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The paradox of social capital: a look through the individual rationality

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Abstract: In this paper, we confront the notion of social capital developed in the knowledge-based view of the firm, in particularly in the seminal work of Nahapiet and Ghoshal (1998), with its original conception from contemporary sociologists like Bourdieu (1986), Putnam (1995, 1993), Coleman (1988) and Burt (1992). We build on those authors to highlight a key facet of social capital: its use as a tool for the micro-macro transition which was elaborated in the underlying sociological theories and is nevertheless neglected in the management literature. After the presentation of our arguments, we propose some guidance to integrate the individual rationality advocated by Coleman in the framework of Nahapiet and Ghoshal and show how it could bring some lights to the knowledge creation and sharing processes at stake in organizational contexts.

Keywords: social capital, intellectual capital, social structure, knowledge

1. Introduction

During the last decade, researchers from the knowledge-based view of the firm have used the concept of social capital (Bourdieu 1986, Coleman 1988, Burt 1992, Putnam 1993) to explain the creation and sharing of organizational knowledge (e.g. Nahapiet and Ghoshal 1998, Adler and Kwon 2002, McFadyen and Cannella 2004). This perspective poses the organization as a social collectivity (Kogut and Zander 1996) and a knowledge-creating entity (Nonaka and Takeuchi 1995) in which individuals voluntarily mobilize available resources in order to contribute to collective goals (Spender 1996). In this paper we argue that such an approach has led management scholars to neglect important insights that were elaborated in the underlying sociological theories such as interest alignment, domination structure or the use of social capital as a conceptual tool for the micro-macro articulation. In this paper, we elaborate on this latter point and compare the original conception of social capital in Sociology with its implementation in the knowledge-based view through the work of Nahapiet and Ghoshal (1998).

In the first section of this paper, we briefly depict the notion of social capital as it was developed by contemporary sociologists, focusing specifically on the work of James S. Coleman (1988) and the intellectual quest that he wanted to achieve. Like Bourdieu, Coleman is among the first authors who explored the concept of social capital and was recognized by his peers as one of its major contributors (see Putnam 1995 p. 67 and 78). His work is also the main source of inspiration in Nahapiet and Ghoshal's paper which itself constitutes the keystone of social capital in management. In the second section, we present the framework developed by Nahapiet and Ghoshal (1998), its references to the piece of literature discussed in the first section and its integration within the organisational knowledge creation literature (Kogut and Zander 1992, Spender 1996). In the third section, we build on the work of Coleman (1988) and Giddens (1984) to highlight a key missing aspect of social capital: the micro-macro transition from contributing actors to their organization. Then, we propose some guidance to integrate the individual rationality advocated by Coleman in the framework of Nahapiet and Ghoshal and show how it could bring some lights to the knowledge creation and sharing processes at stake in organizational contexts.

2. Social capital in contemporary sociology

2.1 Foundation of the concept

A long-standing debate in the sociological community opposes methodological individualists and holists (Udehn 2002) about the level of analysis that is the most important to explain social phenomena: individuals and their interactions or social structures? At the individualistic extreme of the spectrum, the social world is seen as "discontinuous series of mechanical equilibria" (Bourdieu 1986 p. 46) between homogenous agents that are wholly self-interested and strive for utility maximization. A major contribution of this perspective is to provide agents with a principle for action, a reason to move that give a purpose or direction to their actions (Coleman, 1988). Economists are familiar with

this perpective on which are built transaction costs and neoclassical economy theories. At the holistic extreme of the spectrum, interactions are ruled by social norms, institutions and obligations. Individuals are seen as passive agents moved by those social forces that shape, redirect and constraint their actions. In between, weaker forms of both perspectives co-exist and sometimes even converge: several European sociologists like Crozier and Friedberg (1977), Boltanski and Thevenot (1987) and Giddens (1984) addressed the apparent conflict between individualism and holism methodology and combined them in order to offer more satisfactory explanations of social phenomena that would take into consideration the influence of social world as well as the competence of individuals (see Nizet 2007).

