HAL
open science

Mergers and Acquisitions: revisiting the human factor in the light of a knowledge-based view of the firm and complexity theory

Nicola Mirc

To cite this version:

Nicola Mirc. Mergers and Acquisitions: revisiting the human factor in the light of a knowledge-based view of the firm and complexity theory. EIASM- 22nd workshop on Strategic Human Resource Management, 2007, France. hal-00263202

HAL Id: hal-00263202

https://hal.science/hal-00263202v1

Submitted on 11 Mar 2008

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

MERGERS AND ACQUISITIONS: REVISITING THE HUMAN FACTOR IN THE LIGHT OF A KNOWLEDGE-BASED VIEW OF THE FIRM AND COMPLEXITY THEORY

NICOLA MIRC[1]

Resume

An ongoing argument in the M&A literature is that the human factor has an important impact on the outcome of those operations. Analysis of the HR integration has identified human factors that play an inhibiting role on post-acquisition performance, particularly cultural and organisational mismatch, resistance to change and poor level of strategic integration planning. Yet, less is known about the role of the human factor in the organisational dynamics, which is at work when merging two autonomous entities, and the related impact on performance. The aim of the paper is to study ways of exploring the relationship between the human factor and post-acquisition performance, in discussing possible contributions from a knowledge-based view of the firm (KBV) and complexity theory.

From the outset, the literature on M&As has concentrated on post-operation performance. An ongoing issue has been the disappointment in observing that most M&As were reducing rather than enhancing the firm value (e.g. Dickerson, Gibson & Tsakalotost, 1997). Over time, estimates on failure to perform have ranged from 50% to 80% (Hunt, 1988; Cartwright & Cooper, 1996; Marks & Mirvis, 1998; KPMG, 2001 adapted from Erez-Rein & al., 2004). Seeking explanation, scholars have tested hypotheses on the plausible relationships with particular factors such as the size of the operation (higher failure rates in mega-mergers), the strategic fit of the companies, etc.

Alongside the hard data variables, the management of Human Resource (HR) integration has been said to play a major role. In particular, the literature has identified issues that could inhibit post-acquisition performance such as cultural and organizational mismatches, resistance to change, and poor strategic integration planning.

However, if the broad view on the importance of HR management is commonly shared, only few studies have explicitly put the stress on the causal relationships between the human factor and the performance of M&As, notably looking at the interactive dynamics, which shape the new organisation and its efficiency.

The paper aims at exploring ways in dealing with the issue. It visits the human factor in acquisition integration in stressing the scope for contribution of the knowledge-based view of

[1] Centre de Recherche en Gestion, PREG-CRG, Ecole Polytechnique, 1, rue Descartes, 75005 Paris - France

the firm (KBV) and complexity theory, seeking to extending the current academic research framework.

The paper is organised in four sections.

The first section is primarily a review of the existing literature. The focus is on how the human factor has been identified to impact on M&As performance. In broad terms, measuring post-acquisition performance has been a centre of interest in strategy, finance and economics. Academic investigation on HRM issues in M&As has mostly related to the role of the human factor in the integration process and its consequences on success. Therefore, it has approached the impact of the human factor on post-acquisition performance from an indirect angle. However, it is to be recognised that these studies have allowed for identifying different ways by which the human factor may be said to impact on M&A success or failure, i.e. psychological, cultural and managerial factors.

The second section is devoted to the possible insights that might be drawn from considering the human factor in M&A from a knowledge-based view of the firm. The interest in selecting the perspective is its properties to filling the previous gap. The KBV introduces the human factor at the centre of the analysis of organisational dynamics and, from that angle, M&As are primarily about acquiring the knowledge of the firm and her human assets. In a KBV perspective, the contention is that the knowledge transfer process itself is crucial to the firms synergies. In that regard, studying the relationship between the human factor and M&A performance needs considering the role of networks and individual interactions, and also the way they might structure the exchange and combining of knowledge bases within the merged firms.

It is precisely on addressing the issue of interactions and networks, that the third section studies the possible contributions of complexity theory. After providing with the main characteristics of the theory, possible theoretical consequences of the perspective are discussed. In particular, looking at the merging organisations as a complex web of interacting and interdependent entities, the members of the organisation themselves appear to shape the outcomes on performance (Allen & al., 2002).

Finally, a last section explores the combined perspective between KBV and complexity theory. It offers insights from three angles: M&A as a continuous process constantly evolving from one equilibrium to another one; an interactive network set; a mechanism stretched between autonomous dynamics and integration planning.

I. Review of the literature: the human factor and impact on M&A performance

Studies on post-acquisition performance have primarily been a centre of interest of researchers in strategy, economics and finance (with the notable exception of Larsson & Finkelstein, 1999). The identified factors of performance variations have usually ranged from the industry match (complementary of assets, similarities of markets and products, synergies in production, strategic orientation, etc.), pricing policy, financing and size of the operation and type of the transaction, bidding conditions, etc.

By contrast to quantitative measurements from finance and economics, the research, which has focused on the organisational and human side of M&As, has mostly dealt with identifying factors that might have played a role in the integration process of the merging entities and led to successful outcomes. In that regard, the relationship between the human factor with performance may there be said indirect in that the studies do not usually attempt to measure performance variation in relation to those factors.

However, despite the absence of a direct causal correlation, several dimensions have been identified as having an important impact on M&A performance. They are regrouped into three categories: psychological, cultural and managerial factors, knowing that the human factor covers at the same time employees and managers of the firms.

Psychological factors

A large part of the existing research has looked at the psychological effects of M&A on employees. Scholars such as Buono and Bowditch (2003), Marks and Mirvis (2001 or Cartwright and Cooper (1996) have pointed out the strong impact that the operations could have on employees, in particular the resulting increase in stress and anxiety due to changes in work practices and tasks, managerial routines, colleagues environment, the hierarchy, etc. Furthermore, M&A often introduces an uncertainty climate among employees about job losses and future career development.

