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An Asymmetric Perspective on Co-opetitive Strategies

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Abstract:

Situations of “co-opetition” may well become the dominant logic of many industrial sectors. Their common feature is a strategy that obstructs independent and discretionary innovation by forcing companies to share the exploitation and / or exploration of critical assets with competing firms. These new co-opetitive dynamics raise the question of adapting innovation strategies of small and medium firms that can enable them to maintain their place in the co-opetitive game, without losing their individual capacity for innovation. It also raises the issue of formulating innovation strategies that can integrate the co-opetitive component as a strategic advantage, rather than enduring its puzzling architecture. This article proposes to explore two original processes of innovation, which attempt to respond, in their different ways, to the transformation of firms’ environments into co-opetitive arenas.

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The omnipresence of co-opetitive strategies today is such that we may wonder if there would be a genuine interest to directly question the obsolescence of traditional strategic models. As managers or scholars of corporate strategy, we inherently remain faithful to the legacy the strategic choice theory (Ansoff, 1965): We distinguish the firm from its environment and its competitors. We take for granted the idea that a strategy formulation resides *within* a corporation, led by its board of directors, to serve their purposes, in the secret and guarded alcove of its senior ranks. Co-opetitive environments may challenge such an assumption. We define co-opetitive environments as economic, social or technological arenas where competition and cooperation are mutually conditional to each other, i.e. where competition between two or several firms cannot be achieved or maintained with a minimal amount of simultaneous cooperation, and vice-versa, where cooperative attempts will trigger competitive tensions (Bengtsson and Kock, 2000; Brandenburger and Nalebuff, 1996).

Examples of co-opetitive situations can be found in industries depending upon long range research pipelines, with upstream technological complexity and involving

norms and standards, such as the defence and aeronautics industries. They can also be found among less complex industry districts, where the simple mechanism of commensalism (Astley and Fombrun, 1983), i.e. the dependence upon a same resource, forces firms to cooperate to maintain the resource, while they simultaneously compete to gain market share. Emerging technological standards, such as the Blu-Ray vs. HD-DVD video compression standards, often triggered temporary co-opetitive market conditions. It is rather obvious that in such a delicate balance between competition and cooperation, the amount of information shared, and information kept discretionary, may well become problematic for strategy formulation.

While traditional strategy formulation models advocate secrecy and discretion, this article explores and advocates an iconoclastic perspective where strategy is formulated *in the environment itself*, with competitors and partners, as to gain rapidity, momentum and pre-emptive characteristics. Accordingly, we assume that co-opetitive configurations are becoming the dominant logic of many industrial sectors. Firms in such environments struggle to preserve their strategic independence and discretionary capabilities as they are forced to explore and exploit critical assets with competitors. We argue that the externalization of innovation strategy formulation processes may provide unsuspected core advantages to firms by increasing strategic ruptures detection, and by “forging the iron cage” while strategizing.

The common feature of co-opetitive strategies is a loss of freedom. As firms are forced into sharing either the exploitation or exploration of critical assets with competing firms, they mostly lose their capacity for independent and discretionary innovation. Surprisingly, new co-opetitive dynamics firstly raise the question of adapting innovation strategies that can enable them to maintain their place in the co-opetitive game, without losing their individual capacity for innovation. It also raises the issue of formulating innovation strategies that can integrate the co-opetitive component as a strategic advantage, rather than enduring its puzzling architecture. This article proposes to explore two original cases of innovative organizations, which attempted to respond, with their peculiarities, to the transformation of firms’ environments into co-opetitive arenas.

Across its many divisions, management science seems to be reluctant to question the central nature of strategy formulation. The neo-institutional perspective, for instance, would implicitly question the reality of an internal formulation of corporate strategy, but would not *explicitly* challenge the existence of a unity of command in studied organizations. While many authors have suggested an external control over what is perceived as the deed of the strategist (Pfeffer and Salancik, 1978), the “management team”, they would argue that firms’ strategies may be the product of institutionalization, of homologies; circulating narratives; borrowed ideas of innovations from another firm, or managerial fads (Abrahamson, 1991) but would not question the rationale of having a centralized strategic thinking in the first place.

Other authors have highlighted both the shaping force of the “iron cage” of institutionalism and the ability of firms to distort and pervert this iron cage to serve their strategic interests (Abrahamson and Fombrun, 1992). But the “organization” remains a focal point of interest, even when it is seen as the product of complex negotiations between stakeholders (e.g. in Freeman’s stakeholders theory) or when

simply reduced to the determinism of its resources (e.g. in Resource Based View theorizations), or its population and institutional ecologies.