During the same period, James Coleman – an American sociologist – worked at a similar task: the intrusion of social structure into the "rational action paradigm". Estimating that bringing together elements of the individualist and holist intellectual streams only led to "pastiches", or uncoherent models, Coleman advocated the need to begin with the framework of one stream and introduce some elements from the other without destroying the coherence of the initial framework. Since previous attempts to introduce "exchange theory" into sociology only allowed to consider the level of microsocial relations, he rather introduced social structures in the economic theory, thereby preserving what he saw as the principal virtue of economic theory: its ability to make the micro-macro transition from pair relations to system (Coleman 1988). His explanation of social phenomena starts with the rational self-interested individual but, like Bourdieu (1986), Coleman acknowledged that an important part of one individual's resources for action comes from his position in social structures (Burt 2004) that at the same time enable and constraint him (Giddens 1984). As the notion of structure itself can be elusive and difficult to operationalize, Coleman defined the concept of social capital as "a resource for action" and used it as a tool to explore the way social structures influence our interactions. The conception of social capital developed by Coleman and later adopted by Nahapiet and Ghoshal (1998) accounted for the influence of "the structure and functioning of the social world" (Bourdieu 1986) on the individual and provided the basic theoretical blocks needed to overcome the operationalization difficulties attached to the micro-macro transition.

A major contribution of the concept of social capital is that it identifies certain aspects of social structure by their functions, ie their value for the actors as resources they can use to achieve their interests. By identifiying this function, the concept of social capital helps making the micro to macro transitions in the sense that it shows that something of value has been created for the actors and that this value depends on social organization, without requiring a detailed analysis of the social structures through which it occurs. If such an analysis is desirable, it can be done in a second stage. The concept allows showing how resources can be combined together to produce different outcomes and behaviors at system- and individual-levels (Coleman 1988).

2.2 Theoretical elements

In the rational action paradigm, each actor tries to achieve his interest and has control over certain resources to do so (Coleman 1988). However in order to account for the structure and functioning of the social world, it is necessary to consider a broader set of resources, or capital, than recognized by economic theory (Bourdieu, 1986), Some resources are owned by the individual, like education or personal savings; other resources are not directly possessed but can be accessed within a social network thanks to the connections of the individual (Bourdieu 1986). Bourdieu consequentially defines social capital as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition--or in other words, to membership in a group -which provides each of its members with the backing of the collectivity-owned capital, a 'credential' which entitles them to credit, in the various senses of the word" (Bourdieu 1986). Social capital therefore constitutes a particular type of resource available to an actor. A distinction is to be made between physical capital (tangible asset owned by the individual or group), human capital (intangible asset embodied in the skills and capabilities of the individual or group), and social capital, that only exists in the structure of relations among agents, and not in the actors themselves or in physical items. All three forms of capital can be mobilized by the agent in order to facilitate productive activity.

To be considered as social capital, a resource has to possess two important characteristics (Coleman 1988): to be a resource for action – in other words to be a productive asset – and to consist of some aspects of social structure (Coleman 1988). It is a productive asset in the sense that something of

value has been produced for the involved actor; his social capital has facilitated certain actions while constraining others. It reflects social structures to the extent that this specific resource is available through the relationships of the actor and comes about through their modification: the value of the resource for the individual thus depends on the social organization.

While recognizing that this definition allows for various forms of social capital to exist, Coleman distinguished between three main components – or dimensions – of social relations that contribute to individual value creation:

- *Obligation and expectation* that are source of "credit slips" between actors*:* when an agent does a favor to another agent and trusts this agent to reciprocate in the future, this creates an expectation from him and an obligation on the other agent's side. An actor that holds a number of such "credit slips" can mobilize it when needed, thereby enlarging his set of possible actions. These "credit slips" are made possible through control mechanisms and/or trustworthiness of structures (Coleman 1988 p. 102) and are source of power (Coleman 1988 p. 104; Bourdieu 1986).