Stress and insecurity may lead to employee resistance to change, a high staff turnover, absenteeism and lack of commitment to work and the organisation, which in turn are associated with a negative impact on M&A success. (Buono & Bowditch, 2003; Cartwright & Cooper, 1996; Napier, 1989). Employee resistance prevents the building up of a well functioning organisation and constructive cooperative environment. A high staff turnover brings about important losses of knowledge for the firm. Lack and lower work commitments have a negative impact on individual and organisational performance measured in terms of productivity, quality, and service (Cartwright & Cooper, 1996; Gutknecht & Keys, 1993). Moreover, there seems to be a relationship between organisational and financial performance (return on assets, profitability), which has consequences for the market value of the firm (Dyer & Reeves, 1995).

On the opposite side of the argument, satisfied employees are presumed to work harder, better, and longer with higher productivity records. Even though a direct relationship between job satisfaction and corporate performance remains to be established with certainty (Rusu & al., 2006), it appears that lower job satisfaction is a cause of higher absenteeism, which, in

turn is shown to have a negative influence on organisational performance (Sousa-Poza & Souza-Poza, 2000).[2]

Cultural factors

Considering the human factor in relation to the firm culture has been a second significant focus of attention. No clear-cut findings about the impact on performance have yet emerged. Cultural differences look like playing both ways, although distant cultural environments make the integration process harder.

In the studies, the lack of culture-fit or cultural compatibility has often been used to explain M&A failure. Cultural differences have also been considered a source of lower commitment to work, making co-operation more difficult, particularly from employees of the acquired firm (Marks & Mirvis, 1985; Buono & Bowditch, 2003). By the same token, an increase in turnover among acquired executives weighs on performance (Hambrick & Cannella, 1993; Lutbakin, Schweiger & Weber, 1999). Furthermore, the lack of culture-fit has been shown reinforcing organisational conflicts (Olie, 1990), which might lower individual and organisational performance as preventing co-operation to materialize. In this regard, scholars have largely given account of the lack of co-operation momentum stemming from a "we" versus "them" attitude, resulting in hostility among employees (e.g. Cartwright & Cooper, 1996).

Therefore, it is no surprise that strong cultural differences are usually associated with a negative impact on M&A performance, since the integration process is less easy and deals with higher employee resistance, communication problems, and lower interest in co-operation (Nahavandi & Malekzadeh, 1988; Datta, 1991; Haspeslagh & Jemison, 1991; Chatterjee & al., 1992). Noticeably, cultural clashes are likely to be more prominent in cross-national than domestic acquisitions (Lubatkin & al., 1998), since such mergers bring together not only two firms that have different organisational cultures but also organisational cultures rooted in national diversity. These scholars have identified the building up of a common culture as essential for the success of M&As. In other words, should employees stick to their own organisational culture and do not adhere to a shared vision, then, the performance of the merged firm might be adversely affected.

Notwithstanding, findings on the relationship between culture and performance are inconclusive. Other studies argue that cultural distance might produce beneficial outcomes on performance as organisational heterogeneity is an asset for the firm in terms of complementary and capability (Cartwright & Cooper, 1996).

The approach on human factor and culture also encompasses work from the Social Identity Theory (Tajfel & Turner, 1986). Researchers have found that high levels of employees' social identification with the organisation's identity results in increased work effort, higher performance, reduced staff turnover and more frequent involvement in positive organisational citizenship (Ellemers & al., 2004; Bartels & al., 2006).

[2] We should mention here that even though M&A effects on employees are mostly dealt with as negative, several scholars point out positive influences on employees, such as offering opportunities for new responsibilities and career development (Buono & Bowditch, 2003; Empson, 2001, Mirc, 2004), increased job security, greater job satisfaction and more varied work tasks (Napier, 1989).

Finally, another attribute under scrutiny from a cultural perspective has been "management styles". A management style is viewed as an essential element of the culture of an organisation (Sathe, 1988). Several characteristics are attached to a management style, as for instance a management group's attitude towards risk, their decision-making approach, and preferred control and communication patterns (Datta, 1991). Management styles are unique to organisations and may differ considerably across firms (e.g. Blake & Mouton, 1972),

Differences in management style between the merging firms may have a negative impact on M&A success (Datta, 1991; Schoenberg, 2004). As a matter of fact, in an acquisition process, a significant aspect is bringing together distinct management groups. Significant difference may contribute to what Buono, Bowditch & Lewis (1985) refer to as "cultural ambiguity", a situation characterised by uncertainties where style or culture are main attributes. Generally, the acquiring firm management ends up imposing its own style on the management at the acquired firm. This may result in a loss of identity among the acquired firm management, and in turn in anxiety, distrust, and conflict, culminating in a "merger standstill", with declining productivity and poor post-acquisition performance (Schweiger & al., 1987).

Managerial factors

So far the human factor has been looked at in relation to an employee perspective (including staff and managers). Of additional significance is the way the management (as human factor) has looked at the M&A process, its implementation and the relationship with performance.

Here are singled out works that have attempted to assess the strategic fit in the management of the M&A, the integration/planning process v. integrative autonomy, the difference in management styles viewed from a different angle than a cultural perspective.

An often used criterion to predict performance is the pre-acquisition planning and identifying of the target firm –i.e. the assessment of the strategic fit between the merging firms. Researchers have argued that the more the similarities, the more the merger would be successful in terms of value creation (Singh & Montgomery, 1987; Chatterjee & al., 1992; Ramaswamy, 1997; Lubatkin & al., 1998; Schoenberg, 2004).

