: Knowledge Retrieval Matrix scenarios

Journalists and individual knowledge workers retrieve, identify and decode knowledge accessed from organizational memory. Gammelgaard and Ritter (2005) have proposed that codification and personalization strategies are very important issues to be planned in knowledge management. Journalists use different information sources and different codification and personalization strategies. Knowledge and its management have moved up the corporate agenda due to the idea that knowledge is a source of competitive advantage. For media companies, this aspect is a naturally important aspect of competitiveness. In media, the transfer of knowledge is not an easy process. Barriers to knowledge transfer can be roughly categorized into three categories: (1) fragmentation, (2) overload and (3) de-contextualization. Knowledge is dispersed throughout the organization.

Typically, many pieces of knowledge are “unknown” to individual employees and individual journalists. Knowledge is often inaccessible to relevant knowledge workers and journalists, which causes inefficiencies to

the media houses. In addition, knowledge is often geographically dispersed and localized in various sub-units of media houses and its networks. Knowledge acquired at one site can be beneficial to other sites. Typical strategy to this fragmentation problem is “total openness in internal communication”. This strategy easily creates another problem: information overload. In practice, information overload makes it impossible for the individual knowledge worker to handle knowledge transfers. Overloaded knowledge platforms lead to a low usage rate and “information junkyards”. This is also a serious challenge for innovation media and innovation journalism (see e.g. Gammelgaard and Ritter 2005).

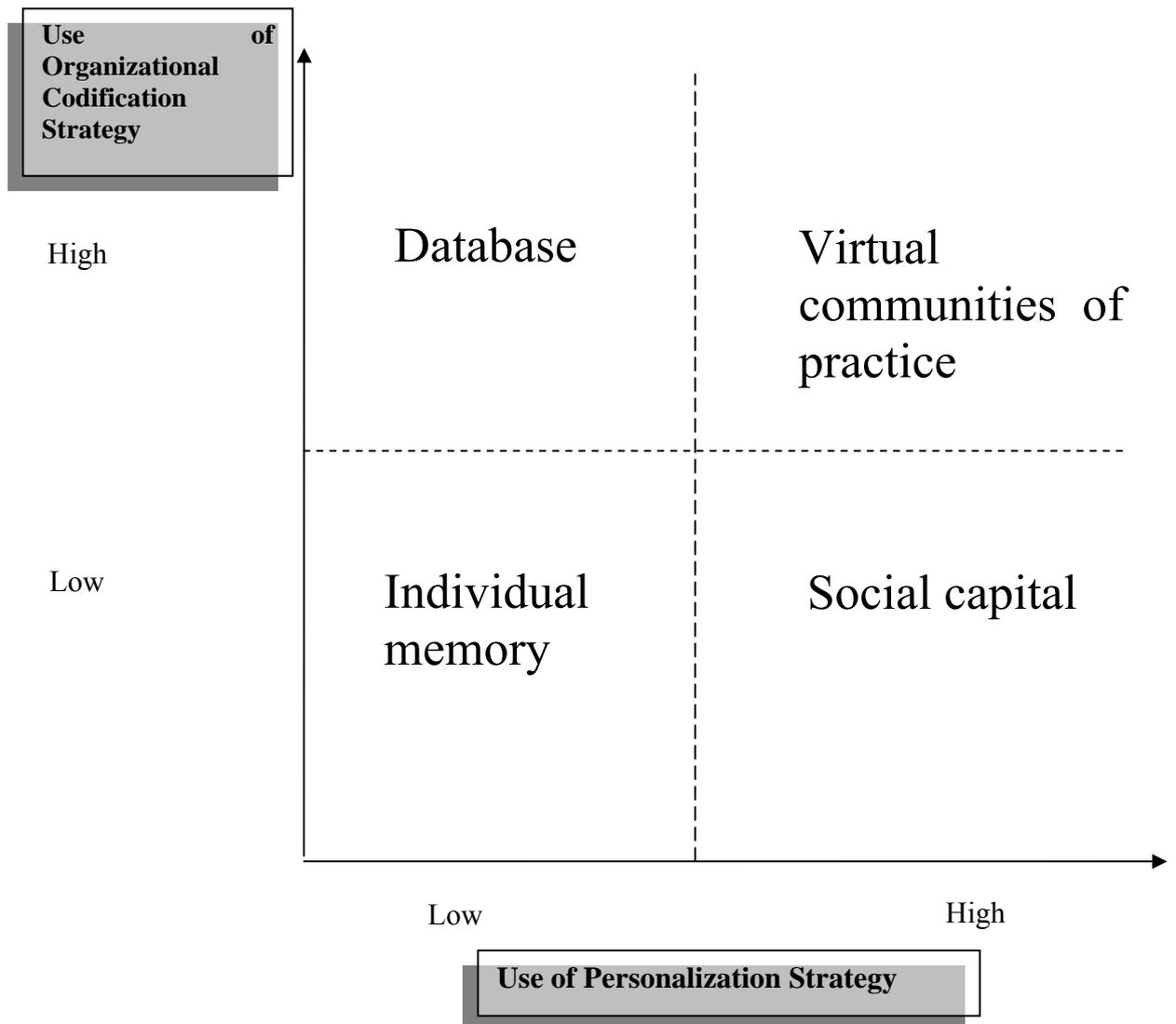
Third problem of knowledge transfer is de-contextualization. It relates to all situations where knowledge was located but could not be retrieved due to problems in understanding the matter. The gap between the sender and the receiver of the information may be due to cultural, technical or organizational distance. (Gammelgaard and Ritter 2005).

