STRATEGIC KNOWLEDGE MANAGEMENT: A NEW RESEARCH AGENDA

3.1 Knowledge creation and transfer in inter-organizational networks

Competitive Paper

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This paper aims at identifying a new research agenda for knowledge management as it pertains to strategic alliances by challenging the existing paradigms within strategic management. By outlining the main strategic management perspectives in contemporary business literature and combining them with current knowledge management perspectives, an indication of the evolution of research pertaining to strategic knowledge management emerges. The paper concludes by offering a new, more dynamic perspective of knowledge management, focusing on the synergies of knowledge-related capabilities in explaining the formation and economic justification of strategic integrative arrangements.

Keywords: Knowledge Management, Strategic Alliance, Strategic Management

Knowledge Management has become somewhat of a buzzword and the term is used widespread in contemporary business literature. We have experienced a paradigm shift from focusing on understanding and managing physical goods to focusing on corporate intangible assets such as knowledge. Hence, knowledge is recognized as a principal source of economic rent and the effective management of organizational knowledge has increasingly been linked to competitive advantage and thus considered critical to the success of the business firm (Levitt & March, 1988; Nonaka, 1994; Prahalad & Hamel, 1994; Spender & Grant, 1996). Traditionally, however, most management literature focuses on *pooling* of operational knowledge within companies and assumes knowledge to be firm specific and cumulative (Nelson & Winter, 1982; Dosi, Teece & Winter, 1992; Conner & Prahalad, 1996). This assumption is grounded in a natural tendency to conceptualize knowledge, and the management of knowledge, within the existing theoretical paradigms. Thus, the evolution of theoretical perspectives within strategic management and organization theory has had a profound impact on research within knowledge management. Empirically, an alternative to the firm specific view of strategic renewal is to acquire new knowledge-related capabilities through strategic integration and mobilize it vis-à-vis the existing knowledge developing activities (Jemison, 1988). Although still embryonic, the existing theoretical paradigms within strategic management seem inadequate at explaining the dynamic and highly complex nature of knowledge as it relates to these hybrid combinations (e.g. license agreements, joint ventures, strategic alliances, mergers & acquisitions etc.).

This paper traces the evolution of knowledge management perspectives throughout the last four decades and offers an agenda for future research. First, a critical review of the strategic management literature provides an overview of the main theoretical perspectives within this field of research as it relates to the management of knowledge within collaborative strategic alliances. Two main schools of thought, the "content" view and the "process" view are recognized and dominant streams within each identified. Then, different knowledge management perspectives are analyzed based on the categorization identified in the previous section. Finally, the evolution of strategic knowledge management research is discussed and the paper concludes by offering an agenda for future research by synthesizing and integrating elements from the "content" view and the "process" view in a new "synergistic" perspective.

Strategic Management Perspectives

The management of knowledge is essentially a strategic objective as companies seek to enhance their (knowledge-related) competencies, capabilities and processes in order to gain competitive advantage. Strategic management literature can be divided into two main streams of theoretical approaches. One dominant stream, in terms of quantity, is the "content" view of strategy. This body of literature is dominated by industrial economics and marketing and is primarily concerned with the content of strategies formed through analysis of the external environment (Porter, 1985; Ansoff, 1990; Roussel et al., 1991). It is argued that successful strategies can be identified and selected *in advance* to deliver success in terms of what Michael E. Porter (Porter, 1985) calls sustainable competitive advantage. The “content” approach has also been used to identify internal factors instrumental to success (Bridges, 1986; Rothwell, 1992). It is within this stream we find the theory of the firm, which is concerned almost explicitly with the single firm level as opposed to the collaboration of firms (Williamson, 1985; Knudsen, 1995). Hence, a dominant fraction of the “content” view, the resource-based perspective, focuses almost entirely on the internal analysis of the firm (Penrose, 1959; Wernerfelt, 1984; Barney, 1991; Prahalad & Hamel, 1990; Teece, 1997).