A second frequently identified managerial factor influencing M&A performance is the way the organisational integration is planned and managed. Here, the emphasis is on the role played by the chosen integration path and the design of the acquisition process. The "process perspective" assumes a connection with the way HF integration is planned and controlled, and an effect on the operation's success (Jemison & Sitkin, 1986; Haspeslagh & Jemison, 1991).

The main contention rests on the effectiveness of the integration planning, the finding being that if integration is little or poorly planned, post-acquisition performance will be lower (Child, Pitkethy & Faulkner, 1999; Schweiger & Very, 2003).

In particular, scholars have stressed the importance of the degree of autonomy allowed to organisational members of the merging firms in the success of the operation (Cartwright & Cooper, 1996; Larsson & Lubatkin, 2001). According to Cartwright & Cooper (1996), a collaborative strategy intended to take advantage of shared knowledge and resources, based on retaining the "best of both worlds" and with a particular focus on increased employee autonomy is a driving force for successful integration.

From the literature review on the human factor and post M&A performance, a number of main findings are brought forward taking into account the psychological, cultural and managerial factors. The limits of the perspectives appear threefold. Where regarded in isolation, findings frequently come to either support common sense views (e.g. differences in culture between companies render co-operation harder) or appears working both ways (e.g. difference in culture may also be a valuable asset). Perhaps, more importantly, what the findings suggest is the need for an integrative perspective enabling to view the role of the human factor in a comprehensive way. The two following sections will question to what extent contributions of a knowledge-based view of the firm and complexity theory might be suitable instruments for filling the gap, notably since they provide insights about organisational dynamics and individuals' and groups' interactions at a micro-level as the shaping forces of post-acquisition performance.

II. Insights from the knowledge based view of the firm

The knowledge-based view of the firm emphasises knowledge as a key resource (Grant, 1996). Accordingly, firms are creative organisations (Kogut & Zander, 1996), whose capabilities to generate and transfer knowledge are the most important assets of sustainable competitive advantage (Machlup, 1980 ; Kogut & Zander, 1992 ; Grant, 1996).

In M&A cases knowledge transfer may be assumed playing different strategic roles.

In the first place, M&As may be seen as a means of completing and renewing the knowledge base of the firm. A motive is acquiring the specialized knowledge of the target firm (R&D expertise, marketing know-how, clientele base).

In the second place, where the merger aims to create operational or organisational synergies, limited or full resources integration processes are required. For a merger to be successful, the resources need being mutually shared in order to give rise to synergies. A study of 121 acquisitions in Europe illustrates that the sharing and transfer of knowledge between the merged firms has been essential to operational synergies (Schoenberg, 2001). In short, knowledge transfer, to which is attached value creation through information and expertise sharing, is crucial to post acquisition performance (Haspeslagh & Jemison, 1991; Inkpen, 2000; Greenberg & Guinan, 2004). The upshot might occur by different means, either reciprocal interaction from the acquirer to the acquired firm or from the acquired to the acquirer firm (Bresman & al., 1999), or as most research indicates from a unilateral transmission from the acquirer to the acquired as the former often seeks to implement its organisation routines, processes and procedures on the acquired firm.

Finally, from a knowledge transfer perspective, the sharing of a common social identity (or culture) appears an important dimension. In particular, where the transferred knowledge is tacit, social relations are supposed being more efficient mechanisms for disseminating knowledge among individuals than formalised mechanisms, such as information systems and formal managerial control (Kogut & Zander, 1992; Nonaka, 1994; Grant, 1996).

In more recent contributions, scholars have introduced the knowledge-based view of the firm to discuss M&A performance issues. They generally point out a positive relationship between post acquisition performance and knowledge transfer. Organisations that succeed in transferring their knowledge bases in the course of a merger have better performance

outcomes than those where knowledge transfer had not been achieved (Ahuja & Katila, 2001; Gammelgaard & al., 2004; Zollo & Singh, 2005).

The findings correspond to those underlined by scholars investigating knowledge transfer in firms without the specifics of M&A environment. As a principle, organisations that are able to transfer knowledge effectively between organisational units appear more productive (Almeida & Kogut, 1999; Argote & Ingram, 2000).

The two main knowledge related factors generally identified as influential prerequisites on post-acquisition performance, are the firm's prior acquisition experience, and the ability to keep on board talented people (as key knowledge holders) within the organisation.

With regard to the first prerequisite on acquisition experience the findings are at variance. For instance, Hunt (1998) found that experienced buyers performed no better than first time acquirers. By contrast, scholars such as Zollo and Singh (2004), Haleblian and Finkelstein (1999), Hayward (2002) or Schoenberg (2001) have concluded that previous experience is associated with superior performance. The experienced firms are assumed to have learned how to codify and centralise knowledge in their previous operations, which should facilitate inter-organisation knowledge transfer in subsequent takeovers. The findings may be brought in line with studies that have found that a poor relationship prior to the operation shapes up the transfer of knowledge in making it more difficult, creating an ensuing causal ambiguity about the nature of the knowledge to be transferred (Schoenberg, 2001).

The second decisive prerequisite, the retention of talented people, has been brought forward by researchers like Ranft and Lord (2000). The contention is based on the assumption that knowledge is primarily embedded in individual capabilities. When knowledgeable individuals leave the firm, the firm loses part of its strategic assets. The capabilities cover technical and operational skills and expertise, but also knowledge of the organisation, which are important items in view of maintaining a well-balanced functioning of the firm –i.e. in particular with regard to informal decision making and information dissemination, etc.

Finally, an additional stream has been more normative. Factors as transparent management, continued communication, and the use of integrative instruments –e.g. cross-division integration teams, common meetings, job rotation- appear facilitating the transfer of knowledge (e.g. Bresman & al., 1999).