Strategic thinking remains *endogenous*, throughout literatures and empirical evidence, in the sense that a “central willingness” is assumed to be a *pre-requisite* for the existence of an organizational strategy. Centrality of authority, will, power and capital are, however, duly questioned by recent economic and societal evolutions. While societal structures of capital ownership are incredibly stable over time, governance of this capital has known an unprecedented variance of its governance in the past decade. If we accept the assumption of drastic changes in modern competitive environments, would it not be appropriate to question the adequacy of their strategy formulation processes?

Our questioning strategy is two fold: First, we will investigate if a more exogenous strategy formulation process would be more efficient when an organization has very little influence on its environmental constituents. We assume that an organization in a mostly co-opetitive environment might have a genuine interest in preceding its own strategic planning by a systematic collective strategy process. Second, if a competitive environment is mainly co-opetitive, do frontal strategies still work? Inspired by Phillips (1960), but also by Schelling’s findings on mixed-motive games (1960), we assume that a game that can neither end in a “win-win” or a “win-lose” situation, as both parties win and lose asymmetrically in a co-opetitive game, must require more subtlety and cunning than traditional Porter’s competitive configurations (1985).

Co-opetitive configurations are tricky. Applying a *benevolent* strategy of cooperation immediately followed by a tit-for-tat posture, as suggested by Axelrod (1984) for winning cooperative games, is unlikely to be successful. Early benevolence would weaken the firm’s strategy at the most crucial moment of a co-opetitive strategy: the early stage of definition, and *pre-emption*, of the future competitive game. Of course, when interdependence is the name of the game, one can follow Bresser and Harl suggestions: “What is relevant is the ability to react to instabilities by switching from more collective forms of strategizing to more competitive ones, and vice-versa (1986: 425). But that would not do the trick either. To alternate swiftly co-opetitive and competitive phases, as suggested by Bresser and Harl (*ibid.*), would be possible if co-opetition was sequential, or so geographically distinct that a sudden change of position in one segment would barely affect the competitor’s reaction in the other one. It is however, rarely the case when dealing with co-opetition. Competition and cooperation are simultaneous, on intertwined markets, and when eventual market distance could be considered a buffer for dissonance or offence, reputation costs are a swift reminder of the co-opetitive entanglement. Hence, the problem with co-opetitive dynamics, is that “the system has multiple modes of behaviour. We are no longer in the linear world where one cause has one predictable effect. We have a nonlinear system where small changes in input can lead to large changes in effect” (Atkinson & Moffat, 2002: 50). It makes a dissonant move very unlikely, especially when we take into account that co-opetition is likely to increase the amount of knowledge shared between competitors, and hence re-enforce their interdependence from Phillips’s perspective (1965). As Starbuck put it (2002:78), “most firms compete against skilled competitors that have access to much the same information. These competitors can either anticipate strategic moves or react to them promptly, so it is very difficult to

gain meaningful competitive advantages through strategic moves”. This becomes even more obvious when almost no moves can be made with discretion.

This article explores two innovative practices of strategy formulation in the United Kingdom and California, and discusses the possible evolution of strategy formulation and innovation strategies, based on two exemplars: the discovery of disruptive innovation in the technical field of RF-ID and the anticipation of geostrategic threats.

Paradox or constrained dissonance?

Co-opetitive strategies are characterized by the simultaneous presence, sequentially or geographically distinct in several areas, of both cooperation and competition. (Bengtsson and Kock, 2000; Brandenburger and Nalebuff, 1996). Pellegrin and Fenneteau (2007) observed the paradoxical nature of these situations, and the dialectic trap in which firms are enacting their contractual agreements. Whether sequential, or whether geographical, co-opetitive strategies refer to an ambiguous anchor of the firm’s strategic universe. If we can compartmentalize space and time, we cannot so easily compartmentalize legitimacy, reputation, brand equity or the discovery and exploitation of a critical asset. The case of the American defence industry, detailed by Depeyre and Dumez (2007) is as such archetypal: the causal ambiguity of a co-opetitive system was resolved by the client by forcing a "winner take all" principle on bidders, such as leaving the forefront runner with the responsibility of caring for the architecture of interaction. Not only such a strategy helped meet the demand, but imposed a hierarchy on an unsolvable puzzle. The contractors were forced into a subcontracting order that preserve their organizational effectiveness, instead of being otherwise transformed into competitive dyads in a situation of forced cooperation.