A major criticism of this “content” view of strategy is, however, that it adopts a static approach, regards competition as a zero-sum game, and neglects the context within which, and the processes whereby, strategies are generated, selected and implemented (Young, 1995; Foss & Eriksen, 1995). Another point of criticism is the “protectionist” nature of the resource-based view, since it is mostly concerned with how to protect existing resources and rent sources, avoiding imitation or substitution, rather than generating, exchanging and combining resources in order to create new competencies and capabilities (Coombs & Hull, 1998; Dagnino, 1999). Knowledge, within this view, is seen as a firm specific and cumulative competence or resource.

The “process” theorists represent another main body of literature within strategic management. “Process theory” is concerned mainly with the “process” of managing change and, from an external perspective, on how companies compete. Through extensive empirical analyses of how strategies are implemented from within, a series of activities has been uncovered that together represents a process explanation of how an outcome is achieved (Burgelman, 1983; Pavitt, 1990; Trott, 1993). Within this stream we find the themes of game theory and network theory (Saloner, 1991; Brandenburger & Nalebuff, 1995; Thorelli, 1986; Jarillo, 1988; Grindley, 1991; Powell & DiMaggio, 1991). The network perspective has been advanced - from a traditional Williamson-like transaction cost standpoint - as an intermediate form between market and hierarchy, in order to explain the existence and economic justification of these networks, suggesting the existence of a continuum of organizational forms ranging from market through network to vertically integrated firms (Williamson, 1985; Powell & DiMaggio, 1991). A second interpretation of a network defines it as a distinct, highly differentiated, heterogeneous organizational form (Powell, 1990). This view emphasizes the cooperative elements of alliances and suggests that networks evolve into multiple webs of technical, financial and social interactions (Kogut *et al.*, 1992; Gulati, 1995).

An abundant amount of literature has focused (both theoretically and empirically) on the organization and structure of inter-organizational relationships, identifying a host of aggregate organizational arrangements. These include: strategic alliances (Borys & Jemison, 1987; Montgomery & Weiss, 1991; Dussauge & Garrette, 1999), joint ventures, R & D arrangements, relationship marketing (Gulati, 1998; Webster, 1992; Baron, 1997; DuPont, 1998; Gordon & Gordon, 1998), strategic business enterprises (Dagnino, 1999), and regional industrial districts (i.e. Silicon Valley, Route 108 etc.). Lately, cooperative strategic arrangements have been linked to the creation and distribution of knowledge (Hamel, 1991; Albino, Garavelli & Schiuma, 1999).

While emphasizing both internal, intra-organizational and external, inter-organizational levels of analysis in a socio-economic perspective, the main criticism of the “process” approach is its lack of attention to the endowment of resources and capabilities by the network partners and the synergistic effects thereof (Dagnino, 1999). The bulk of the literature within this stream uses a rather static approach to the management of knowledge in network relationships in that it assumes knowledge to be universal, objective, transferable (when coded) and controllable in general. However, as argued by Krogh & Ross (Krogh & Roos, 1996), knowledge is in fact dynamic and subjective in nature. Table 1 compares the main strategic management perspectives.

Recognizing the shortcomings of both strategic views, some authors have recently attempted to integrate parts of the two different approaches in order to develop a more holistic and dynamic approach. Hence, emerging theories within strategic management, such as the dynamic competence based theory and evolutionary theory, view the internal environment as dynamic and shift the focus to the enhancement of the firm’s organizational competencies through its responsiveness to change and its ability to learn (Doz, 1996). Firms are seen as possessing different qualities allowing them to compete on the basis of competencies and capabilities (Nelson & Winter, 1982; Prahalad & Hamel, 1990; Pavitt, 1990; Cohen & Levinthal, 1990). Some authors are trying to conceptualize the possibility of a continuous reinvention of the firm’s competitive environment through the strategic use of organizational knowledge (Hamel & Prahalad, 1994). Others identify certain strategic motives for international alliance formation and link them to strategic positioning and organizational learning in an attempt to (indirectly) test these theoretical paradigms (Glaister & Buckley, 1996). Finally, some authors propose a synergistic perspective, integrating resource-based theory and network theory into the network of resources and competencies, explaining the existence and ability to create superior business performance of certain aggregate organizational forms (Dagnino, 1999).