- *Information channels* as useful information provides a "basis for action" (Coleman 1988 p. 104). Indeed, if the agent is competent, as advocated in the rational action paradigm, he must be informed about the context of his action in order to react adequately. But acquiring information is costly, whether in time, money or attention. Social relations that are maintained for other purposes still provide opportunities to acquire information at minimum cost.

- *Social norms* reinforced by effective internal and external sanctions that allow avoiding opportunism. This component of social structure complements the information channels as it informs the actor about the direction he can take once he has identified the social context (Fine 2001).

As a consequence, individuals with broader social capital have broader possibilities to accomplish things of interest thanks to the structural proprieties of the system to which they belong (Giddens 1984; Bourdieu 1986). It implies that some individuals may participate in multiple social groups and draw different resources from them. What is important is not a taken-for-granted collectivity – like the firm – but rather the network of the individual who accesses different systems and thereby is able "to see early, see more broadly, and translate information across groups" (Burt 2004). It also implies that this ability of accomplishing things may vary between members of the structure: in his study of knowledge brokers, Burt (2004) showed that the presence of effective brokers in a network may be detrimental for more modest employees located nearby. The empowering of individuals through social capital may also have downsides at the collective level. This aspect of social capital was illustrated by Bourdieu in the so-called delegation paradox, when a "mandated agent can exert on (and up to a point against) the group the power which the group enables him to concentrate" (Bourdieu 1986 p. 53).

When an individual has an original advantage due to his position in social structures, he draws on more social capital and is able to generate more benefits that may be used as resources for further actions, thereby involuntarily reproducing the original domination structure (Bourdieu 1986). Faced with this reasoning, scholars working on social capital and the micro-macro transition can adopt different positions about the evolution of structures. For Bourdieu and other structuralist scholars, individuals mobilize their resources to climb their way up, mainly unconscious of the structures that they contribute to reproduce. Giddens (1984) adopted a more nuanced approach: because structures are instantiated in recurrent social actions, they are constantly (re)produced. This perspective recognizes the path-dependency implied by Bourdieu but at the same time gives to individuals the capacity to influence back the social structures.This latter view is echoed by Coleman. Having chosen the rational action paradigm as a starting point for his work, Coleman also made this step forward by looking at how interactions, in turn, are able to shape social organization. In Giddens' terminology, Coleman wanted to stress that social structures are not only the medium of the practice they shape, they are also their products.

3. Social capital in the knowledge-based view of the firm

3.1 The sociological influence

Building on the work of contemporary sociologists like Bourdieu (1986), Coleman (1988), Burt (1992) or Putnam (1993), researchers in management have introduced social capital as a key factor in understanding organizational knowledge creation (Jones 2008). One of the main influential frameworks of this research stream was developed in 1998 by Janine Nahapiet and Sumantra Ghoshal in their seminal work “Social capital, intellectual capital and organizational advantage”.

In their paper, the authors referred to Bourdieu (1986, 1993) and Putnam (1995) as they defined social capital as “the sum of potential and actual resources embedded within, available through and derived from the network of relationships developed by an individual and social unit” (Nahapiet & Ghoshal, 1998 p. 242), or in other words both the relationships between agents and the assets that may be mobilized through those relationships (Bourdieu, 1986; Burt, 1992). Building on Coleman (1990), they added that “although social capital takes many forms, each of these forms has two characteristics: (1) they constitute some aspects of the social structure and (2) they facilitate the action of the individual within the structure” (Nahapiet and Ghoshal p. 244).

Nahapiet and Ghoshal also distinguished between three different dimensions of social capital:

- The *relational dimension*, the norms, expectations and levels of trust or respect that are developed through repeated interactions within the network.
- The *structural dimension*, or the overall configuration of the network at hand and the access to resources that it enables.
- The *cognitive dimension*, the set of interpretive schemes, codes and languages that agents from the same network share and refer to in order to make sense of their behaviors and of the environment.