The organisation of the defence industry in a “system of systems” is obviously a key driver of these new architectures of imposed cooperation and competition. Accordingly, should we adopt a way of formulating corporate strategy to maintain its competitive objectives, while also being able to absorb its co-opetitive dimension? From a strategic interdependence perspective (Philips, 1960), the certainty of being in relation to a partner or competitor in the future, either by being the leading supplier for the competitor who won the contract, or by the dependence upon a shared resource (Astley and Fombrun, 1983) should encourage the firm to consider the dual constraint as exogenous to its strategy. This strategic posture nevertheless leads to a strategic logic of opportunism, as illustrated by the case of Boeing - SAIC alliance in 2002, which won the contract for Future Combat Systems (Depeyre and Dumez, 2007). The cost of this strategic opportunism is felt at the level of second-tier, where Boeing - SAIC are forced to a situation of cooperation with General Dynamics, a direct competitor on the integration of systems. In such configurations, the logic of co-opetition impedes innovation. The firms are placed in a situation where it is difficult to maintain discretion over their critical assets, and are hence threatened by a disclosure of their future competitive advantage.

With the globalization of assets and their transformation into generic capabilities, -- a phenomenon known as *commoditization*, commensalism and interdependent competitive situations are widespread. These co-opetitive configurations are the partially result of a pressure for cost efficiency on production systems. They become a *sine qua non* condition for working with powers such as China and India, emerging

technological players such as Egypt, or with any raising economic or technical system, which growth rely on the development of asymmetric knowledge. Moreover, competitive transactions are likely to be co-opetitive where technological learning and transfer are compulsory counterparts. Market access is often a trade-off with sharing technological advance. Hence, firms are subsequently placed in a position where they increase the asymmetric advantages of their competitors as a result of international compensation mechanisms (Baumard, 2007).

Asymmetric campaigning in co-opetitive settings

Asymmetric campaigning is the engagement of an offensive despite a strong and explicit unbalance of forces, to the disadvantage of the attacker (Atkinson & Moffat, 2002) . They differ from a dissymmetric deployment, and even from a guerrilla tactic, which are expresses the use of unconventional means of warfare to undo a more powerful opponent. If the concept has driven recent attention, the first writings about asymmetric strategies date from the fourth century B.C. (Detienne & Vernant, 1974). Tradition in social sciences distinguishes three forms of knowledge, as described and enhanced by Ancient Greece philosophers: *episteme* (abstract generalizations, basis and essence of sciences), *techne* (the technical know-how, being able to get things done) and *phronesis* (practical wisdom, drawn from social practice). The assumption that these three categories of knowledge cover all extents of knowledge is thus presumed universal. In 1974, however, two French researchers of ancient civilizations produced a major work that was almost unnoticed until the recent second edition of their complete works (Detienne, Vernant, 1974, 1992). In their ten years' investigation of knowledge in Ancient Greece, Detienne and Vernant unveil a fourth dimension of knowledge, highly considered and intensively practiced in Ancient Greece mythology and social life. This fourth field of knowledge bears for more than one thousand years the name of *mètis*, and disappears both from the literature and the common language in any forms in the fifth century of our era. What is this "*mètis*" ? What role did it play in Ancient Greece? How does it relate to the modern concept of asymmetric campaigning?

Mètis is both a Greek divinity and a mode of knowing. It helps Ulysses to be successful in his Odyssey, it permits Zeus to reign with serenity on the Pantheon, it helps the hunter to trick his prey, it leads the boat in a violent sea, when compass, radar and maps are not available. In this heterogeneous Greek world, a persistent model of knowing and perceiving emerges at all levels of society, from the fisherman and the hunter to the sophist and the politician. The *mètis* is that form of practical intelligence, using *conjectural and oblique* knowledge, which anticipates, modifies and influences the fate of events in adversity and ambiguity. As Detienne and Vernant (1974) underlined, *mètis* is used in situations of unbalanced power. Narratives about warriors using *mètis* to become victorious over much larger numbers of adversaries abound in Ancient Greek literature. In some examples given by Detienne and Vernant, a chariot driver uses his better knowledge of the landscape to find shortcuts, even if disadvantaged by a weaker chariot or slower horses. Brutal force is replaced with subtlety and a capability of using the asymmetry of forces to *displace* the nature of conflict, its logic, its cultural roots. Of course, asymmetric moves are *mythological*. And because they are mythological, they are even closer than modern warfare *asymmetries*, which develop an intensive use of information warfare.

