PARADOX: NEW LENSES TO UNDERSTAND INNOVATION IN MODERN MNEs

Introduction

Management is to a large extent about dealing with contradictions and conflicting demands. A company may be envisaged as a living social community (Zander and Kogut, 1995) aiming at surviving and prosper (De Geus, 1997). This requires adaptation. Innovation means that behaviors which have been successful in the past have to be discarded, even forgotten, and replaced by others to strive in a new environment. However, companies cannot easily forget the past, the more so as their present conditions have been shaped by earlier trajectories and accumulation processes. This obviously raises contradictory pressures on management. How to keep the company together while engaging in changing course? How to keep the company's 'crown jewels' while travelling towards unchartered territories? How can the company keep its identity, its *persona*, while changing? Yet, as Giuseppe Tomasi di Lampedusa put it in *Il Gattopardo*, if one wants things to stay as they are, things will have to change.

This is the essence of paradox. Paradox is central in organization studies. Clegg *at allii* (2002) argue that the very foundation of the organization is based on paradoxical thinking: an organization is made of independent, creative individuals who, by belonging to the organization, accept a control structure. Paradox is also at the heart of innovation management. Schumpeter (1942)'s idea of "creative destruction" is paradoxical in itself. The same may be said about Quinn (1985)'s view of innovation management as "controlled chaos". The tension between exploiting and exploring is at the core of recent thinking on innovation management.

Yet, the use of paradox in international management is relatively limited. Besides the psychic distance paradox (O'Grady & Lane, 1996; Brouthers & Brouthers, 2001; Wang & Schaan, 2008), the literature provides very few references to paradox. A perusal of the subject indexes of general books on international management, such as the main textbook (Bartlett & Beamish, 2014) or the *Oxford Handbook of International Business*

(Rugman & Brewer, 2001), shows no reference to the word paradox. Relevant exceptions are Song & Shin (2008), on the paradox of technological capabilities applied to knowledge sourcing from R&D activities abroad, Yamin & Sinkovics (2007), on the effects of increased ICT-enabled headquarters control of subsidiaries on innovation performance in multinational enterprises (MNEs), and Hong & Doz (2013) account on *L'Oréal*'s use of multicultural individuals to respond the tension between global integration of activities and local adaptation.

The weak recourse to paradox thinking is surprising, having in mind the pervasive nature of dualities (local/global, headquarters/subsidiaries, standardization/adaptation, centralization/decentralization, core/periphery) in international management. We argue that the international management discipline might benefit a lot from using paradox lenses in addressing the key international management issues. This paper is intended to provide a contribution on that regard. An "appreciative theory" approach (Nelson & Winter, 1982; Nelson, 2005) will be followed. Appreciative theorizing is appropriate to undertake applied research on a specific question, using theoretical ideas in a less formal way and more as a means for organizing analysis. This will highlight the importance of espousing Janusian thinking (Rothenberg, 1979), duality theory (Ford & Backoff, 1988; Sutherland and Smith, 2011) or paradox lenses (Lüscher & Lewis, 2008) to improve the quality of both the research and the managerial decisions in the international business field, especially those dealing with innovation issues.

The present paper is organized in five sections, besides this introduction. First, the concept of paradox and its main managerial implications will be presented. Then, top managers are envisaged paradox managers, aiming to respond the challenges raised by conflicting demands, and a brief analysis of the main ways open to address paradox in organizations will be provided. The third section delves on the role of paradox in international management, particularly in innovation management, highlighting how contradictory pressures are at the heart of managing innovation in the MNE. This provides the framework to more closely examine four key paradoxes which firms with international operations have to deal with. In the final section, a brief summary of the main findings is provided, followed by an analysis of the interactions among the paradoxes, and main managerial implications stemming therefrom.

Paradox: Concept and Managerial Implications

The term 'paradox' applies when apparent conflicting propositions or elements which are simultaneously present in a way that actions aimed at resolving the inherent contradiction or tension leads to new dilemmas (Abdallah *et allii*, 2011; Clegg *et allii*, 2002). According to Poole & Van de Ven (1989: 563-4), "a paradox is (…) a puzzle needing a solution", thereby involving "tensions, oppositions, and contradictions".

Paradoxes are pervasive in management, applying to multiple dimensions of business administration. A few examples (planning versus acting; leadership *versus* empowerment; analysis *versus* intuition; and focus *versus* flexibility) are briefly presented below.

Consider first the planning *versus* acting duality. Planning is important to provide a structure for managerial action. However, it is impossible to plan every contingency in advance, while too much planning may stifle action and adaptability. But action without a planning frame may become purposeless, becoming hostage of short-termism. Therefore, a (dynamic) compromise needs to be achieved. A host of literature, in the wake of Weick (1993), has argued that improvisation is the key to address this paradox (for instance, Moorman & Miner, 1998a and 1998b; Cunha *et allii*, 1999; Clegg *et allii*, 2002).