Thus, the existing work on M&A performance and KBV offers a sound platform to think about extending the analysis. If the relationship between effective knowledge transfer and post-acquisition performance has been a prominent subject in recent M&A research, the process of knowledge transfer in M&A itself seems to have received less focus. Only a few scholars have looked for theorising this issue -i.e. how and by which mechanisms knowledge is transferred between individuals, among the units of the organisations; how knowledge circulates and is subject to exchange; which are the social relations and interpersonal strategies involved in the process; how they may shape the effectiveness of the operation; and why and for which purposes knowledge transfer materialises or not (Bresman & al., 1999).

However, on that ground, research carried out by scholars like Empson (2001) and Greenberg and Guinan (2004) appears a noticeable exception.

In her thorough study about the merging of professional service firms, Empson has identified several factors at the individual and inter-individual levels being essential for a successful transfer of knowledge. A first factor is the individual's perception of the quality of the merging partner, which influences the willingness to exchange knowledge with other members of the organisation –i.e. fear of contamination. The second one relates more directly to the individual position in the hierarchy. If the individual feels that the sharing of knowledge might translate into losing power in the organisation, the knowledge transfer will be inhibited –i.e. fear of exploitation.

Moreover, Greenberg and Guinan (2004) have centred the analysis on the importance of emergent social relations among individuals in M&As through the perspective of communities of practice (Brown & Duguid, 1991). They have concluded that autonomous regrouping of individuals in such communities of practice facilitates the transfer of knowledge as it helps building up a shared organisational identity endorsed by members.

As the different studies have pointed out, it is the actual process by which knowledge is transferred that determines the ability of the new firm to deploy this resource. Therefore, analysing performance variation from a KBV requires concentrating on the very means by which knowledge exchange and combination take place or not. Further, it entails focusing on the inter-individual dimension of the operation and thinking in terms of network reconfigurations –i.e. through reorganisation, employee turnover, and interactions between organisational members.

An approach to combine the network perspective with the interactive dynamics is to refer to developments occurring in the complexity theory. It would mean looking at the merging firms as organisational entities forming a new web of interactions where knowledge transfer would play a major role.

III. The human factor in M&A in the light of complexity theory

Complexity theory has developed in the natural sciences, and in particular in the field of evolutionary biology. Endorsing Darwin's theory of evolution, scholars have considered the scope for non linear development of natural complex organisms and behaviour (e.g. an example is the formation of bird flocks in the sky).

However, complexity theory has also raised interest in other fields, such as computational science and strategic management and organisation studies. For the latter, it has offered a stimulating framework in viewing organisations as "complex adaptive systems" (CAS), which adapt to their environment. Complex adaptive systems possess several main characteristics (after Anderson, 1999; Andriani, 2003 and Middleton-Kelly, 2003).

Agents and schemata

CAS are shaped by agents, which in an organisation might be individuals, groups or coalitions. The behaviour and decisions of each agent are governed by a schema -i.e. a cognitive structure in relation to a given perception of the environment. Those schemata may differ between agents and evolve over time. An agent's schema is influenced by a constant

search for improving his fitness function -i.e. the actions or decisions taken by an agent are driven towards maximisation such as increasing a hierarchy position and role in the system.

Connections and interrelations

The agents, which are part of a system or subsystems are interconnected through network relationships. Complex behaviour arises from the interrelationship, interaction and interconnectivity of entities (agents) within the system and between the system and its environment. The degree of interconnectivity determines the nature and the density of the network relationships. Interaction is however minimally structured and follows simple rules.

Interdependence

Agents in a system or sub-system are interdependent. The action and decision of an agent impact on others, who are part of the same system or subsystem. The influence of one agent to another depends on his experience (history, cultural context). Furthermore subsystems being part of a larger system, i.e. for instance the merged firm, they are also interconnected and interdependent, so that the behaviour and structure of a subsystem impact on the behaviour and structure of a related system.

Non linearity

Interactions between agents and related systems are non-linear. Agents adapt to each other and their environment in a cause-effect relationship that introduces changes in equilibrium, which do not reproduce linear trends.

Co-evolution

Agents co-evolve. Given the inter-connectivity and interdependence of entities (individuals, groups, branches, departments, divisions), the evolution of one entity is partially dependent upon the evolution of the related entities. Moreover, each step taken by any agent modifies the environment of the other (Kauffmann, 1993). Therefore each agent's adaptive landscape, mapping his behaviour to his achieved outcome, is constantly shifting (Levinthal, 1997). The equilibrium resulting from agents' co-evolution is dynamic and not static and lies at the edge of stability or the "edge of chaos" (Kauffmann, 1993).

Self-organisation

Complex systems have the capacity to self-organise -i.e. creating new order and coherence through the interactions of agents within the system. It comes under a "spontaneous coming together of a group to perform a task", where the group decides about what to do, how and when (Midleton-Kelly, 2004, p.26). Therefore no single component in the system determines the collective behaviour (Drazin & Sandelands, 1992). Rather, it is the local set of rules of interaction within a system that creates and recreates structure and organisation. From that angle, the rules of interaction might be subject to change over time, in particular to adapt endogenous changes –i.e. entry or exit of new agents and transformation of present agents' schemata, and to exogenous changes –i.e. changes in the environment. Subsequently, the capacity to self-organising means that CAS is able to self-repair and maintain. Besides, new agents may emerge by recombination of the elements of the system.

Emergence

Together with self-organisation, emergence is a process, which creates new order. It refers to the assumption that the whole is more than the sum of the parts or the assembly of distinct, separate elements. The emergence of properties, patterns and structures is directly related to agents' interactions, with an emphasis on the interacting whole.