Compared to the dimensions proposed by Coleman, we can see three main evolutions. Firstly, *obligation and expectation* as well as *social norms and sanction* merge under the *relational* label borrowed from Granovetter (1992). Indeed, Granovetter identified the relational embeddedness of an interaction as the degree to which exchange parties consider one another’s needs and goals (Granovetter 1992) and both components from Coleman’s framework refer to social rules that inform about the actions that are expected. Secondly, *information channels* turn into a more general *structural dimension* – a term also coined by Granovetter (1992) – that accounts for the access to information as well as to other kinds of resources that may constitute a basis for action. In Granovetter’s words, structural embeddedness provides "more efficient information spread about what members of the pair are doing, and thus better ability to shape that behavior" (Granovetter 1992 p. 35). What is important now is “who you reach and how you reach them” (Burt 1992). Thirdly, Nahapiet and Ghoshal proposed a *cognitive dimension* that stresses the importance of a common understanding basis to act adequately within the structure. It is not enough to have information about the context; the agent also needs to be able to interpret it correctly.

As their goal is to explain the link between social capital and organizational knowledge, Nahapiet and Ghoshal (1998) finally proposed to consider the organization as a social network and to look at the impact of social capital on the conditions for organizational knowledge creation. They introduced the three conditions for exchange and combination of knowledge developed by Moran and Ghoshal (1996) as well as a fourth condition acting as a prerequisite for exchange. The first condition is “that the *opportunity* exists to make the combination or exchange” (Nahapiet and Ghoshal 1998 p. 249). The second condition is to make sure that the exchange is a *source of value* for the organization. The third condition is about *motivation*: the efforts that the organization has to put in the exchange should be smaller than its anticipated value. The prerequisite is about *combination capabilities* because the organization needs some pre-existing competences to deal with a new piece of knowledge (Cohen and Levinthal 1990). As a result, Nahapiet and Ghoshal elaborated an operationalizable framework (see figure 1) that allows for the development of measurement scales and correlation analysis.