Leadership *versus* empowerment portrays another duality[1]. Leadership is commonly envisaged as the capacity to develop as vision and to mobilize others to commit themselves in order to develop the activities perceived as required to turn the vision into reality. In contrast, empowerment is defined as the process of enabling "individuals in a firm to act in their own initiative but in the interests of the team as a whole" (Crainer, 1995: 1112). Where is leadership left if individuals take actions in their own initiative? On the other hand, it may be argued that the existence of a leader leaves no room for autonomous individual action by team members: they should obey. From this perspective, leadership and empowerment collide. However, the contradiction is only apparent. In fact, empowerment only makes sense in the context of an overarching

[1] Another interesting duality concerns managerial and organizational capabilities. For instance, Goddard & Eccles (2013) convincingly argue that "the need for extraordinary management suggests a poorly designed organization".
(Jules Goddard & Tony Eccles (2013), Uncommon sense, common nonsense, Londres: Profile Books, pg. 132)

shared perspective. More important, leadership is not absolute power. Carlos Ghosn, the former CEO of *Nissan*, argued that leaders face a paradox: "on the one hand, you have to be more confident and secure, but on the other, you have to be a lot more open and empathetic" (Barton, Grant & Horn, 2012)[2]. As Karl Jung, the founder of Analytical Psychology, put it, the true leader is always led, insofar as leadership is to a large extent the capability to provide articulation and sense-making to the inner beliefs of the group.

Analysis *versus* intuition provides another example of management tension. Textbook presentation of managers' work emphasizes the analytical dimension. The main task of strategic planning departments is portrayed as processing and analysing data enabling to assess the firm's position and challenges in the context of a specified framework (for instance, Porter's five forces). On the other hand, airport literature on successful CEOs stresses their intuition and decision-making capabilities (see for instance the wave of books on Steve Jobs). In fact, both are relevant. Analytical thinking is essential for evidence-based management. However, intuition may be the sparkle that makes the difference. The case of the development of *Losec* by *Astra* provides a good example of a blockbuster drug that would have never came to the market if the analytical routines on budget assignment were followed. CEO's intuition and trust in the 'product champion' made the difference. Intuition may be fuelled by tacit knowledge about a specific topic, as in the previous case, but also by reading poetry, as Moya Greene, the CEO of United Kingdom's *Royal Mail Group* has implicitly suggested (Barton, Grant & Horn, 2012).

Focus versus flexibility in opportunity exploitation is another interesting example. Bingham *et allii* (2014) present the results of a recent research on that topic, contrasting two company types: 'opportunists' and 'strategists'. They found that 'opportunists' are very flexible on opportunity selection but often become too rigid on execution, while 'strategists' tend to be more flexible on this regard. The main message is the need for balancing focus and flexibility. More important, contingent on the phase (opportunity selection or opportunity execution) considered, such balance requires distinct mixes.

The four examples presented above suggest a common pattern: dealing with paradoxes requires not an either/or, but rather a copulative approach: an 'and'. The two 'sides' of the paradox are related, and they are not amenable to elimination (Clegg *et allii*, 2002).

[2] The same contradiction has also been expressed in a recent article by Andrew Hill in *Financial Times* (Hill. 2015).

Some kind of balance or 'escape', involving both 'sides', has to be crafted. This mainly entails action, to enable structuring (Clegg *et allii*, 2002). However, very often the 'solution' or the 'synthesis' (see next section) is temporary. It is a "quasi-resolution of conflict" (Cyert & March, 1963), not a long term solution. It may be envisaged as an 'armistice' in a never-ending dialogical conflict. This feature seems particularly poignant in the case of MNEs. In these companies, the interplay and the potential contradictions between internal and multiple environmental forces are very acute, being pervaded by simultaneous tensions of stability and change (Cantwell. Dunning & Lundan, 2010).

MNEs' Top Managers as Paradox Managers

It was argued above that a MNE is a social community. Managing knowledge is one of its key tasks (Caraça & Simões, 1995; Kogut & Zander, 1992 and 1993; Zander & Kogut, 1996). However, it is a 'community of difference', since there is a recognition of commonalities and differences throughout the organization (De Weerdt, 1999); for instance, employees in different countries belong to the same organization, and may share a common company culture, while being different in the way how they process information and interact, due to linguistic and national cultural differences (Joshi & Lahiri, 2015). Furthermore, the MNE has different types of 'embeddedness' (home country, host countries, industry, value chain), each one with specific characteristics. This raises tensions and contradictions, thereby generating significant managerial challenges. For the sake of economy, in this piece of work we will focus on top managers only.

Mintzberg (2001) highlights the existence of two different faces of management, which may be envisaged as paradoxical: the *yin* and the *yang* of management. There are different views about MNEs' managers role, which are contingent upon the underlying theory of the MNE (Forsgren, 2013). However, irrespectively of the theory espoused, dealing with paradox becomes omnipresent when investigating about top managers' challenges and achievements.

For instance, envisaging the MNE as a differentiated network (Ghoshal & Bartlett, 1990; Ghoshal & Nohria, 1997), Bartlett & Beamish (2014) suggest that top level

corporate managers have three main responsibilities: providing direction and purpose; leveraging corporate performance; and ensuring continual renewal. Interestingly, all these responsibilities are pervaded by contradictions. Providing direction and purpose is not straightforward, since different divisions in the company may have different requirements and visions of the future. For instance, the recent shift of *Philips* towards a "circular economy" (Fleming & Zils, 2014) is not envisaged in the same way by different businesses. With regard to corporate performance, it is important to remark, following Cameron (1986), that effectiveness is not immune to paradox: on the contrary, "the complexity of effective organizational performance cannot be evaluated without considering simultaneously opposites" (Cameron, 1986: 551). Continuous renewal is a paradox-ridden field, in which the tensions between (1) inertia and change (Criscuolo & Narula, 2007) and (2) nurturing existing capabilities and developing brand new ones (Leonard-Barton, 1995; Teece, 2009) are always present.