TABLE 1

Comparison of Strategic Management Perspectives

	CONTENT VIEW	**PROCESS VIEW**
Unit of Analysis	Competencies Resources Capabilities	Processes Structures Relationships
Level of Analysis	Firm Industry	Firm Networks Systems
Strategic Behavior	Rent-seeking Resource-protecting	Rent-seeking Efficient Economizing
KM View	Knowledge as resource or competence	Knowledge as process Knowledge as universal, objective and transferable asset

TABLE 1 (CONTINUED)

Comparison of Strategic Management Perspectives

	CONTENT VIEW	PROCESS VIEW
Main Criticism	Static Process-lacking Context-lacking Zero-sum Protectionist	Somewhat static Content-lacking Lack of attention to endowment of resources and capabilities
Major Contributors	Penrose (1959) Wernerfelt (1984) Williamson (1985) Porter (1985) Prahalad & Hamel (1990) Roussel (1991) Rothwell (1992) Teece (1997)	Thorelli (1986) Jarillo (1988) Ginsberg (1988) Powell & DiMaggio (1991) Kogut *et al.* (1992) Trott (1993) Bartlett & Gulati (1995 Ghoshal (1996) Worley, Hitchin & Ross (1996) Rajagopalan & Spreitzer (1997)

Knowledge Management Perspectives

The literature pertaining to management of knowledge can also be divided into a "content" view and a "process" view. Within these two main streams of literature a number of different foci exist. The "content" view of knowledge management is mainly concerned with categorization and transferability of types of knowledge. It is within this body of literature we find the distinction between tacit knowledge and explicit knowledge (Polanyi, 1962). Tacit knowledge can be regarded as knowledge that is nonverbalizable, intuitive, and unarticulated (Polanyi, 1962) - knowledge that has not yet been abstracted from practice (Spender, 1996). Explicit knowledge is understood as knowledge that is transmittable in formal, systematic language and may include explicit facts, axiomatic propositions, and symbols (Kogut & Zander, 1992). Thus, one dominant notion explores technical approaches to dealing with explicit knowledge. This literature focuses on availability and transfer of knowledge primarily facilitated by computer-based systems, such as intranets, groupware, e-mail etc. This distinction between tacit and explicit knowledge should not be regarded as a dichotomy but rather as 'a continuum ranging from explicit knowledge embodied in specific products and processes to tacit knowledge acquired through experience and use and embodied in individual cognition and organizational routines' (Inkpen & Dinur, 1998).

From a strategic perspective, knowledge can be regarded as a critical source of resource development of the firm (Conner & Prahalad, 1996). Hence, effective management of knowledge can be considered one of the main sources of competitive advantage (capabilities) for international corporations (Winter, 1987; Prahalad & Hamel, 1990;

Grant 1996). One argument is that firms that effectively expand, disseminate and exploit organizational knowledge internally, that protect knowledge from expropriation and imitation by competitors, and that know how to accumulate and distribute knowledge effectively and efficiently, enjoy a competitive advantage (Szulanski, 1996; Liebeskind, 1996; Appleyard, 1996; Bierly & Chakrabarti, 1996). The ability of firms, as institutions, to protect the value of knowledge from exploitation is linked to strategic behavior, as the incentive to innovate is seen as being dependable upon the degree to which a firm can protect its knowledge-related capabilities (Liebeskind, 1996). This is consistent with traditional theories of the scope of the firm that are based on arguments of knowledge-protection (Teece, 1980).