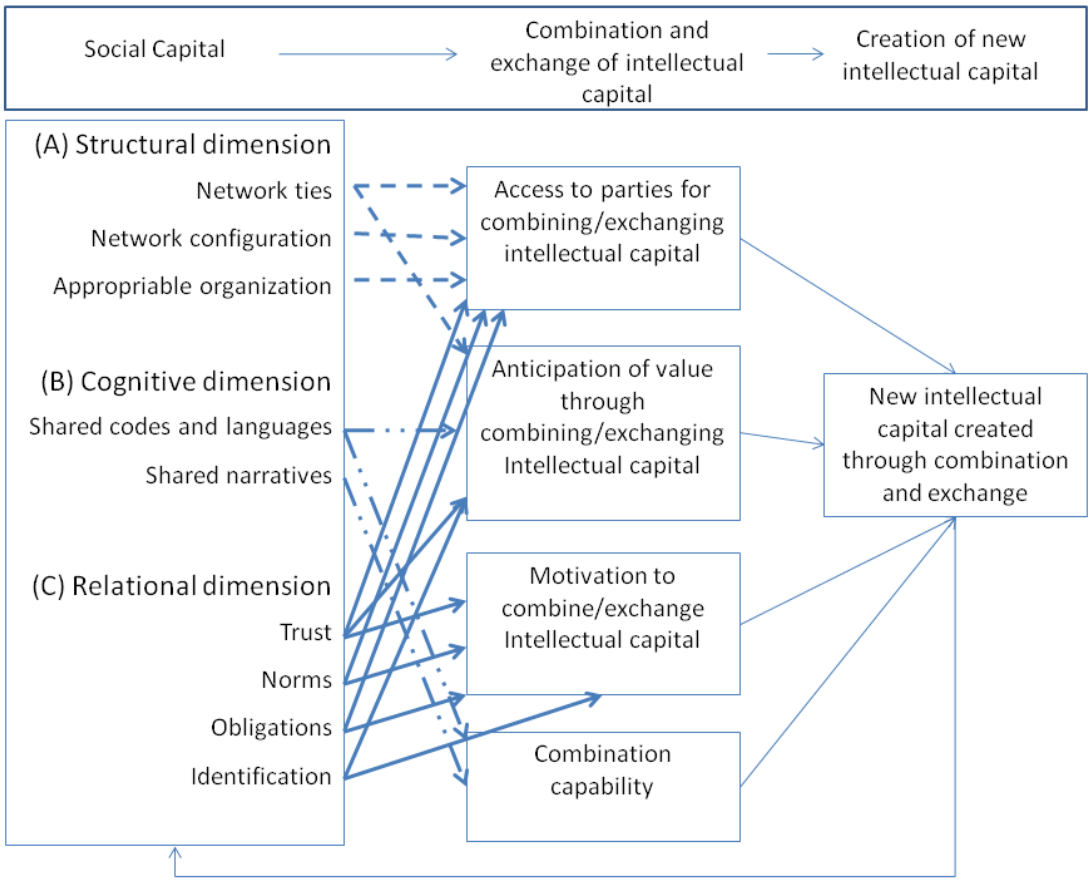

Figure 1: Social capital in the creation of intellectual capital (Nahapiet and Ghoshal 1998)

3.2 The knowledge-based anchoring

At the same time as building their definition of social capital and the theoretical arguments supporting the proposed relationships (see figure 1) on sociological theories, Nahapiet and Ghoshal specifically aimed to contribute to the knowledge-based view of the firm (see Nahapiet and Ghoshal 1998 p. 242), a perspective that arose in opposition with the transaction cost theory and which proposes "that a firm be understood as a social community specializing in the speed and efficiency in the creation and transfer of knowledge" (Kogut and Zander 1996 p. 503). In order to gain a deeper understanding of the paradigm adopted by Nahapiet and Ghoshal, we examined the quotation frequency from their paper “Social capital, intellectual capital and organizational advantage”.

For each author (or academic team like Kogut and Zander) referenced in their bibliography, we counted the frequency of quotation in the whole paper and identified the authors who had the most notable influence on the development of their framework. Unsurprisingly, we can distinguish in table 1 between two sources of inspiration: contemporary sociologists working on social structure and/or social capital (underlined) and management scholars from the organizational knowledge creation literature (italicized) and more generally from the knowledge-based view of the firm.

Table 1: Quotations from Nahapiet and Ghoshal (1998)

Frequency of quotations	Name of author(s)	Frequency of quotations	Name of author(s)
25	Coleman 1988 (8); 1990 (**16**); 1993 (1)	6	*Boland and Tenkasi 1995*
23	*Kogut and Zander 1992 (9); 1993 (3); 1995 (1); 1996 (8); Zander and Kogut 1995 (2)*	6	*Moran and Ghoshal 1996*
17	Bourdieu (1); 1977 (2); 1986 (**12**); 1993 (2)	6	*Brown and Duguid 1991*
17	Putnam 1993 (**11**); 1995 (6)	6	Fukuyama 1995
11	Burt 1992	5	Polanyi 1962 (1); 1967 (4)
11	*Spender 1994 (1); 1996 (**10**)*	5	Giddens 1984 (3); 1990 (1); Giddens and Turner 1987 (1)
9	Granovetter 1973 (4); 1985(3); 1992 (2)	5	*Connor and Prahalad 1996*
7	*Ring and van de Ven 1992 (4); 1994 (3)*	5	Jacobs 1965
7	*Boisot 1995*	< 5	All others

If we focus on the influence from the knowledge-based view, we can see that, like Kogut and Zander (1992), Nahapiet and Ghoshal considered the firm as a social network able to create value through its knowledge. While recognizing the existence of different levels of knowledge (see table 2) within the firm, Nahapiet and Ghoshal (1998) agreed with Spender about the prevalence of social knowledge like organizational routines (Brown and Duguid 1991) over the individual level for organizational advantage and therefore decided to leave individual knowledge creation out of their framework.