If a politicizing view of the MNE (Forsgren, 2013) is adopted, top management's role is two-folded: to promote the legitimacy of the MNE as well as of its subsidiaries; and to influence the design of worldwide rules and standards (Kostova & Zaheer, 1999; Forsgren, 2013). Again, paradox is present: a subsidiary faces contradictory pressures for isomorphism at country and at corporate levels. As Forsgren (2013. 147) underlines, "as a result a number of 'isomorphic conflicts' arise throughout the multinational that manifest themselves in a state of flux arising from perpetual bargaining between different interests".

Therefore, there are good reasons to argue that a key role of MNEs' top managers is to manage paradox. Such paradoxes include, but are not restricted to, the following: local *versus* global businesses; efficiency *versus* adaptation; exploitation *versus* exploration; headquarters' control *versus* subsidiary initiative; country of origin imprint *versus* global mindset; and internal network *versus* external (multi-country) networks. Interestingly, the coexistence of these paradoxes in the MNE is simultaneously a liability and an asset. It is a liability, since the firm has to address them and to find workable approaches for the "quasi-resolution" of the contradictions. It is an asset, insofar creative ways to combine or transcend opposites may provide the firm with a

significant leverage *vis-à-vis* competitors. As Mr. Percy Barnevik, the charismatic CEO who led the *Asea Brown Bovery* merger[3], argued (Taylor, 1991/1992: 897):

> "*ABB is an organization with three internal contradictions. We want to be global and local, big and small, radically decentralized with centralized report and control. If we resolve these contradictions, we create real organizational advantage*"

Successive visions of MNE organization and strategy, from the heterarchy (Hedlund, 1986), the Integration-Responsiveness framework (Prahalad & Doz, 1987) or the transnational firm (Bartlett & Ghoshal, 1989) to the metanational firm (Doz, Santos & Williamson, 2001) or the AAA framework (Ghemawat, 2007) are endeavors to respond conflicting tensions.

Responding Paradox: Different Approaches

There is not a single, let alone a 'one best way', to respond paradox. Extant literature (Abdallah *et allii*, 2011; Andriopoulos & Lewis, 2010; Clegg *et allii*, 2002; Cunha & Rego, 2010; Lewis, 2000; Lüscher & Lewis, 2008; Poole & Van de Ven, 1989; Sutherland & Smith, 2011) provides different approaches. It shares, however, three common considerations. First, most paradoxes cannot be solved, in the sense that a definitive response to the underlying tension is not possible. Second, responses are in most cases the result of action, being "enacted, not designed" (Clegg *et allii*, 2002). While creativity in identifying "quasi-resolutions" may play a role, the acid test is in the field, in the process how actions are carried out, and how "reinforcing cycles" (Lewis, 2000), that is vicious cycles, are overcome. Third, as pointed out above, responses are temporary: after some time has elapsed, the tensions will emerge again, in similar or different forms. Building especially upon Poole & Van de Ven (1989), it is possible to identify five main ways to address paradox: opposition recognition; spatial separation; temporal separation; integration, and synthesis.

Opposition recognition corresponds to the acceptance of the paradox. The approach is to use it constructively to deal with the inherent tensions. This may be done by emphasizing one of the poles, as is the case of franchising, in which the standardization

[3] Ironically, in spite of his own experience in dealing with paradox, Mr. Barnevik seems to have fallen prey of his own contradictions.

pole clearly prevails over adaptation. Another possibility is loose-coupling, through the establishment of minimal structures that provide a frame for accommodating the contradictions (Weick, 1979; Clegg *et allii*, 2002; Poole & Van de Ven, 1989).

Spatial separation involves the identification of the most appropriate organizational levels to focus on each 'side' of the paradox, and the setting up of processes through which such levels are interrelated. For instance, when the product cycle model was the prevailing frame for the internationalization of American firms (Vernon, 1966), following a projection approach (Doz, Santos & Williamson, 2001), exploration took place at headquarters level while foreign subsidiaries were mainly in charge of exploitation activities, which replaced an earlier export strategy. However, this response held in a mono-polar or bi-polar world. The development of globalization and the dispersion of innovatory centres, leading to home-base augmenting subsidiaries (Kuemmerle, 1997), made the model no longer feasible.

Time segmentation of the 'horns' of the paradox is the hallmark of the temporal separation approach. This approach may be adopted in line with the development of a product life cycle or of a technology S-curve. In earlier periods, before the emergence of a dominant design (Abernathy & Utterback, 1978), innovatory activities would be focused on exploring new product designs; when a dominant design emerges, the focus is put on exploitation and process innovation; finally, when the product becomes mature, the exploration 'horn' becomes dominant again.