The mechanism of asymmetric strategies, as described in the Greek world by Detienne and Vernant (1974) are also very similar to modern practices of co-opetitive configurations involving asymmetric players. Co-opetitive situations immediately displace competitive advantage in the arena of knowledge rent seeking. But the kind of knowledge being sought is greatly different than in traditional Porterian competition. Paradoxically, rents are sought in a form of knowledge that is the most difficult to accumulate over time, for it resides mostly in *minds*, and rarely in *assets*. In other words, applying a resource-based view strategy to this modern forms of conflict is not only likely to fail, and even to aggravate the disadvantage. Let us explore how Greek society tackle the issue: when abstract generalizations (*episteme*) were judged unable to handle a changeable and unbalanced situation ; when superior know-how (*techne*) did not have any grip on a chancy confrontation; when practical wisdom, drawn from social practice (*phronesis*) did not overcome an ambiguous social context, Greek historians and philosophers would advocate the use of short-cuts, of sagacious envisioning, of perspicuous intervention, i.e. to become even more mutable than the situation belligerents had to cope with, discreet, operative, conjectural : the *Mêtis*.

When *Al Qaida* communicates in the halo of an external world event (i.e. external to its direct cause, but driving world attention), it compensates its smaller organizational assets with an asymmetric campaigning, which uses parasitism to override the dissymmetry in communication forces with its opponent. Asymmetric strategies are *oblique* strategies. They simultaneously displace the arena of competition, while playing with the contradictions of the opponent. Plato illustrates the concept with an enigma of intertwining contradictory interpretations : “A man who was not a man, seeing and not seeing a bird who was not a bird, perched on a wood that was not a wood, did and didn’t throw a stone that was not a stone” (Plato, 430-347 B.C.). Such was the puerile riddle of the eunuch (“a man who was not a man”), aiming without reaching (“did and didn’t throw”) because of darkness (“seeing and not seeing”) with a pumice-stone (“a stone that was not a stone”) a bat (“a bird who was not a bird”), perched on a reed (“a wood that was not a wood”). Plato uses this enigma to enlighten the field of opinion — *dóxa* — where events have double meaning, “where truth and its contrary interlace tightly” (Detienne, 1967, pp. 114-115). Of course, co-opetitive configurations reinforce the cognitive dimension of competition, and Plato’s teachings have never been so true when one deals with the complexity and imbrications of modern competition. We could, for instance, update Plato’s riddle, that would become: “A competitor who was not a competitor, seeing and not seeing a partner that was not a partner, perched on an advantage that was not an advantage, did and didn’t launch an offensive that was not offensive”!

Co-opetitors surely have neck problems, as they constantly need to look back obliquely, to make sure that partners that are backing them up, are not already in front signing a contract with their best customers. Hence, *obliquity* is the only *path* that leads toward a tolerable solution to Plato’s enigma. Straight rationality fails to provide an answer to such paradox as “a man who was not a man”, or “a wood that was not a wood.” Only through adductive thinking (Eco, 1992, p. 253) can we invent a “representation” that would fit the “multiple sense making frameworks that are themselves complex and simple, ambiguous and clear, contradictory and logical, and stable and changing” (Starbuck, 1988). Most of the famous “deductions” of Sir Arthur Conan Doyle’s Sherlock Holmes are in fact similar *creative inductions* (Eco,

1992, p. 275) and proceed from obliquity. In *The sign of four* (Doyle, 1890), Sherlock Holmes observes traces of red mud on Watson's shoes along with stamps and a pack of postcards on Watson's desk. He suddenly turns to Watson and asks him why he went to Wigmore Street that morning to send a telegram. Holmes could not have possibly deduced from the two available weak signals the proposed solution. He proceeded from *oblique knowledge*, deriving a sagacious envision of events from *ab-*ductive construction, where the prefix "*ab-*" signifies the absence or the weakness of tangible evidence or stimuli to derive a formal interpretation: imaginative induction (Baumard, 1999).