Table 2: The four componants of knowledge, adapted from Spender (1996), Cook and Brown (1999)

	Tacit knowledge	Explicit knowledge
Individual knowledge	Skills / Automatic Knowledge	Concepts / Conscious Knowledge
Social (organizational) knowledge	Genres / Collective Knowledge	Stories / Objectified Knowledge

This perspective frames specific hypothesis about the nature of firm as well as about people: as argued by Spender, “organizations learn and have knowledge only to the extent that their members are *malleable beings* whose sense of self is influenced by the organization’s evolving social identity’ and thus learning is *primarily* internalized from the social context” (1996 p. 53, emphasis added by Felin and Foss (2005) p. 443). As a consequence, while Nahapiet and Ghoshal conceptualized social capital as a resource for individual actions, they also hypothesized that those individuals would voluntarily mobilized the resources in a way that contributes to organizational goals, taking for granted the alignment of interests between people and the collectivity to which they belong.

A paradox appears: while social capital was developed as a tool for the micro-macro transition and thus conceptualized as a resource at the disposal of the individual, social capital is now considered as the property of the firm, a resource which exists indendently of its potential users. This approach may lead to an operationalization of social capital that focuses exclusively on the organizational level, measuring the overall configuration of the firm instead of considering the patterns that are actually useful for the individual and that may cross organizational boundaries. Likewise, the conditions for knowledge creation included in the framework are mainly discussed at the collective level. The anticipated value of an exchange activity is not assessed from the perspective of the self-interested individual but rather from the perspective of the taken for granted organization. The same reasoning applies to motivations for knowledge exchange and combination capabilities. When social capital has the potential to yield destructive results such as fraud or corporate misgovernance (Tillman and Indergaard 1999, Mitchell 2003, in Burt 2004) it is important that conditions also reflect individual incentives to actually share knowledge so that it becomes an organizational asset.

There are three main pitfalls in such a view. First of all, social capital is only considered as a mean for actions although it may also turn out to be a frustration, a constraint. Even if Nahapiet and Ghoshal recognized that "social capital is not a universally beneficial resource" (1998 p. 245), they decided to include in their framework only the positive influence of social capital on knowledge combination and exchange. Second, this framework takes for granted the domination structure at hand, the asymmetric distribution of resources that exists within the firm. As a consequence, it neglects the process of interest alignment between the collective entity and its members, as well as potential social discontents that may affect its structure (see Hirschman 1970, Bajoit 1988). Thirdly, the framework proposed by Nahapiet and Ghoshal reflects a notion of social capital which is mainly considered at the organizational level while social capital was originally proposed as a tool to make the individual-collective transition. We elaborate on this latter point in the next section as we propose possible theoretical and methodological guidance to apply the framework of Nahapiet and Ghoshal in accordance with the rational action paradigm.

4. Discussion

As explained above, Nahapiet and Ghoshal identified three facets of social capital: the relational dimension, the structural dimension and the cognitive dimension. When elaborating on this third dimension, Nahapiet and Ghosal referred mostly to the organizational knowledge creation literature (e.g. Kogut and Zander 1992, Grant 1996, 1996) and argued that it was "an important set of assets not yet discussed in the mainstream literature on social capital". While it may be the case in the literature about social capital in a strict sense, if we enlarge the search to the literature on social structures we realize that Anthony Giddens proposed a similar dimension named signification structure in 1984.

In order to face the issue identified in the previous section, we firstly propose to look at the three dimensions of social capital and enhance their theoretical coherence through a comparison with the three dimensions of social structures developed by Giddens. Then we highlight the gap to avoid in their operationalization using an example from the study of Hansen (2002) on knowledge networks in multi-unit firms.

Table 3: Social dimensions in Nahapiet and Ghosal (1998) and Giddens (1984)

Dimensions of social capital	Dimensions of social structures	Common modalities
Relational dimension	Legitimation structure	Syntaxic rules: social norms giving direction for action
Structural dimension	Domination structure	(Asymmetrical) Access to resources
Cognitive dimension	Signification structure	Semantic rules: Interpretive scheme

The three dimensions of social structure developed by Giddens are: 1) the *legitimation dimension*, to which agents refer to via norms and sanction; 2) the *domination dimension* that lays on the asymmetric distribution of resources like information or access to relations with other agents; 3) the *signification dimension* of structure that provides the interpretive schemes that "restrict and enable agents to make sense of the context they act in and communicate this meaning (…) to others" (Sydow and Windeler 1998).