The fourth approach is *integration*, which corresponds to the establishment of operational methods for the "quasi-resolution" of the paradox. Percy Barnevik's *Asea Brown Bovery* provides a good illustration. In fact, the method he devised to respond the big and small paradox has been to decompose the organization in 1,100 smaller operational units, responsible for specific businesses, which, while located in a single country, had to report simultaneously to two bosses: the leader of the business concerned, and the president of the country subsidiary (Taylor, 1991/1992).

Grounded on a dialectical perspective, *synthesis* is the fifth approach. It involves the introduction of a new concept or perspective to address the paradox. The synthesis corresponds to a creative reframing of the terms, in order to transcend the original 'sides', thesis and antithesis. A good example of synthesis are what Abdallah *et allii* (2011) have called "discourses of transcendence". These are open a new opportunity

window for organization members, contrasting with the dominant pessimistic mood associated to the perception of a deadlock (Abdallah *et allii*, 2011). The new course of action is portrayed as solving past contradictions, in order to reach the "pastures of heaven" (Steinbeck, 2013/1932) or, to quote Whitman (1855/2004), "the port is near, the bells I hear, the people all exulting" or as aiming at mobilizing the MNE's social community towards a way out of current troubles and hopeless feelings. The idea of thriving in a "circular economy" presented by *Philips* CEO Frans van Houten ressembles a discourse of transcendence (Fleming & Zils, 2014). In fact, it provides a new vision for the company "to design products that are upgradable and maintainable ant that can be mined for material and components that can be reused", requiring a "mind-set [that is] 15 years out" (Fleming & Zils, 2014: 5).

As shown above, these five approaches may apply to different issues faced by MNEs, from company restructuring to strategy. In the present paper, the focus is on MNEs and innovation. Therefore, we will turn now to the relevance of paradox lenses to understand innovation in the MNE.

The Challenges of Innovation in MNEs: A Paradox View

Van de Ven *et allii* (1999:12) suggested that "the central problem in leading the innovation journey may be the management of paradox". Innovation is at the crux of paradox thinking, since it deals with change and stability. It is intended to provide the firm with a temporary advantage, which should be as long as possible to reap the inherent benefits. Innovation which is not followed by stable competitive advantage may be, at the end, detrimental to the innovating firm, as Porter (1985) has shown[4].

Innovation production and diffusion have become global. Therefore, innovation has become, more than ever, a key vector for firms to develop ownership advantages, irrespectively of its main features: home base exploiting, home base augmenting or borderless (Kuemmerle, 1997; Rocha *et allii*, 2014). Paradox lenses may be used to address a wide array of innovation challenges in MNEs, which are impossible to encompass in a short paper like this. Therefore, a set of four issues was chosen; these

[4] However, in principle, that will not be the case for customers' welfare, since this is improved by stiffer competition among manufacturers or service providers.

are, in our view, particularly interesting to be approached from a paradox perspective: capability as leverage *versus* capability as fate; structure *versus* flexibility; cooperation *versus* competition; and convergence *versus* divergence. Table 1 below summarizes the key elements involved and provides examples of the paradoxes addressed.

It is important to remark that we do not contend that the four paradoxes selected are the most important for research on innovation in MNEs. They should rather be envisaged as distinct, though interrelated, illustrations of the power of paradox thinking for international innovation management.

Capability as leverage *versus* Capability as fate

Helfat *et allii* (2007) and Teece (2009) argue that technical fitness alone in not enough to ensure the development of dynamic capabilities: evolutionary fitness, that is, "how well the capability enables a firm to make a living", related to the external selection environment, becomes key (Teece, 2009:7). However, this is just one part of the issue. In fact, the lack of evolutionary fitness may stem mainly from the internal selection environment than from the external environment. In fact, there is a risk that capabilities become a fate, being equated to the company's *persona*, and thereby superseding it. In other words, organizational inertia provides an internal selection environment that stifles novelty, and compels change to take place under the existing frame. Therefore, technical prowess is not enough to ensure innovation, since the forces of organizational inertia are stronger.

The case of *Kodak* provides a good illustration of this problem. *Kodak* has been the first company to develop a prototype of a digital camera. It has even launched digital cameras in the market. Its weakness was not of technological nature. It was mostly organizational. Paradoxically, the very factors which propelled *Kodak* towards an (almost) uncontested leadership of the photography business for around one century have been the same which fostered its fall. *Kodak* had anchored its growth on two capabilities: chemical technology (the film itself and film processing) and the worldwide dealership web. These two capabilities were envisaged as fate: for most of *Kodak*'s community, the company was firm and retailing. While the company has researched on digital image, this was envisaged just as a marginal aspect. Ironically, the company fell pray of its historical assets. The company was not able, through action, to enact a synthesis (Clegg *et allii*, 2002) between past capabilities and future challenges.