As Meigs (2003:4) underlines, "Asymmetry means the absence of a common basis of comparison in respect to a quality, or in operational terms, a capability. Idiosyncrasy has a different connotation—possessing a peculiar or eccentric pattern. In a military sense, idiosyncrasy connotes an unorthodox approach or means of applying a capability, one that does not follow the rules and is peculiar in a sinister sense". Thus, asymmetric campaigning is seeking an advantage through creating a *critical delay* in the adversary's retaliation, not through the disorganization of its assets, but through the *puzzling* of its sense-making. Co-opetitive situations, however, limit the range of *puzzling* one can produce on competitors that are also partners. Such situations become natural oligopolies because the simultaneity of durable cooperation and competition over time create a confined space for strategic action, where players are bound exchange the places of guests and hosts of a competitive bid with the same customer. As Baumard and Ibert put it, "the main issue for the oligopolist willing to engage in a successful transition from collective to competitive strategies — and vice versa — is therefore to make this move "acceptable" by other members of the community. In other words, this oligopolist is going act incongruously, but he has to make this choice congruous to the community with which he is almost inescapably going to be thrown in further dealings. So, he must prepare the terrain as to make his forthcoming discordance accepted by all community members, with the expected reward of being able to stay in this community and pursue dealings. He has to make his very deliberate incongruity socially congruous!" (Baumard and Ibert, 1997: 2).

Accordingly, co-opetitive environments call for strategies that are more ecological than organic. The social and human ecology may present, in such situations, a better leverage than analyses conducted at the level of the firm (Astley & Fombrun, 1983; Hawley, 1950:66), for example, contends that adaptation is a communal phenomena and can be analyzed without reference to individual-level variables. When symmetric confrontation or cooperation lead to antagonism, co-opetitive strategies are closer to commensalism as partners and competitors try to manage a communal resource, which in that case is a shared customer (Astley & Fombrun, 1983). When competition or cooperation become *dissymmetric*, antagonism shifts towards predation, and cooperation shifts towards parasitism (Ayres, 2004). To the contrary, dissymmetry in a co-opetitive game intensifies the mutual dependency between firms, and leads to traditional strategic interdependency situations (Phillips, 1960).

Asymmetric situations trigger much different configurations. A rise in competitive pressure will force players to quickly find shortcuts, and adopt "oblique strategies" (Baumard, 1996). A stronger pressure to cooperate in an asymmetric dynamic, far from resolving the tension, will probably create what Schelling called a "mixed motive" game (Schelling, 1960). When asymmetries are deployed in the midst of a

co-opetitive interaction, the tension between oblique moves and mixed-motive games requires organizational agility (Atkinson & Moffat, 2002). The following table synthesizes these configurations:

	Competitive	Cooperative	Co-opetitive
Symmetry	Antagonistic (Hawley, 1950)	Symbiotic (Hawley, 1950)	Commensality (Astley & Fombrun, 1983)
Dissymmetry	Predation (Porterian competition)	Parasitism (Ayres, 2004)	Strategic interdependency (Phillips, 1960)
Asymmetry	Oblique strategies (Baumard, 1996)	Mixed motives games (Schelling, 1960)	Agility (Atkinson & Moffat, 2002)

Table 1: A proposition on interactions, asymmetry and co-opetition

As table 1 suggests, conventional strategy formulation may stumble in attempting to rationalize a process that would both encompass oblique strategies and mixed motive games. While firms pursue a “strategic fit” (Ansoff, 1965), they can adequately adapt to a more ecological perspective of their strategic development, as suggested by Astley & Fombrun (1983) in a neo-institutional approach. But planning requires a clear motive, and hardly tolerate contradictory prescriptions. Strategy require a clear direction, and hardly absorb *ex ante* obliquity.

Case Studies And Propositions

The status of this paper is propositional. It aims at producing further research in the field of co-opetition and organizational transformation that would encompass several proposed dimensions. Hence, evidence was gathered through a non-directed search, by investigating new organizational phenomenon, in what Berry and al. (2003) have labelled “outdoor research”. None of the above variables were operationalised. We do not claim either internal or external validity, and every statement that we make should strongly be considered as a question. The research is one of “directly theorizing from the ground” (Bartunek & Louis, 1996: 6), with an approach that is more an improvised naturalistic inquiry than rigorous qualitative research instrumentation.