The Retrieval Matrix describes the retrieval process which takes place in an interface between social interaction and technology. This critical division reflects the fact that organizations and media houses typically operate with two different knowledge strategies, a codification strategy, where knowledge is codified and stored in databases, and a personalization strategy, where personal interaction is essential and information technology is only a tool for communication between people. (Gammelgaard and Ritter 2005).

In this section, scenario based analysis is presented about this topic. In the fourth scenario analysis (Scenario analysis 4), Knowledge Retrieval Matrix developed by Gammelgaard and Ritter (2004) is presented. The critical driving forces of this new theoretical knowledge management model are: (1) organizational codification strategy and (2) personification strategy as knowledge management strategies of innovation journalism.

Figure 8 presents the Knowledge Retrieval Matrix. It describes the key sources of knowledge, which are databases, individual memory, social capital and virtual communities of practice. Gammelgaard and Ritter (2005) have noted that especially the development of virtual communities of practice helps to solve fragmentation, overload and retrieval problems. They have noted that combined use of weak and strong tie-binding practices through the establishment of virtual communities of practice could help many knowledge transfer problems. This aspect is a very important viewpoint to innovation journalism, too. Previous research of knowledge management often viewed personalization and codification strategies solely as separate knowledge management instruments. A wise approach is to combine the two strategies.

Figure 8. Organizational and personal codification strategies: Knowledge Retrieval Matrix and information sources of innovation journalism



The Knowledge Retrieval Matrix is closely related to the use of weak and strong ties between individuals. (Rindfleisch & Moorman 2001). Weak ties cover distant, infrequent relationships between individuals. Weak ties between units are helpful in searching or scanning for information. Strong ties refer to close, frequent, long lasting, personalized relationships, which in turn reflect the personalization approach. Strong ties are needed to transfer complex knowledge. Complex knowledge is hard to encode and

decode through communication technologies (Granovetter 1972, Huber 1991, Hansen 1999).

In this scenario analysis to role of (1) databases, (2) individual memory, (3) social capital and (4) virtual communities of practice are analyzed from the perspective of innovation journalism. In this section, it is possible to point out that – through the establishment of virtual communities of practice – the codification and personalization strategies can be combined, which is a fundamental advantage for knowledge management among innovation journalism professionals.

6. Summary

All the provided scenario analyses are critical and provide new innovative thinking tools for more effective strategies of the modern innovation journalism and innovation media. All the key analyses are performed in the form of problem-oriented scenario analyses. Analytical scenarios relevant for innovation journalism and journalism profession are based on (1) new information and knowledge management theories, (2) innovation theory and (3) the most critical driving forces of media, media content and media technology.

When we analyze the futures of innovation journalism, we can present some conclusions concerning key tensions of the journalism profession and innovation journalism:

- (1) Professional expert knowledge (substance knowledge) and competence level to use journalistically relevant research methods
- (3) determine the logic of journalism profession. Emphasis on expertise or emphasis on research competence results in different kind of journalistic traditions.
- (2) Journalism profession and innovation journalism are facing the key tasks of Social Learning Cycle (SLC) model (scanning, codification, abstraction, diffusion, absorption and impacting). How well does journalism perform these tasks will determine how well social learning cycles are performed in societies. Codification, diffusion and impacting are very important tasks for innovation journalism.
- (3) Orientation of journalism profession in relation to open and closed innovation paradigms determines the future innovation logic of the

profession. Both innovation journalists and innovation media can produce their own innovation dynamics either by supporting the open or the closed innovation paradigm.

- (4) Codification and personalization strategies determine the key sources of journalism profession and innovation journalism. Alternative sources of journalism, according to the Knowledge Retrieval Matrix Theory, are (1) databases, (2) individual memory, (3) social capital and (4) virtual communities of practice.
- (5) According to the Knowledge Retrieval Matrix Theory, barriers to knowledge transfer can be roughly categorized into three categories: (1) fragmentation, (2) overload and (3) de-contextualization. The way these key knowledge transfer problems are solved partly determines the future of journalism profession and innovation media.
- (6) In the establishment of virtual communities of practice, the codification and personalization strategies can be combined, which forms a fundamental advantage for knowledge management among innovation journalism professionals. This aspect of combination of personalization and codification strategies is a critical driving force for the future of innovation journalism.

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