Table 1: Paradoxes in Managing Innovation in MNEs

Paradox	Isssues	Organizational Response	Examples
Capability as leverage *versus* Capability as fate	How to avoid that core capabilities become core rigidities? How to match technological prowess with organizational willingness? "Company strengths are also, simultaneously, its weaknesses" (Leonard-Barton, 1995).	Overcoming paradox through a new synthesis based on action. Such synthesis often comes from the periphery, not from the centre. (Or incapacity to escape from the traps of the past. Adaptation constrained by the core assets and mind frames which made the company to strive in the past).	Intel: The D-ram decision Intel: Intel Centrino Kodak
Structure *versus* Flexibility	Establishing focused organizational structures and implementing ICT promote control and efficiency. However, they jeopardize adaptation and may stifle joint learning experiences and exploration initiatives.	Opposition (minimal structures) and Time segmentation. Adopting more decentralized structures to foster inter-departmental cooperation Implementation of standardized approaches to ensure common practices and easier information exchange followed by assignment of (some) autonomy to key subsidiaries.	Coca-Cola Company. Microsoft
Cooperation *versus* Competition	The company invests in innovation alone to follow competitive innovation strategies with a view to achieve monopolistic positions. Going alone increases costs are reduces the odds of establishing *de facto* standards. Cooperation to reduce costs, to face other rivals or to combine complementary capabilities. However, cooperation entails vulnerability, and exposure to partners' opportunistic behavior.	Simultaneous cooperation and competition by spatial segmentation and opposition. Establishment of a joint venture for common development and manufacturing while products have a common robust design with minor aesthetic differences and are marketed under different brands	AutoEuropa (Ford/Volkswagen) Renault-Nissan
Convergence *versus* Divergence	Divergence as a chaotic or random process of generating new product ideas through "learning by discovery". Convergence as an organized process of integration and implementation of ideas, based on learning by testing. Too much convergence may stifle innovation, while too much divergence jeopardizes innovation focus.	Synthesis (Disciplined imagination), Time segmentation and Spatial separation. Product development is a never-ending game. Subsidiary capabilities identify distinctive requirements and contribute with specific knowledge. Convergence to get the whole picture to achieve a faster international product roll-out. Segment adaptation needs foster a new divergence cycle.	Whirlpool: the world washing machine project. Unilever McDonald's

Intel's decision on the D-ram business in the early 1980s provides a contrasting example. Interestingly, as in *Kodak*, a part of top management group envisaged capabilities as fate: *Intel* was born as a memory company, and it should continue to be so. Capabilities were a factor of inertia. However, the external selection environment was negative: Japanese companies were far more efficient, and were capturing increased market shares. Action by middle managers, namely securing the *IBM* account, has been the key instrument for ensuring a 'Capabilities as leverage' view (Cogan & Burgelman, 1989). The recourse to a relatively marginal technology was essential for the transition from memories to micro-processors, providing *Intel* a new competitive breathing spell. However, this has enabled just a short-term advantage. The *Intel Centrino* saga shows how former heterodoxy became orthodoxy, and how it constrained the move toward mobile computers. The response to the "hotter than the sun" challenge came from the periphery (Israel research unit), not from the center (Santa Clara), although it has been, this time, backed by top management (Burgelman & Meza, 2007).

This paradox is closely related to the capability-rigidity paradox (Leonard-Barton, 1995; Atuahene-Gima, 2005). There is, however, a twist, since focus is put on the organizational perspective, and not on the technical one. In fact, in our view, the crux is not related to technology mastering, but rather to organizational mind frames. As Hamel (2000) put it, organizational processes (and, therefore, organizational power) are often led by "the defenders of the past", and not by the action-based creators of the future. When organizational capabilities are envisaged mostly as fate, that is, as the defining vectors of the 'company way', inertia tends to prevail over change. For capabilities to be levers for creating the future, some kind of diving into the unknown is needed: this is not easily accommodated with the complacency stemming from past achievements. But, paradoxically, former challengers usually become the *status quo* defenders at a later stage. Therefore, firms are bound to continuously navigate between the 'Scylla' of becoming prey of past successes and the 'Charybdis' of venturing into unchartered waters.

Structure *versus* Flexibility

It is well known that when innovative firms are young, they tend to espouse an organic behavior, characterized by flexibility and by problem- or project-oriented approaches, rather than by clear organizational divisions. However, as time goes by, (informal)

structuring leads to (formal) structures. Successful companies become more organized, that is, more efficient to take profit of past achievements. A standardized approach may emerge as a result of the 'crystallization' of earlier successful approaches. This is intended to promote efficiency, further enhancing the benefits from a successful business way. However, the company may risk to 'freeze' an assumedly successful structure and a way of doing business. The downside is the strength of entrenched approaches, which constrain company adaptation. The company may become prey of the product which has been behind its earlier success.

The international expansion of *Coca Cola Company* is a good example of the missionary approach pointed out by Hedlund & Kogut (1993), through the standard overseas replication of successful business approaches developed at home. *Coca Cola* has been conveying the 'American-way-of-life' everywhere: the 'dirty water of capitalism' had a very strong appeal, especially for groups of customers which were not able to have access to it (remember the accounts of east-Berliners reactions after the fall of the wall). However, *Coca-Cola* has also learned the drawbacks of the standardized approach. After the charismatic leadership of Roberto Goizueta, a call was launched to mobilize 'local forces' and initiatives in order to adapt the company strategy to different local conditions. Marketing campaigns were 'localized' with a view to foster empathy with the brand. More recently, the need for escaping from the standardized approach has been voiced by Muhtar Kent, *Coca-Cola* chairman and CEO, in the following terms: "we worked hard to source more products from within India and deepen our ties to the Indian market" (Kent, 2013). The idea is to introduce flexibility by structuring local action in specific countries to escape the overall structure, which might becoming too constraining for the company to strive in large, non-Western markets. Therefore, even a successful firm as *Coca-Cola* cannot stand still. It has to stimulate structuring forces, in order to avoid being trapped by the structural, 'freezing' forces of the 'one best way'.