Empirical evidence was gathered through two different experiences in California and in Europe. The first experience was participation to a North Atlantic Treaty Organization (NATO) sponsored workshop in Eastern Europe in March 2007. As the event was organized under the Chatham House Rules, we will concentrate our interpretation on the process that have been deployed, rather than on the matters discussed. We selected this experience for it presents a strong adherence with the theoretical foundations of the subject being investigated. As suggested by Mitchell (1993), we preserved the anonymity of players engaged in the observed process. In this event, organizers decided on experimenting a scenario exercise that would directly address on-going issues with their direct stakeholders. Instead of asking experts to externally evaluate situations, the exercise consisted in asking directly stakeholders, with executive and policy decision ability upon discussed issues, to participate in a sequential scenario exercise to assess a situation where they stand as both rivals and partners. Hence, the scenario technique is being used as a “cognitive device” (Healey and Hodgkinson, 2008) that would simultaneously contribute to identify plausible futures, and directly influence them. The involvement of executive decision makers, i.e. CEOs, government members of the concerned States, military commanders, helps resolving a well-known “plausibility paradox” of scenario

planning, i.e. “such scenarios must be challenging enough to stretch thinking but plausible enough to foster engagement in analyzing, and acting to anticipate, the future” (Healy and Hodgkinson, 2008: 581). The first observation that we were able to make is that organizers of the exercise were carefully avoiding verticality in its deployment, i.e. authority structure was left to emergence within the group dynamics. It gave the impression that we were engaged in “a scenario that was not a scenario”, for a “final goal that was not the final goal”, with “a leadership that would not claim to be the leadership”, with “competitors that were not competitors”, to use a similar riddle than Plato’s *Republic*. While this approach seems to give much work in managing group dynamics, it does create a stronger involvement in the exercise, and does resolve most of the tensions coming from a truly co-opetitive situations (as were present in the room stakeholders who could be clearly opponents on some of the discussed issues). Hence, our first proposition would be:

Proposition #1: In a co-opetitive environment, strategy formulation strongly benefits from causal ambiguity of purpose, deployment and authority structures.

When matters of discussion became strongly controversial (i.e. increasing a competitive pressure among the group), some participants demanded more formalization and sub-structuring of the group. Such a manoeuvre would of course lead to highlighting coalitions and would weaken the collective intelligence of the group. Moreover, it would accentuate dissymmetry, as smaller groups would naturally regroup by forming an human ecology that would favour their domination over others (Hawley, 1950). Hence, if such sub-groups were to exist, through the increase of dissymmetry, the group dynamics would end up in *predation, parasitism or strategic interdependency*, according to literature (see table 1, above). Organizers strongly opposed the creation of such subgroups, clearly stating that the collective intelligence of the working group was a supra-ordinal objective that could not be jeopardized. I found this initiative to be an exemplar of a successful *asymmetric* move, as the organizers were clearly adopting a policy that was against the majority opinion of the group. First, the debate was swiftly displaced from the *contents* to the *solidarity* of the group functioning. Second, the motive invoked to maintain the group dynamics was rather *idiosyncratic*, i.e. preserving a sociological characteristic of this group over its purpose. But when purpose becomes irreconcilable because there is too much competition and too much requisite cooperation at the same time, it seems that social structure can play a decisive role in pursuing the strengthening of a collective strategy. While this finding corroborates previous research on the behaviour of small and medium firms in an equipment business oligopoly (Baumard and Ibert, 1997), it also suggest a more specific proposition for co-opetitive dynamics:

Proposition #2: Agility in a co-opetitive situation gains from acting upon the resilience of the social structure as to decrease tensions between simultaneous competition and cooperation.

Another striking characteristic of this experience was the content of the scenario exercise itself. While I participated in many scenarios in both governmental and industry contexts, I was never confronted with such an accurate and unilateral scenario *ex ante*. Instead of facing the tensions of participants who are both competitors and partners, i.e. eventually military in that case, the group did not participate in the elaboration of the first scenario, as it is usually the case in scenario