Most research on knowledge within the “content” view concentrates on internal analysis of the firm, i.e. knowledge creation (Nonaka, 1994; Nonaka & Takeuchi, 1995), structural arrangements like communities-of-practice (Brown & Duguid), and codification and transfer of knowledge (Schulz & Jobe, 1998; Cohen & Levinthal, 1990; Kogut & Zander, 1995) rather than focusing on interdependent and inter-organizational perspectives. Another critique of this perspective is its static and protectionist nature, which offers limited openness to creation of new knowledge and which ignores cognitive and behavioral aspects.

Within the “process” view of knowledge management we find the organization theory literature on organizational learning. The organizational ability to learn and adapt has recently been linked to competitive advantage in an attempt to enhance performance in an increasingly complex global marketplace. The strategic change literature (Ginsberg, 1988; Rajagopalan & Spreitzer, 1997; Barlett & Ghoshal, 1996; Worley, Hitchin & Ross, 1996) and the literatures on organizational learning and evolution (Argyris & Schön, 1978; Levinthal & March, 1993; Nelson & Winter, 1982; Tushman & Romanelli, 1985) all share a common concern with organizational learning. The bulk of this literature considers knowledge to be a strategic asset and is concerned with the enhancement of processes for accumulating and internalizing knowledge-related capabilities. It is within this stream of literature we find the notions of absorptive capacity (Cohen & Levinthal, 1990), emphasizing the value of new, external knowledge and the importance of assimilating it, and management of intellectual capital dealing mainly with human capital as an asset (Brooking, 1996; Quinn, Anderson & Finkelstein, 1996; Stewart, 1997).

The main criticism of the "process" view of knowledge management is its lack of dynamism and limited emphasis on synergies. The number of international alliances has grown rapidly over the last 10 years and this trend has been explained, by process-oriented researchers, as a vehicle for organizational learning, giving partner firms access to each other's knowledge (Kogut, 1988; Hamel, 1991; Grant, 1996). The main focus of the majority of this literature is, however, on the transfer and internalization process of firm specific, cumulative knowledge, neglecting risks associated with learning from own experience in the form of over-attention to the short term and local conditions. The long-term experience of the industry obtained through collaborative arrangements may offer opportunities for organizational learning that the experience of the single organization does not, because this experience is more varied, and not tied to the path-dependent history of any one organization (Ingram & Baum, 1997). Table 2 summarizes the main knowledge management perspectives.

TABLE 2

Comparison of Knowledge Management Perspectives

	CONTENT VIEW	**PROCESS VIEW**
Unit of Analysis	Types of knowledge	Collective knowledge
Level of Analysis	Intra-organizational: - Tacit vs. explicit - Knowledge as resource - Knowledge as embedded Inter-organizational: - Knowledge transfer - Network as repository of knowledge	Intra-organizational: - Organizational Learning - Absorptive Capacity - Intellectual Capital Inter-organizational: - Knowledge as strategic tool - Network as growth opportunity
Main Focus	Individual vs. group vs. organization Codification, exploitation and protection of knowledge	Ideas, techniques and prescriptions Accumulation and distribution of knowledge
Approach	Descriptive analysis of activities	Practical analysis of practices
Strategic View	Ontological/structural	Pragmatic/organic
Strategic Objective	Enhancement of efficiency and effectiveness	Enhancement of processes

TABLE 2 (CONTINUED)

Comparison of Knowledge Management Perspectives

	CONTENT VIEW	**PROCESS VIEW**
Main Criticism	Static Protectionist Limited openness to external knowledge Limited openness to creation of new knowledge Ignores cognitive and behavioral aspects	Internally oriented Lack of dynamism Knowledge as asset Limited emphasis on synergies Short-term focus
Major Contributors	Polanyi (1962) Winter (1987) Prahalad & Hamel (1990) Leonard-Barton (1995) Kogut & Zander (1995) Drucker (1995) Szulanski (1996) Liebeskind (1996) Appleyard (1996) Bierly & Chakrabarti (1996) Conner & Prahalad (1996)	Argyris & Schön (1978) Nelson & Winter (1982) Tushman & Romanelli (1985) Cohen & Levinthal (1990) Brown & Duguid (1991) Levinthal & March (1993 Nonaka (1994) Hamel & Prahalad (1994) Spender (1996) Stewart (1997)