Microsoft provides another, though different, example of the interplay between structure and flexibility in promoting innovation. In spite of its extraordinary wealth[5], *Microsoft* is facing some difficulties in coping with fast change. In 2005, Steve Ballmer promoted an organizational revamping that included the setting up of "cadre of powerful and autonomous divisional business leaders" (Financial Times, 2013). In 2013, faced with

[5] This has involved, according to some, namely European Union Competition authorities, unlawful anti-competitive behavior.

the competitive challenges of *Apple* and *Google*, among others, Ballmer found that such structure inhibited flexibility: it was leading to organizational silos, hindering the inter-organizational inter-action and the capabilities' cross-fertilization required to design new platform approaches (Financial Times, 2013). The new CEO, Satya Nadella, further rejigged *Microsoft*'s top management with a view to foster flexibility and change. He made a plea for an "'all in' commitment as we embark on the next chapter for the company", in order "to drive clarity, alignment and intensity across all our work" (The Economic Times, 2014). Decisions which made sense in times of uncontested leadership may be inappropriate to ensure the creativity and the cross-disciplinarity needed to devise innovative solutions in more challenging times.

These examples of two companies widely recognized as successful show that too much structuring along the lines which made past successes may risk jeopardizing their competitive advantages. To foster innovation, top managers need to avoid company ossification and divisional silos as well as a home-country bias. Following Clegg *et allii* (2002), enabling organizational flexibility on the basis of minimal structures gives room to foster initiative that may help to reshape the firm, escaping from the organizational 'crystallization' trap. In the cases surveyed here, time segmentation (and spatial separation, for *Coca Cola*) has been the approach followed to address the paradox.

Cooperation *versus* Competition

This is an old paradox, which gained significance since the late 1980s, when the limitations of one-sided competitive strategy became more evident. The traditional perspective of 'going alone', in order to fully appropriate the benefits from innovation (Porter & Fuller, 1986), came under increasing criticism. The faster pace of technological change and the multi-technology content of most products led firms to concentrate on core capabilities. The approach demanded cooperative initiatives to explore reciprocal strengths. The so-called 'relational view' (Dyer & Singh, 1998) has underlined the opportunities stemming from cooperation, in terms of both increased efficiency, by learning to work together, and innovativeness, by combining complementary knowledge streams. However, the 'co-opetition' neologism coined by Nalebuff & Brandenburger (1996) shows that cooperation is pervaded by paradox, for two main reasons. First, there is always a tension between cooperating and going alone, the more so as the level of inter-partner trust is low. Second, each partner is vulnerable

to other partner's opportunistic behavior. This is especially evident in learning alliances. As Khanna, Gulati & Nohria (1998) have shown, an alliance involves both 'common' and 'private' benefits. When the *ex-ante* perception of 'private' benefits is higher than that of 'common' ones, tensions may lead to the end of the alliance. Furthermore, intra-alliance balances are also shaped by each partner's perception of opportunity sets outside the alliance (Khanna, Gulati & Nohria, 1998) as well as by the learning about other partner's motivations and behavior (Doz, 1996).

The automotive industry provides several interesting examples of (usually temporary) approaches to cooperation *cum* competition. The creation of *AutoEuropa*, a joint venture between *Ford* and *Volkswagen* to manufacture multi-purpose vehicles (MPV), provides an interesting case of spatial segmentation. When the joint venture was designed, in the late 1980s, the market for MPV was emergent, *Chrisler* and *Renault* being the first movers. The need to share risks and costs led *Ford* and *Volkswagen* to join forces to design and manufacture MPVs. However, each firm went alone marketing-wise, selling the product under their own brands. However, the products were in fact very similar, based on a common robust design to which brand introduced minor aesthetic changes (Vale, 1999). Interestingly, the joint venture was managed following a split control approach, some functions being assigned to *Volkswagen* and others to *Ford*, though the general manager was from the former. After a relatively successful market launch of the products, partner's perception of the risks declined as well as their assessment of the balance between private and common benefits. In 1999, less than 10 years after market launch, *Ford* divested from the joint venture, by selling its equity stake to *Volkswagen*.

The *Renault-Nissan* alliance is now more than 15 years old. It provides another example of the binding force of cooperation, although it is not immune to tensions. The alliance emerged as a result of the perception of the need to gain weight in face of a trend towards concentration in the industry. *Nissan* was desperately looking for a 'white knight' to escape bankruptcy. *Renault* followed a more strategic approach, based on the learning from its former cooperation with *Volvo* (Masclef *et allii*, 2008).

The organizational approach to address the cooperation *versus* competition paradox was based on opposition and spatial segmentation. Opposition insofar as there was an understanding of the impossibility to merge French and Japanese company cultures.