planning (see Healey and Hodgkinson, 2008). On the contrary, a perfectly crafted and very well informed scenario was presented completed in full to the group. The “competitors who were not competitors” then discussed the “scenario that was not a scenario”. The presentation of a unique and single scenario, when participants expect a range of potential futures has very beneficial impacts. First, it is a rather *asymmetric* move as well, as participants had to cope with “the absence of a common basis of comparison in respect to a quality, or in operational terms, a capability. Idiosyncrasy has a different connotation—possessing a peculiar or eccentric pattern” (Meigs, 2003). One of the obvious benefits of such an oblique approach is that organizers do not have to deal with the “plausibility paradox”, as they got rid of it altogether. Instead of balancing appropriation and plausibility, the organizers just threw at the audience a very plausible, and very controversial, vision of a unique scenario about the future. For instance, the scenario was presenting the prediction of the election of a President (which happened to be correct retrospectively), immediately followed by a prediction of his future turmoil and loss of affluence (which also happened to be exact *ex post*). Is it too much revealing, and could it be applied to a strategy discussion in a more corporate context? It is plausible. First, the amount of complexity in such a scenario contributes to increase causal ambiguity, and it is rather difficult to identify if the organizers are experimenting with “productive playfulness” (Starbuck & Webster, 1991) or if they are testing their intelligence with an informed audience. One could imagine, with a little cunning, that a corporate strategy could be expressed within a scenario that would display similar characteristics: provocative, riddled with causal ambiguities, astute, challenging, entertaining and ultimately, very interesting. Second, as underlined by Starbuck (1992), competitors strategize using the same information, and therefore, most of what organizations believe to be corporate discretion has been already circulating in the industry for a long time. Consequently, it might not be very difficult to craft a strategy scenario that would be sufficiently informed to gain credibility, and sufficiently ambiguous to preserve discretion, i.e. “a scenario that is not a scenario”. (sic). The obvious advantage of such an approach is that it greatly reduces time and transaction costs. While being thrown in sense-making, in a very Weickian configuration, participants immediately engage in challenging the scenario, and the playfulness of such an exercise does increase productivity (Starbuck & Webster, 1991). They also directly exert their influence, as key stakeholders do not wait to voice their disagreement with the displayed future. Interestingly, adherence and appropriation is sought afterwards, by integrating the inputs of the audience in a second run of the scenario. Hence, this approach suggests a third proposition:

Proposition #3: In a co-opetitive environment, performance of strategy formulation gains momentum through its externalization to stakeholders, as boundaries between collective sense-making, influence and strategy formulation are merged into a single process.

The second experience was part of a industry-sponsored grant on innovative upstream innovation processes, which took place in California from 2004 to 2007. The aim of this research was to identify “out of the box” organizational configurations to foster and accelerate upstream innovation. We gathered ten case studies of high performing technological firms with out of the ordinary organizations, and tried to identify outstanding organizational characteristics that would explain their exceptional performance. Non-surprisingly, a contingency theory approach to innovation was not

very fruitful. Although most firms with original organizational designs were indeed very successful, it was rather not sure if the design was a consequence or a cause of their innovation performance. Nevertheless, among the studied firms, the Intel Berkeley laboratory stood out as an interesting case, for its cross-fertilization of the overall tackling of a difficult co-opetitive situation, and an original organizational configuration. We visited the Intel-Berkeley, a joint research centre between the University of California, Berkeley and the Intel Corporation, in early 2005. This laboratory is mainly open source, and most of its findings are public¹. As its brochure mentions, Intel is pursuing an open and collaborative research model: “The open and collaborative research (OCR) model practiced at Intel’s university labs was designed to eliminate the conflicts over intellectual property (IP) rights that hinder or prevent many collaborations between companies and universities. “Our model provides a certain freedom that you can’t get with a more proprietary approach,” says Eric Brewer, Director of Intel Research Berkeley. “Research can take its natural course, since researchers don’t have to worry about IP. A more closed model, even if it’s well intentioned, slows down the research process. And it can produce a chilling effect: just worrying about potential violations of IP rights prevents work from getting done.” (Intel, *IRB Brochure*, 2008). The second objective of Intel by creating a joint-research facility with UC Berkeley is to benefit from the geographical and intellectual proximity with the university campus: “Both Intel and the university benefit from the proximity of Intel Research Berkeley to the UC Berkeley campus. “We have a large number of students flowing back and forth between the lab and the university,” says Brewer. “It’s this flow of students that’s the most critical form of sharing. The primary means of collaborating with the university is via students; they’re the mechanism that really makes it work.” (Intel, *ibid.*).

Intel Berkeley’s lab focuses on one specific domain: the application of electronic sensors, reduced at micro and nano sizes. RF-ID and actuator technologies gained momentum in the mid-1990s when progress in nano-fabrication of processors started to make out of the ordinary progress. Since then, the technology evolved at twice the speed of Moore law (1965), a principle depicted by Gordon Moore, then Director of R&D of Fairchild Semiconductor, and that read, in particular: “The complexity for minimum component costs has increased at a rate of roughly a factor of two per year . Certainly over the short term this rate can be expected to continue, if not to increase”. (*ibid.*). This visionary prediction that has been validated over time is now known as the Moore law, as to express that performance of a technology double with each of its generation, and hence, follows an exponential curve. RF-ID technologies progressed even faster.