Evolution of Strategic Knowledge Management Research

As mentioned earlier, the development of research within knowledge management has been heavily influenced by strategic management theoretical paradigms. Using Polanyi's (Polanyi, 1962) classification of knowledge as either tacit or explicit as a point of reference, the early studies of knowledge and knowledge management were concerned mainly with the "content" based categorization of knowledge. Different types of knowledge were identified and the management of knowledge was seen, primarily, as the practice of transforming tacit knowledge into explicit knowledge.

As strategic management literature got preoccupied with competitive theories of the firm, scholars adhering to the static "content" based view of knowledge as a, predominantly, internal resource developed a growing concern with imitation and replication. Knowledge was seen as a critical competence of the firm that could - and should - be managed effectively, i.e. protecting acquired knowledge from imitation by competitors, in order to create sustainable competitive advantage. This was empirically mirrored by Miller and Shamsie in their study of major U.S. movie studios, which showed that knowledge-based resources that were difficult to buy or imitate indeed contributed to performance (Miller & Shamsie, 1996).

The effective management of change grew to be an important issue for strategic management scholars as the growing complexity of the global marketplace became apparent. Rather than protecting acquired knowledge, the process of generating new knowledge and, more importantly, internalizing this new knowledge in order to respond to changes in the external environment became the focus of knowledge management research. The concepts of organizational learning and adaptation grew out of this need to develop and distribute, internally, the acquired knowledge (Argyris & Schön, 1978; Levinthal & March, 1993; Nelson & Winter, 1982; Tushman & Romanelli, 1985). Although some authors left open the potential of the firm to acquire external knowledge (Nonaka, 1994; Leonard-Barton, 1995), the focus was still internally oriented and scholars turned their attention to the process of managing knowledge as a capability through what some researchers labeled absorptive capacity (Cohen & Levinthal, 1990).

As the market complexity grew so did the complexity of organizations. Researchers observed an increasing number of collaborative arrangements and hybrids of combinations emerged (e.g. license agreements, joint ventures, strategic alliances, mergers & acquisitions etc.). Most scholars analyzed these hybrids within traditional economic theoretical paradigms in order to justify their existence. Research within knowledge management has followed this trend and seeks to explain collaborative arrangements from a "content" based view as a repository of knowledge and from a "process" based view as an opportunity for growth. Building on the previous steps on the evolutionary path of strategic knowledge management research, contemporary scholars dealing with knowledge management in relation to integrative arrangements are mainly focusing on the access to - and accumulation, codification, transfer, and internalization of - firm specific, complementary knowledge. Although this focus is allowing for more dynamism and subjectivity in the analysis of strategic knowledge management, it is still limited by the inherent static and objective nature of existing theoretical paradigms.