Renault took the lead, nominating the Brazilian-Lebanese-French Carlos Ghosn to be in charge of *Nissan*'s management. Significant changes were introduced (see Ghosn account *in* Barton, Grant & Horn, 2012). However, respect has been shown to *Nissan*'s history and engineering prowess. Spatial segmentation was expressed in alliance's design, allowing for cross-shareholdings to keep the two companies and the respective brands independent. Again, the marketing field was kept separated, each partner keeping distinct brands and dealership networks.

These two cases express different approaches, though sharing some similarities, to the cooperation *versus* competition paradox. The *AutoEuropa* joint venture was restricted to a single vehicle, being intended as an 'armistice' in competition. There was, since inception, the idea that it would be a temporary instrument aimed to reduce the costs and risks of entering a new, promising market segment. After achieving such objective, when the vehicle was approaching the end of its life cycle, the binding glue no longer held, and *Ford* sold it share to the partner. The opposition between cooperation and competition was inherent to the alliance. Spatial separation was essential to ensure 'private' benefits as well as to create options for the post-alliance. In *Renault-Nissan*, organizational integration was simultaneously wider and smaller. Wider insofar the alliance has a bigger scope and cross-equity shareholdings were implemented; smaller, since no common manufacturing organization was established. Spatial separation in marketing emerged as the main instrument for accommodating tensions, though it may raise other contradictions. While all accounts assess *Renault-Nissan* as a very successful alliance, it will not stand forever. While a dissolution of the alliance seems, at the time of writing, unlikely, it cannot ruled out, since adaptation moves (expressed for instance in the redefinition of cross-shareholdings) may no longer solve conflicting interests. Conversely, a merger cannot be ruled out either. Time will show which possibility will unfold.

Convergence *versus* Divergence

Van de Ven *et allii* (1999) account of the development of cochlear implants shows how innovation is fostered by the paradox between convergence and divergence. "The innovation journey is a nonlinear cycle of divergent and convergent behaviors that may repeat itself over time and reflect itself at different organizational levels" (Van de Ven *et allii*, 1999: 213), in a way that management cannot control it. Each 'side' of the

paradox is relevant, but if one of them is carried too far, innovation performance suffers: too much convergence may stifle innovation. It does not allow for the emergence of different views and contradictory ideas to generate creative syntheses which may enable a specific, difficult to replicate, value proposition; in contrast, too much divergence may endanger innovation because it does not enable focus and appropriate delivery time.

Taking these findings as a starting point, we will introduce a twist to adapt it to the spatial dimension of MNEs' innovation projects. MNE growth has been based on different mixes of the convergence versus divergence approaches. The MNE was traditionally envisaged as anchored on its home country-generated capabilities to launch international products (Vernon, 1966). Later, it has been considered as an orchestrator of internationally dispersed capabilities to stimulate new syntheses (Cantwell, 1995; Kogut & Zander, 1993). More recently, it was portrayed as a less dynamic organization in which the power struggle between headquarters and subsidiaries, expressed in the implementation of standard Enterprise Resource Planning (ERP) software might jeopardize subsidiary initiatives and overall company exploration moves (Yamin & Sinkovics, 2007).

Looking at corporate examples, one finds distinct approaches. For instance, *Unilever* has followed a divergent path, putting a strong focus on product adaptation to different local conditions, while *McDonald*'s key asset has stressed convergence, through the replication of food products and a delivery approach which had been successful in the USA. However, both had to pay tribute to the other 'horn' of the convergence/divergence paradox, as the cases of the international leverage of *Timotei* shampoo and the change of *Big Mac*'s ingredients in India illustrate.

The case of the development of *Whirlpool*'s *Duet* or *Dreamspace* washing machine, in the early 2000s, provides an excellent illustration of cycles of divergence-convergence-divergence in MNEs' product development. The starting point has been the perception of a significant divergence of clothing washing habits, giving rise to different washing machine designs (Bartlett & Ghoshal, 1989). The goal of creating a worldwide washing machine was a dream long held by *Whirlpool*. The intention was to contribute to overcome international washing habits by launching a machine that might combine the features of different approaches in a coherent whole (Financial Times, April 29, 2002). A team of 65 people comprising designers, engineers and marketeers from the

Whirlpool units in Germany, Italy and the USA worked hard to develop a new washing machine, combining the European approach of frontal feeding with American requirement to process large volumes of clothing. This is an expression of convergence, which might enable significant benefits in terms of product design and economies of scale in manufacturing. However, convergence was not complete: the product was marketed under two different brands: *Duet* in the USA, and *Dreamspace* in Europe. Interestingly, *Whirlpool* experience in China and India revealed the limits of product convergence, leading to another cycle of adaptation to specific product conditions. More recently, in 2012, *Whirlpool* announced an alliance with the Chinese retailer *Suning Appliance Co*. to enable better access to other retailers in small cities of hinterland China.

This case highlights how the attempts to solve the convergence/divergence paradox are temporary. The limits of the convergence intended to respond a Triadic world (USA, Europe and Japan) have been made clear when the company aimed at strengthening its presence in emerging markets, which require different trade-offs. Product development is a never-ending game. Subsidiary capabilities do help in underlining specific, distinctive requirements and in contributing with specific knowledge streams. But there is also a need to figure out the whole picture in order to achieve a faster roll-out of the product in multiple national markets with similar customer segments. The capacity to orchestrate distinct subsidiary capabilities becomes very relevant to develop specific, difficult to imitate, value propositions. But these need, at a later stage, to be 'fine-tuned' to different market conditions and requirements.