Feed-back loops

CAS evolution and organisation are influenced by interactions' feedback loops. Positive feedback produces a strengthening of cause and effect relationships. In turn, it introduces scope for destabilising effect prompting changes. Negative feedback has a balancing or attenuating effect, which tends to maintain stability in the system.

Although the attributes of the complexity theory might be perceived as far remote from the issues under study, a degree of relevance may be ascertained. Thus, what might be learned from complexity theory according to the analysis of the human factor in M&A?

From a complexity framework perspective, an important characteristic is the interdependence and co-evolution of agents. Moreover, one agent's behaviour or decision has an impact on the system's behaviour and constitution of which he is a part, as well as on those related to it.

In the contribution, agents is used a generic term referring to the members of the merging entities –i.e. individual employees and/or group of individuals that are part of the integration process. Agents belong to one or more subsystems in the organisation, in other words offices, departments, divisions. The subsystems are themselves constitutive of global systems, which in the case of a merger means the firms involved in the M&A operation and the resulting merged organisation.

The behaviour of agents interacting in a complex system are driven by improving their own position or *fitness*. However, they are reciprocally influenced throughout their interactions and according to the degree of interconnectedness. The network of interactions sets the agents' room for manoeuvre. The network itself is self-organising, defining in fine the structure of the system.

Consequently, the prevailing role of interactions between agents in the modelling of the organisation entails that the members of the merging organisations themselves shape the possible outcomes on performance (Allen & al., 2002). From that angle, the M&A performance outcome hinges on the capacity of the agents to self-organise, taking into account their schemata, objectives and strategies. Here, the equilibrium is reached through conflicting and competing strategies, the interdependence of agents playing the crucial role. It may be viewed as agents entering in a co-opetitive setting where they seek maximising their position using co-operation and competition, alternatively and/or simultaneously (Brandenburger & Nalebuff, 1996).

Subsequently, the interest of the perspective with regard to M&A appears twofold. Firstly, it enables to discuss the constructing dynamics at individual and group levels developing at the

heart of merging process. Secondly, it allows for adopting an alternative approach on post-acquisition performance by looking at it as a de-centralised construct, with stressing the significance of employee autonomy.

Therefore, approaching M&A from a complexity theory framework offers the insight of a dynamic decentralized construct of performance. Such a perspective is in contrast to those generally endorsed by M&A researchers, where the integration process and its outcome are related to managerial planning and behaviour, and to exercising strategic control over the transformation of the organisation (Allen & al., 2002). In the dominant literature stream, the organisation is often viewed as a predictable set whose activities might be fully developed and controlled by means of strategic choices. Yet, in complex systems, where self-organisation is a major component, the evolution of an organisation cannot be entirely planned or anticipated. Rather, it is set into motion through prodding and impulses. In other words, the study of the integration process needs considering, on the one hand the interrelation between leadership impulses and the organisational response, and on the other hand the building up of a new organisation setting, which emerges from the interactions of its members.

In this regard, the combination of the firms resources, and the set of the organisational and individual knowledge appears promoting a research orientation on the issue of the human factor and post-acquisition performance.

IV. Knowledge transfer in complex systems as offering an integrative framework to study the human factor in M&A

The section is above all exploratory. It looks at combining KBV with complexity theory, offering an integrative perspective on the human factor and M&A performance.

In the literature the different dimensions of the human factor are overall studied in isolation – i.e. psychological, cultural, managerial factors. However, the review has illustrated that the dimensions were intertwined. Therefore the interest in the approach is to weave them together under a single integrative framework (Javidan & al., 2004; Schoenberg & Seow, 2005; Cartwright & Schoenberg, 2006). It invites to put the stress on three main items: the organisation dynamics; the prevalence of interactions and networks; the mechanisms by which knowledge transfer emerges and develops.

Organisation dynamics

The complexity theory looks into the merging of organisations as a multifaceted dynamics system constantly evolving over time. It assumes setting at the forefront of the analysis the dynamics elements, in other words, the view of M&A as a continuous process, a co-evolutionary system (the firm) with its subsystems (branches, departments, divisions) and agents (individuals and groups of individuals).

In that respect, the dynamic view comes in contrast to the rather static approach developed in the literature, which studies the impact of employee reactions and organisation changes at one point in time, the lapse to assess HR integration issues being usually short, from two to three years after the merger. Furthermore, such a perspective does not give account of the evolving character of a complex system and does not offer scope for a study of non linear dynamics where the firm is seen as made up of transforming networks.

The changes in integrative strategies may provide with an example. In a M&A, the acquiring firm may not plan to integrate the acquired firm. For a while, it may decide on leaving it as an independent entity with only small changes at the fringes since the market conditions. Under such circumstances, only several years after the deal may the decision of full integration been decided. Or else, the managerial relationships between the acquiring and acquired firms may reverse over time –i.e. France Telecom with Orange, Renault with Nissan.

Therefore, rather than cross-sectional analysis, a more appropriate device to give account of the M&A dynamics would be to introduce sequence analysis (Abbot, 1995, Dumez & Jeunemaître, 2006b), aiming at the identification of related patterns among sequences –i.e. "either over the whole sequences or within part of them" (Abbott, 1995, p.105), their interrelatedness and development throughout a series of events.

Moreover, drawn from the theory, the co-evolutional character of a complex autonomous system would require a multi-dimensional and multi-level approach. Suppose that in M&A the emergence of an order results from the interaction of agents, sub-systems and the environment, which defines an equilibrium of the system –i.e. the firm, then, the analysis should look at the different dimensions –i.e. psychological, cultural, managerial in dynamics at a micro level –i.e. agents interactions- and sub-systems level –i.e. branches, departments, divisions, together with characterising the end performance result of the system, seen as a whole –i.e. the firm.