Figure 1: Evolution of Strategic Knowledge Management Research Agenda

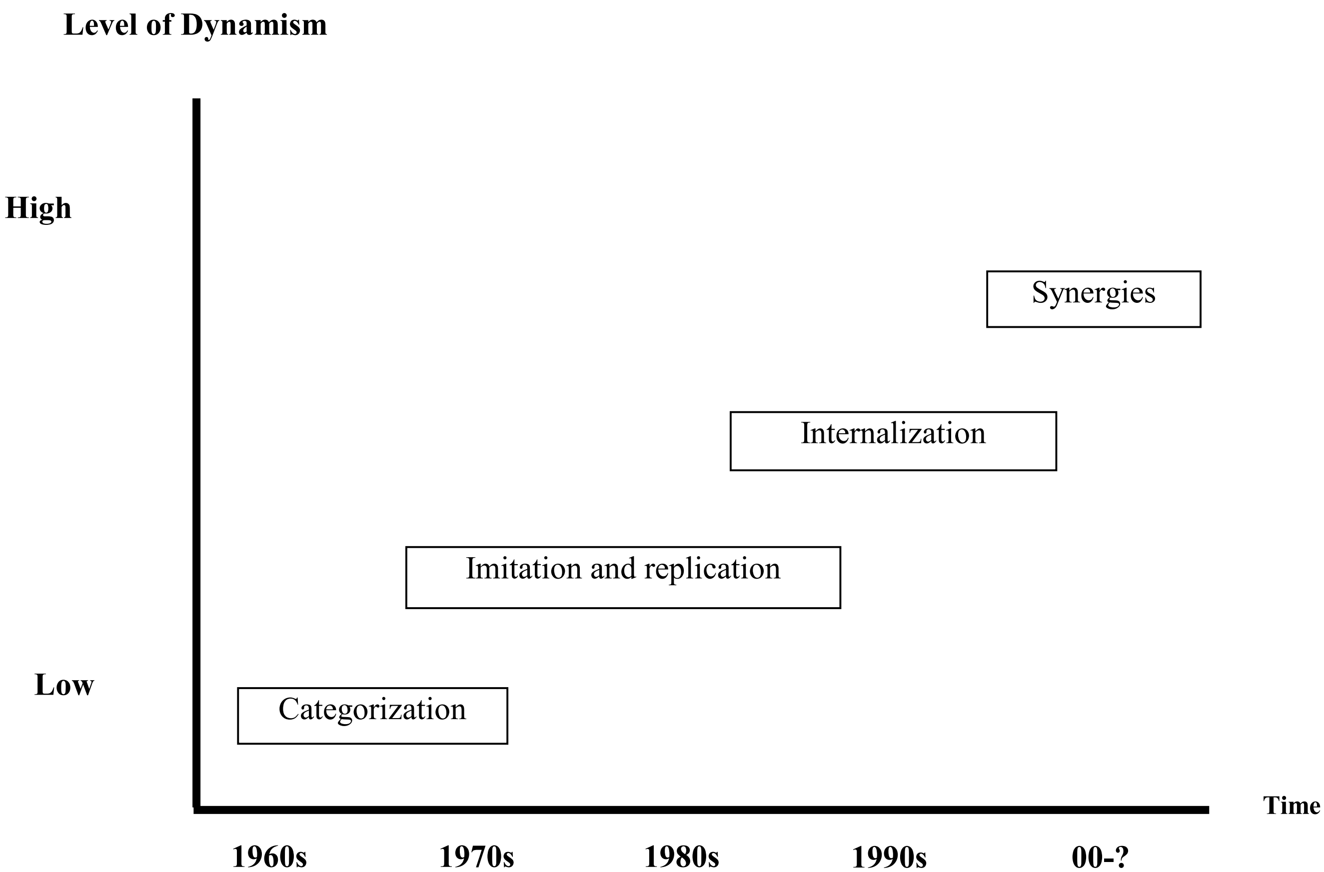

Figure 1 captures the evolution of the strategic knowledge management research agenda. The research agenda has gone from a rather static, content-based focus on categorization and protection of knowledge and knowledge related capabilities in the 60s and 70s via a preoccupation with transferability of knowledge to a more dynamic and process-oriented emphasis on internalization through organizational learning in the 80s and 90s. This seems consistent with the fact that business strategy literature has developed a more process orientation over the last 15-20 years. Lately, some strategic management scholars have attempted to integrate parts of the "content" view and the "process" view in order to facilitate a more dynamic and synergistic understanding of the existence and capabilities of collaborative, strategic arrangements (Young, 1995; Dagnino, 1999). Changing the level of analysis from the single firm to the aggregate of firms and integrating resource and network-based perspectives allows a more systemic and complex analysis of the "economics" of firms to be carried out. The focus in this body of literature is on the synergistic effects of integrating resources and capabilities through various strategic configurations, such as network forms, strategic alliances, and different types of strategic agreements.