Discussion and Conclusions

The four perspectives presented above are illustrations of the central role of paradox in MNEs' innovation activities. The first perspective contrasted capability as leverage and capability as fate. The company may be envisaged as a bundle of resources and capabilities. This is often the basis for the development of specific, difficult to replicate, market offers. However, when the company goes complacent and capabilities are framed in the context of existing product/markets, they hinder innovation. Interestingly, this seems to happen more due to organizational rigidities than to technological backwardness. The response to this paradox demands the development of new

syntheses, able to frame the firm's mission in a different way and to provide a new orientation for firms' innovation endeavors.

The structure *versus* flexibility paradox is related to a different kind of organizational contraction. On the one hand, clear structures promote control and efficiency in the organization. On the other, they may limit subsidiary initiative, inhibit adaptation to new circumstances and constrain those 'unexpected encounters' which may be the basis for exploration. The approaches to deal with this paradox usually involve the setting up of minimal structures or time separation, according to the main products life cycles, or even spatial segmentation, as in the case of *Coca Cola*. Recognition of the risks of 'crystallizing' earlier successful structures is essential to manage the future development of the company. New winning approaches may come from the periphery, and not necessarily from the center.

Competition *versus* cooperation is probably the most well-known paradox. It applies to both domestic and international settings. Issues are, however, compounded in the latter, due to contextual and cultural differences. The establishment of a dynamic balance between 'private' and 'common' interests, to ensure that the latter are not put into jeopardy by the former, becomes essential for the cooperative relationship to be mutually successful. The cases analyzed provide good examples of successful cooperation; however, competitive tensions have not been eliminated altogether. *AutoEuropa* is a good example of alliance termination when the balance of 'common' to 'private' interests had changed in favor of the latter. Most probably, this issue is behind the spatial segmentation adopted in both cases (*AutoEuropa* and *Renault-Nissan*), leaving marketing issues to a large extent independent from the alliances.

The process of product development in general, and especially in MNEs, is pervaded by the convergence *versus* divergence paradox. In MNEs there may be a 'polyphonic' approach to product development, involving headquarters and specific subsidiaries, to take account of market differences. Different voices need to be heard, especially of those who are at the 'front office' in different locations, but a synthesis needs to be achieved. This is, divergence is followed by convergence. But when the convergence outcome, that is the product, is launched in multiple markets, its performance is often variable, raising the need for further divergence to cater for specific markets needs and behaviors. As the *Whirlpool* case has shown, this may lead to a new divergence cycle.

Taking the paradoxes together, it is important to pinpoint the relationships existing among them. The 'capabilities as fate' approach tends to foster structure and 'crystallization', the more so as it emerges from past successful performance. This is likely to give rise to hubris, inertia and insufficient attention to change, especially the one coming from the periphery. It may become very difficult for the organization to frame the future in terms significantly different from the past. The successful recipe superimposes on capability assessment and organizational structure. When problems become more evident, attempts to change organizational structure are launched. However, if the mind frame of key people in the organization is not changed (Bartlett & Ghoshal [1989] would say, the psychology), such attempts are prone to failure. The case of *Kodak* provides a good example.

When the organization is 'crystallized' and hubris is dominant in top managers, divergence becomes increasingly difficult. The successful recipe stifles diversity. Sometimes, top managers have a sharp perception of being caught in a kind of 'Abilene paradox': they tell their staff encouraging and reassuring words, when they are themselves full of doubts; and staff's reaction would most probably be what it is thought that the boss would like to hear. This raises a vicious cycle of evasion, which further undermines company's health and constrains the possibilities for divergent perspectives and fresh views to emerge.

Capabilities as fate may also reduce the company's cooperative drive. If we are thought to have the best 'crown jewels', how can we allow intruders to enter our castle? If we have the most valuable capabilities, what can we learn from others? Hubris is against humbition (humility *cum* ambition)[6] and cooperation. The company's assessment of 'private' and 'common' benefits (and costs) from cooperation is biased by its managers' mind frame.

This paper was intended to use an appreciative theorizing approach to highlight the role of paradox in MNEs' innovative activities. The use of what we called paradox lenses provided a new view of the challenges and opportunities of innovation in MNEs. This leads to think in terms of 'dualities', and not just of single elements. Furthermore, as we have shown, such dualities are inter-related. This provides a more 'mixed' and complex view of innovation management in the MNE.

[6] We borrowed this neologism from Cunha & Rego (2010).

Our contribution has three main limitations. First, it is based on the analysis of secondary data, and not of primary data collected by the authors on the basis of their fieldwork. Further, we have not been able, due to time restrictions, to carry out a wide search of information on the cases presented. Finally, the paper has just has addressed a limited number of paradoxes, deliberately leaving others aside.

In spite of these limitations, we do hope to have contributed to shed a new light on innovation management by highlighting different, simultaneously contradictory and coexistent, views. The international management field is simultaneously diverse and complex. Paradox lenses may provide an encompassing perspective to better address such diversity and complexity, underlining the limitations of one-off approaches and 'solutions'. Therefore, we conclude by making a plea for other scholars to use such lenses in pursuing international management research.

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