As exemplified by Nonaka (1994), the process of knowledge creation and transfer is "a never-ending, circular process that is not confined to the organisation but includes many interfaces with the environment" (p.27). Environmental fluctuations are continuous drivers of knowledge creation, which might result in generating a "creative chaos" (p.28) since the organisational members need adapting to the new conditions. They have to recreate their own system of knowledge in dealing with "ambiguity, redundancy, noise, or randomness generated from the organisation and its environment" (p.18)

Thus, in M&A, knowledge transfer would be triggered off by organisational members facing some sort of organisation crisis, requiring a collective involvement in problem solving and recreating a new order. Therefore, the co-evolution of a system with its environment would spur individual commitment

Networks

Research on knowledge transfer assumes that interactions between individuals or groups facilitate the exchange and creation of new knowledge. Constructive collaborations between entities, notably in the form of self-organising teams (Nonaka, 1994) help knowledge transfer, in particular of tacit form. Moreover, such "communities of interactions" (Nonaka, 1994) institute a socialisation dynamics among individuals and groups. A shared culture and social identity develops, which has an effective knowledge transfer impact.

Therefore, from the KBV, networking and interactions are important factors for an M&A outcome. If viewed from a complexity theory perspective, the issue becomes how co-operative and competitive opportunities, among agents, subsystems may enhance autonomous adaptation and improve the performance. As stressed before, the dynamic environment in

which agents operate relates to a co-opetitive setting, made at the same time of co-operation and competition.

The resulting interactions and networks determine knowledge transfer processes. The degree of connectedness between agents and subsystems shapes the relationships and create room for manoeuvre within the subsystems and system. It structures the network of relations, having a direct impact on information flows within the system and on feedbacks when managing with information.

Mechanism

A particular issue when attempting to merge the KBV of the firm and complexity theory is characterising the engine of the integration dynamics.

From a complex theory perspective, knowledge transfer develops from interactions among agents and subsystems, alongside the structuring of networks. It refers to a self-organising process based on autonomous adaptation.

From the KBV of the firm, if such mechanism is recognised, the stress is rather on the strategic importance of human resource planning. Existing work supports the view that early and effective integration planning is decisive for post-acquisition performance.

Therefore, combining the two theoretical streams require to deal with a tension between autonomous adaptation and integration planning. Of course, both are at work during the continuous process of acquisition. They may operate in harmony or opposition. Therefore, managing knowledge transfer in M&A requires a fine tuning between managerial "prodding" through impulses, -i.e. setting up the system into "motion" and helping its evolution through the minimising negative feed back loops, and an appropriate degree of flexibility in the system, giving rise to self-organisation, which is compulsory to ensure the coherence of the new emergent system.

Here it will be to the research design to combine the two dimensions of the knowledge transfer mechanism. It will have to associate not only a longitudinal case study of an M&A over a long period of time by means of an analytic narrative (Dumez & Jeunemaître, 2006a) accounting for sequences and changes in equilibrium, but also a framework of investigation at the micro level –i.e. agents, subsystems, and top managerial level –i.e. integration planning.

Concluding comments

The review of the literature has given account of the accumulated knowledge about the role of the human factor in M&A performance. It has highlighted a cognitive gap from two angles, on the one hand, the role of the human factor in the organisation dynamics of M&A and, on the other hand, the knowledge transfer mechanism by which performance might be achieved and sustained.

To provide with an extended theoretical framework on both considerations, a combined perspective associating the KBV of the firm with complexity theory has been proposed, putting the stress on knowledge transfer processes in M&A, viewed as complex systems.

The lessons to be drawn from the exercise may be summarised in looking at the amendments it produces to the current streams of research and the scope for implementing the renewed framework from a practical research device.

With regard to the amendments proposed to the current approach, perhaps the most salient point is the view of the human factor in M&A as governed by a continuous dynamic process, of which the outcome is a changing equilibrium over time according to endogenous and exogenous factors, and of which the view on performance differs from normative and static assessments. At the heart of performance, lies the transfer of knowledge, which is the decisive resource allowing to encompass the isolated measurements and findings reviewed in the literature.

As for implementing the renewed framework, the combined perspectives have introduced the importance of networks and interactions between agents, subsystems and systems present in M&A. Bearing in mind the dynamics elements, it invites to consider a longitudinal M&A investigation, structured around narratives and sequences analysis and applied to a micro-level, more likely the branches or departments of the merged firms.

Bibliography

Abbott A. (1995), Sequence analysis : new methods for old ideas, *Annual Review of Sociology*, vol.21, n°1, p.93-113

Ahuja G., R. Katila (2001), Technological acquisitions and the innovation performance of acquiring firms : a longitudinal study, *Strategic Management Journal*, vol.22, n°3, p.197-220

Allen P., R. Ramlogan, S. Randles (2002), Complex Systems and the Merger process, *Technology Analysis & Strategic Management*, vol.14, no°3, p.315-329

Almeida P., B. Kogut (1999), Localization of knowledge and the mobility of engineers in regional networks, *Management Science*, vol. 45, n°. 7, p.905-917

Anderson P. (1999), Complexity theory and organizational science, *Organization Science*, vol.10, p.216-232

Andriani P. (2003), Evolutionary dynamics of industrial clusters, in E. Mitleton-Kelly (ed), *Complex systems and evolutionary perspectives on organisations*, Elsevier Science Ltd., London

Argot L., P. Ingram (2000), Knowledge transfer : a basis for competitive advantage in firms, *Organizational Behavior and Human Decision Processes*, vol.82, n°1, p.150-169

Bartles J., R. Douwes, M. De Jong, A. Pruyn (2006), Organizational identification during a merger : determinants of employees' expected identification with the new organization, *British Journal of Management*, vol.17, p. S49-S67