Synergistic Perspective - An Agenda for Future Research

Discussions in existing literature are almost solely concerned with codification, imitation and replication, and internalization of firm specific knowledge as it relates to accumulation and transfer of complementary knowledge, rather than development and distribution of new, synergistic knowledge and its impact on strategic flexibility. This internal, static focus implicitly considers firms as atomistic actors engaging in strategic actions in an asocial context, thereby encapsulating the external context within measures of competitiveness in product or supplier markets. However, the fact that the opportunity set a firm may perceive for strategic actions can be influenced in important ways by the social structural context in which it is placed must also be taken into consideration. Hence, combining the resource-based view of the firm with the network perspective, as advocated by Young (Young, 1995), taking into account the embeddedness of firms in the social and structural context proves promising for the study of knowledge management, since knowledge, as a series of capabilities, involves both a “content” and a “process” dimension. This shifts the unit of analysis from the firm and its resources to the collaboration of firms, focusing on intra-firm capabilities combined with inter-firm dependencies embedded in a social context. Building on resource-based, “content” theory and integrating it into the “process” perspective with particular emphasis on network theory allows knowledge to be perceived as a dynamic, ever-changing asset, closely connected to - and dependent upon - the situational context, thereby making it complex to manage, in particular across organizational and geographical/cultural boundaries.

As mentioned earlier, traditional strategic theories view aggregates of firms as an intermediate form between market and hierarchy and maintain that these hybrid combinations exist because they earn a superior rent compared to the rent a firm could otherwise earn on its own. The analytical base is the relationship amongst firms and knowledge is regarded a strategic tool or an asset, collective in nature yet inherently static and firm specific. Resource-based theory, on the other hand, is concerned with the firm observed as a system of resources and competencies and defines knowledge as a basic source of competitive advantage. According to this perspective, firms exist because of knowledge-based transaction costs that are independent of opportunistic considerations (Conner & Prahalad, 1996). By integrating these two theoretical paradigms into a network of knowledge-related resources and competencies, the unit of analysis shifts from the firm to the collaboration of firms, focusing on intra-firm capabilities combined with inter-firm dependencies through the concept of coopetition (cooperation combined with competition). This simultaneous focus on internal, firm specific competencies and external, collaborative synergies plays an important role in creating new knowledge-related capabilities and thereby enhancing competitive performance. According to this perspective knowledge is viewed as a complex, dynamic and subjective set of assets, which is inherently indeterminate and continually reconfiguring. Hence, new knowledge can be created *among* the participants in a strategic aggregate arrangement as a synergy (and not simply the sum) of the knowledge-related capabilities brought into the collaboration by each member.

The importance of synergies of knowledge is apparent in relation to strategic integration; however, most traditional literature is preoccupied with knowledge compatibility (possession of skills and resources that match those of another firm) and knowledge complementarity (skills and resources that the other partner needs but does not have) (Geringer, 1988). Most Western firms focus on explicit knowledge that can be created through analytical skills and concrete forms of oral and visual presentations and incorporated in the parent firm (Nonaka & Takeuchi, 1995; Inkpen & Dinur, 1998). Because of this focus on sharing of explicit knowledge, most firms approach collaboration from a complementary view and seek to identify visible, matching knowledge related capabilities that can be transferred and incorporated in the parent firm. As argued by Harrigan, strategic alliances are more likely to succeed when partners possess complementary assets and thus a firm will seek knowledge it considers lacking but vital for the fulfillment of its strategic objectives (Harrigan, 1985). One traditional view is that in seeking and applying this relevant knowledge, a firm will furthermore need to possess a knowledge base in the same or similar area, since only such similarity will allow for an understanding of the intricacies of the new knowledge as well as of its applicability to the firm's unique circumstances (Cohen & Levinthal, 1990). Another dominant interpretation holds that a firm will seek knowledge complementary to its own, especially when that enables and/or facilitates the absorption of other knowledge. This interpretation has its roots in strategic alliance literature, identifying the possession of complementary knowledge as conducive to international strategic alliance formation (Beamish, 1988; Geringer, 1988; Parkhe, 1993). Hence, according to Balakrishnan and

Koza (Balakrishnan & Koza, 1993), a joint venture can be defined as " a special mechanism for pooling complementary assets".