The confrontation between Giddens and Nahapiet and Ghoshal brings two important insights. First, it provides a better understanding of the distinction between the relational dimension and the cognitive dimension which is otherwise a little bit tricky. As expressed by the authors themselves, there is "often complex interdependencies between social identification and shared vocabulary and language" (Nahapiet and Ghoshal 1998 p. 251). Indeed, when a research group names itself "PRECISE", does the metaphor belong to the cognitive dimension (as an interpretive scheme) or the relational dimension (as social identification)? Instead of looking for the real nature of the metaphor, one can assign it to the right dimension based on its function: relational components fulfill a syntaxic function – what action is socially approved or otherwise sanctioned; cognitive components fulfill a semantic function – it helps make sense of the context and communicate that meaning to others. As a consequence, we propose to complement the three dimensions of Nahapiet and Ghoshal with this functional approach. Secondly, this comparison reminds us that social capital is a tool for the micro-macro transition, from social structures to agency and backward: "social structures are both

constituted by human agency, and yet at the same time are the very medium of this constitution" (Giddens 1993). If a researcher is interested in the impact of social capital as a resource for individual action (micro) on the creation of organizational knowledge (macro), then he should not look at the overall configuration of the given organization but he should on the contrary examine the patterns that are useful for the actor who contributes to organizational efficiency and from which the actor can draw the appropriate resources.

As an example, Hansen (2002) examined the efficiency of knowledge networks in multi-units firm and took into consideration the overall pattern of the organization as well as the specific valuable patterns for each project team (considered in this case as a collective actor). Results showed that "neither the extent of available related knowledge in the Company nor the path length in the entire network explained the amount of knowledge obtained from other divisions and project completion time" (Hansen 2002 p.244). Instead, project teams that were found to be more efficient were the teams that were connected through short paths to divisions with useful knowledge for the project. This study highlights the importance of two elements of Nahapiet and Ghoshal's framework: the structural dimension of the network (ties and configuration) *from the point of view of the project team* and the anticipation of value of the transferred piece of knowledge *towards a specific task*. Applied in this way from the point of view of the contributing actor, other elements of Nahapiet and Ghoshal's framework may enrich our understanding of intra-organizational knowledge transfer but only if limits are acknowledged and sides effects investigated, such as the cannibalistic impact of succefull project teams on less performing actors and consequently the overall organization.

5. Conclusion

In this paper, we critically examined the framework developed by Nahapiet and Ghoshal and proposed theoretical and methodological directions to apply it in organizational contexts. In this approach, the rational individual gains some degree of latitude but the main contribution of this work is to remind that social capital is a tool aimed to make the micro-macro transition, not to be applied as a single level concept like it was originally developed by Nahapiet and Ghoshal. Measures of social capital should therefore avoid focusing on the targeted organization but rather on its main contributing actors and their useful connections – inside or outside the firm. Likewise, conditions for knowledge exchange and combination should be considered as incentives from the point of view of the contributing actors, not from the perspective of the organization.

Another contribution has regards with the distinction made by Nahapiet and Ghoshal between social capital and intellectual capital and that attracted some peer critics (Locke 1999). By reaffirming a functional approach of social capital, the distinction between social capital and intellectual capital becomes less problematic: social capital is seen as the input while intellectual capital is the output, the produced value. As a consequence, the same piece of knowledge may be either intellectual capital or social capital depending on its function for the individual: newly created intellectual capital may come back as social capital as it becomes a resource for further actions, in that way contributing to the (re)production of structures. Finally, the role of manager is much more complex than his previous job in the framework of Nahapiet and Ghoshal. Indeed, the manager has now to manage multiple structures with transposable rules and polysemic resources.

While this work focuses on the micro-macro transition that was missing in Nahapiet and Ghoshal (1998), it also identified other shortcuts that were not developed. Further research should focus on the way to account for the exercise of power in (inter-)organizational context – the political process behind resource access and its interaction with domination structures – as well as the constraining aspects of social capital.

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