Bresman H., J. Birikinshaw, R. Nobel (1999), Knowledge transfer in international acquisitions, *Journal of International Business Studies*, vol. 30, n° 3, p.439-462

Blake R., J . Mouton (1972), *Les deux dimensions du management*, Edictions d'Organisation, Paris

Buono A., J. Bowditch, J.W. Lewis (1985), When cultures collide: The anatomy of a merger, *Human Relations*, Vol. 38, No. 5, p. 477-500

Buono A., J. Bowditch (2003), *Human side of mergers and acquisitions: Managing collisions between people and organisations*, Edit. Beard Books, Washington DC

Brandenburger Adam M. & Nalebuff Barry J. (1996) *Coopetition.* NY, Doubleday

Brown J.S., P. Duguid (1991), Organizational Learning and Communities-of-practice : toward a unified view of working, learning and innovation, *Organization Science*, vol.2, n°1, p.40-57

Cartwright S., C.L. Cooper (1996), *Managing mergers, acquisitions and strategic alliances : Integrating people and culture*, Edit. Buttlerworth-Heinemann, Oxford

Cartwright S, R. Schoenberg (2005), Thirty years of mergers and acquisitions research : recent advances and future opportunities, *British Journal of Management*, vol.17, p.S1-S5

Chatterjee S., M. Lubatkin, O. Schweiger, Y. Weber (1992), Cultural differences and shareholder value in related mergers : linking equity and human capital, *Strategic Management Journal*, vol.1, n°5, p.319-334

Child J., R. Pikethly, D. Feulkner (1999), Changes in management practice and the post-acquisition performance achieved by direct investors in the UK, *British Journal of Management,* vol.10, p.185-198

Datta D. (1991), Organisational fit and acquisition performance : effects of post-acquisition integration, *Strategic Management Journal*, vol.12, n°4, p.281-297

Dickerson A., H. Gibson, E. Tsakalotos, (1997), The impact of acquisitions on company performance : evidence from a large panel of UK firms, *Oxford Economic Papers*, New Series, Vol. 49, n°3, p. 344-361

Dumez H., A. Jeunemaître (2006a), Reviving narratives in economics and management : towards an integrated perspective of modelling, statistical inference and narratives, *European Management Review*, vol.3, p.32-43

Dumez H., A. Jeunemaître (2006b), Etudier la combinaison affrontement et coopération : La notion de séquences stratégique multidimensionnelle, in S.Yami and F.Le Roy (eds), *Stratégies collectives – rivaliser et coopérer avec ses concurrents*, Editions EMS, Colombelles

Drazin R., L. Sandemands (1992), Autogenesis : A perspective on the process of organizing, *Organization Science*, vol.3, n°2, p.230-249

Dyer L., T. Reeves (1995), Human resource strategies and firm performance: what do we know and where do we need to go?, *International Journal of Human Resource Management*, vol.6, n°3, p. 656-670

Ellemers N., D. De Gilder, S. Haslam (2004), Motivating individuals and groups at work : a social identity perspective on leadership and group performance, *Academy of Management Review*, vol.29, n°3, p.459-478

Empson L. (2001), Fear of exploitation and fear of contamination : impediments to knowledge transfer in mergers between professional service firms, *Human Relations*, vol.54, n°7, p.839-862

Erez-Rein N., M. Erez, S. Maital (2004), Mind the gap – Key success factors in cross-border acquisitions, in A. Pablo and M. Javidan (eds), *Mergers and acquisitions : Creating integrative knowledge*, Blackwell Publishing, Oxford

Gammelgaard J., K. Husted, S. Michailova (2004), Knowledge-sharing behavior and post-acquisition integration failure, working paper CKG WP 06/04.

Grant R. (1996), Toward a knowledge-based theory of the firm, *Strategic Management Journal*, vol.17, p.109-122

Greenberg D., P.J. Guinan (2004), Mergers and acquisitions in technology-intensive industries : the emergent process of knowledge transfer, in A. Pablo and M. Javidan (eds), *Mergers and acquisitions : Creating integrative knowledge*, Blackwell Publishing, Oxford

Gutknecht J., J. Keys (1993), Mergers, acquisitions and takeovers: Maintaining morale of survivors and protecting employees, *Academy of Management Executives*, vol. 7, n° 3, p. 26-36

Haleblian J., S. Finkelstein (1999) , The influence of organization acquisition experience on acquisition performance : a behavioural learning theory perspective, *Administrative Science Quarterly*, vol.44, n°1, p.29-56

Hambrick D., A. Cannella (1993), Relative standing – A framework for understanding departures of acquired executives, *Academy of Management Journal*, vol.36, p.733-762

Haspeslagh P., D.B. Jemison (1991), *Managing acquisition : creating value through corporate renewal*, The Free Press, New York

Hayward M. (2002), When do firms learn from their acquisition experience? Evidence from 1990 – 1995., *Strategic Management Journal*, vol.23, n°1, p.21-40

Hunt J., S. Lee, J. Grumbar, P. Vivian (1987), *Acquisitions – The human factor*, London Business School and Egon Zehnder International, London

Hunt J. (1988), Managing the successful acquisition : A people question, *London Business School Journal*, Summer, p.2-15

Inkpen A., A. Sundaram, K. Rockwood (2000), Cross-border acquisitions of U.S. technology assets, *California Management Review*, vol.42, n°3, p. 50-71

Javidan M., A. Pablo, H. Singh, M. Hitt, D. Jemison (2004), Where we've been and where we're going, in A. Pablo and M. Javidan (eds), *Mergers and acquisitions : creating integrative knowledge*, Blackwell Publishing, Oxford

Jemison D.B., S. Sitkin (1986), Corporate acquisition : A process perspective, *Academy of Management Review*, vol.11, n°1, p.145-163