Approaching strategic integration from a synergistic view, not limiting knowledge-related capabilities to be acquired from complementary knowledge only raises some key issues, which are imperative to the understanding and management of knowledge in strategic partnerships. If we discard the notion that a firm needs to possess a knowledge base similar to the knowledge acquired via the strategic network integration in order for it to absorb it and capitalize on it, we also discard the traditional argument, outlined above, for strategic alliance formation. Hence, if, as argued here, firms are assumed to form strategic networks based on a perception of possible knowledge-related synergies rather than looking for compatibility and complementarity, a more dynamic and flexible understanding of the motivation behind complex strategic integrations can be achieved.

Shifting the focus from inter-firm pooling and transfer of <u>complementary</u> knowledge *through* strategic alliances to development and distribution of <u>synergies</u> of knowledge *within* strategic alliances (knowledge networks), a number of interesting questions suitable for future research surface. Creating synergies of knowledge does not dictate that the knowledge bases are similar or matching, suggesting that complementarity of knowledge bases is a poor criteria for selecting an alliance partner if creating synergy is the goal. Hence, questions like (a) how to identify and select a potential strategic partner based on a perception of synergies, (b) what role knowledge-related motivation plays in the formation of strategic alliances, (c) how the balance between complementary and synergistic knowledge changes over time, (d) under what conditions are synergies of knowledge more likely to occur, and (e) what impact synergies of knowledge, developed in strategic networks, have on organizational learning and strategic flexibility offer prospective avenues for future research. Most traditional literature is mainly concerned either with examining the underlying conditions favoring alliance formation or investigating alliance outcomes and the impact of alliances on the partner firms. A new research agenda should approach the management of knowledge in strategic alliances from a more dynamic perspective, combining elements from both research streams by focusing on the dynamics of strategic alliances viewed through an evolutionary lens. Hence, one avenue would be to focus on the relationship between conditions for alliance formation and outcomes and the impact of learning (knowledge creation) on the dynamic evolution of alliances. Furthermore, distinguishing between different types of alliances in terms of their contribution to the partners is both conceptually and managerially important (Hennart et al., 1999). The traditional conceptual dichotomy between exploiting and exploring alliances needs to be linked to degree of complementarity in knowledge bases, perceived motivation (intent), and a distinction between different types of knowledge. Hence, a new research agenda should aim at developing a different dichotomy of motivational intent for alliance formation based on perception of complementarity (symmetry vs. asymmetry) in knowledge bases and the *networking* of these. The difference in perceived intentions behind the alliance formation is likely to have an impact on the performance of the alliance partners in terms of *creation* of new knowledge-related capabilities vs. *transfer* of existing knowledge-related capabilities. Consequently, a distinction between knowledge transferring alliances (complementary knowledge networks) and knowledge creating alliances (synergistic knowledge networks) can be developed and tested empirically.

Finally, there seems to be an indication of the existence of an important underlying latent construct, synergies of knowledge, which needs to be explicitly recognized and integrated in the theory of knowledge creation. The effect of synergies of knowledge on knowledge creation in strategic alliances needs to be modeled as a function of multiple factors determining this construct. While the individual importance of many of these factors (i.e. tacitness, uncertainty, control, longevity etc.) has long been recognized in the literature, their simultaneous effects have yet to be examined and tested empirically.

This paper has attempted to challenge the existing paradigms within strategic management in order to identify a new research direction for knowledge management. By tracing the co-evolution of the main strategic management perspectives and the knowledge management perspectives in business literature, an overview of the evolution of strategic knowledge management research emerges. Combining certain aspects of the existing resource-based literature with network theories, a new, more dynamic perspective of knowledge management is derived. This perspective focuses on the synergies of knowledge-related capabilities in explaining the formation and economic justification of strategic integrative arrangements.

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