Kauffmann S. (1983), *The origin of order : self-organisation and selection in evolution*, Oxford University Press

Kavanagh M., N. Ashkanasy (2006), The impact of leadership and change management strategy on organizational culture and individual acceptance of change during a merger, *British Journal of Management*, vol.17, pp. S83-105

Kogut B., U. Zander (1996), What firms do : coordination, identity and learning, *Organization Science*, vol.7, p.502-518

Larsson R., L. Finkelstein (1999), Integrating strategic, organizational and human resource perspectives on mergers and acquisitions : a case of synergy realization, *Organization Science*, vol.10, no°1, p.1-26

Levinthal D. (1997), Adaptation on rugged landscapes, *Management Science*, vol.43, p.934-950

Lubatkin M., R. Calori, P. Very, J. Veiga (1998), Managing mergers across borders: a two-nation exploration of a nationally bound administrative heritage, *Organization Science*, vol.9, n°6, p.670-684

Lubatkin M., D. Schweiger, Y. Weber (1999), Top management turnover in related M&A's: An additional test of the Theory of Relative Standing, *Journal of Management*, vol.25, n°1, p.55-73

Machlup F.M. (1980), *Knowledge : its creation, distribution and economic significance*, Princeton University Press, New York

Marks M., P. Mirvis (1985), Merger syndrome : stress and uncertainty, *Mergers and Acquisitions*, vol.20, n°1, p.50-55

Marks M., P. Mirvis (1998), *Joining forces – Making one plus one equal three in mergers*, Jossey-Bass Inc., Publishers, San Francisco

Marks M., P. Mirvis (2001) Making mergers and acquisitions work: Strategic and psychological preparation, *Academy of Management Executives*, vol. 15 n°2, p80-94

Mitleton-Kelly E. (2003), Ten principles of complexity and enabling infrastructures, in E. Mitleton-Kelly (ed), *Complex Systems and Evolutionary Perspectives on Organisations*, Elsevier Science Ltd., London

Mirc N. (2004), Le changement identitaire lié à une modification de l'accès au pouvoir lors d'une fusion d'entreprises – l'exemple de la fusion TotalFina-Elf, Master thesis.

Nahavandi A., A. Malekzadeh (1988), Acculturation in mergers and acquisitions, *Academy of Management Review*, vol.13, n°1, p.79-90

Napier N. (1989), Mergers and acquisitions, human resource issues and outcomes : A review and suggested typology, *Journal of Management Studies*, vol.26, p.271-289

Nonaka I. (1994), A dynamic theory of organizational knowledge creation, *Organization Science*, vol.5, n°1, p.14-37

Pablo A., M. Javidan (eds) (2004), *Mergers and Acquisitions : Creating Integrated Knowledge*, Blackwell Publishers, Oxford

Paruchuri S., R. Nerkar, D. Hambrick (2006), Acquisition integration and productivity losses in technical core : disruption of inventors in acquired companies, *Organization Science*, vol.17, n°5, p.545-562

Ramaswamy K. (1997), The performance impact of strategic similarity in horizontal Mergers: evidence from the U.S. Banking Industry, *Academy of Management Journal*, vol. 40, n°3, p.697-715

Ranft A.L., M.D. Lord (2000), Acquiring new knowledge : The role of retaining human capital in acquisitions of high-tech firms, *Journal of High Technology Management Research*, vol.11, n°2, p.295-319

Rusu M., A. Miettinen, A. Varjonen (2006), HRM and firm's performance after a merger : a longitudinal study, Paper prepared for the 21st workshop on Strategic Human Resource Management, Aston, UK, March 30-31.

Sathe V. (1988), From surface to deep corporate entrepreneurship., *Human Resource Management*, vol.27, n°4, p.389-411

Schoenberg R. (2001), Knowledge transfer and resource sharing as value creation mechanisms in inbound continental European Acquisitions, *Journal of Euromarketing*, vol.10, n°1, p.99-115

Schoenberg R. (2004), Management style compatibility and cross-border acquisition outcome, in C. Cooper and S. Finkelstein (eds), *Advances in Mergers and Acquisitions,* vol.3

Schoenberg R., L. Seow (2005), Cross-border acquisitions : a comparative analysis, paper presented at the 47th annual conference of the Academy of International Business, Wuebec, Canada (July)

Schweiger, D., J. Ivancevich, F. Power (1987), Executive actions for managing human resources before and after an acquisition., *Academy of Management Executives*, vol.1, n°2, p.127-138

Schweiger D., P. Véry (2003), Creating value through merger and acquisition integration, in C. Cooper (ed), *Advances in mergers and acquisitions*, vol.2, p.1-26

Singh H., C. Montgomery (1987), Corporate acquisition strategies and economic performance, *Strategic Management Journal*, vol.8, p.377-386

Sousa-Poza A., A. Sousa-Poza (2000), Well-being at work: a cross-national analysis of the levels and determinants of job satisfaction, *Journal of Socio-Economics*, vol.29, n°5, p.517-538

Stahl G.K., M.E. Mendenhall (2005), *Mergers and Acquisitions : Managing Culture and Human Resources*, Stanford University Press, Stanford

Tajfel H., J. Turner (1986), The social identity theory of intergroup behavior, in S. Worchel and W. Austin (eds), *Psychology of intergroup relations*, Chicago, Nelson-Hall

Weber A., C. Camerer (2003), Cultural Conflict and Merger Failure: An Experimental Approach, *Management Science*, vol.49, p.400-415

Zollo M., H. Singh (2004), Deliberate learning in corporate acquisitions : post-acquisition strategies and integration capability in U.S. bank mergers, *Strategic Management Journal*, vol.25, n°13, p.1233-1256