It became clear that RF-ID, if progressing at this speed, could become for central processors what the decentralized Personal Computers had become for centralized mainframes: a potential death threat. Just imagine a world of nearly anything, from an ashtray, to a wall, a paint, a ring, a golf ball, can contain computational capabilities close to a Personal Computer from the late 1980s... Imagine now a decrease in costs that has already made this small chips available at a dozen of cents, for a size of a quarter of Eurocent, with a range of eighty feet... When incumbents are faced with swift, disruptive worldwide change, a *Porterian* or a *Resource Based View* perspective would be to try to develop proprietary assets, engage in early and pre-

¹ See : <http://www.intel-research.net/berkeley/>

emptive rivalry, and try to install a standard on their own. When this change occurs at twice the Moore's law, it makes such a strategic move quite impracticable.

In this case, asymmetry does not come from the idiosyncrasy of the threat, the illogic and unreadable character of its moves, of the unbalance of forces; it comes from speed. Because large incumbents suffer from strategic inertia, even a very small firm, with limited financial resources can overcome a larger firm when its rhythm of innovation does not allow the preparation of a competitive response. Intel's response was to adopt a co-opetitive strategy as to be part of the change, and direct it, instead of enduring it.

Proposition #4: In open innovation architectures, co-opetitive strategies allows a reduction of firms' strategic inertia by allowing them to shape the future cooperative and competitive interactions on emerging standards.

In the mid-1990s, a group of UC Berkeley researchers came up with the idea of using very small sensors, and deploy them into a mesh network just by throwing them around. This project was then named "Smart Dust" (Hsu, Kahn and Pister, 1998). Smart Dust are "fleck-sized wireless sensors intelligent enough to organize themselves into autonomous networks. Dropped from a passing helicopter, the sensors could spy on enemy movements or detect a hidden stash of mustard gas" (Koerner, 2003). They can also help to prevent wild fires in accessible zones, by being thrown from planes, or help very large rescue operations². Of course, these new mesh networks and sensors were in need of a communication language and an operating system. And this is where Intel adopted a smart strategy, probably learning from its past experience with the birth and rise of the Microsoft operating system in the early 1980s. This operating system for nano-sensors and dust networks has been built in the Intel Berkeley laboratory, and named "Tiny OS". The UC Berkeley team began prototyping with TinyOS in scaled-down, plastic-model houses, equipping them with mesh-networking that supported inexpensive sensors to measure temperature, light or occupancy. As Intel entered very early the race for a standard in operating systems for sensors networks, the TinyOS quickly became the *de facto* standard for nano, pico, and micro-mesh networks using RF-ID and sensors. Progressively, and because the Intel Berkeley lab is designed as a co-opetitive structure mixing several UC Berkeley laboratories, with engineers from Intel Corporation, research projects started to flow in many directions: pervasiveness for homes, the protection of the natural environment, and societal changes, such as understanding how sensors could become part of human socialization. This project, led by Eric Paulos of the Intel Berkeley lab was named "familiar strangers" after Stanley Milgram historical paper (1972) that explored how complete strangers feel familiar. Faithful to its commitment to an open innovation model, Intel Corporation made all the findings freely available³. The project is exploring how various mobile and fix technologies, such as sensors in cell phones, but also in Berkeley's streets on walls, street signs and poles, could emulate and learn strangers' familiarity recorded by an intelligent device. While Paulos's project is a beautiful homage to Milgram's

² For more information, see Pister's page on the Smart Dust project at UC Berkeley : <http://robotics.eecs.berkeley.edu/~pister/SmartDust/> and for photographs see Warneke's page at UC Berkeley EECS: <http://www-bsac.eecs.berkeley.edu/archive/users/warneke-brett/SmartDust/index.html>

³ . For more details on the « Familiar Strangers » project, see : <http://www.paulos.net/research/intel/familiarstranger/index.htm>

research, it also accomplishes a difficult step for a corporate organization: to understand how a new technology can overcome societal resistance and enter in the social crafting of everyday life. Garcia, Bardhi and Friedrich (2007) have already identified how New Zealand wine makers through a co-opetitive strategy managed to overcome resistance to screw caps. But this experiment goes further as it leverages enactment through a design with “mixed motive games” (Schelling, 1960). It is very unlikely that a large corporation would support within its own laboratory a project intended to explore attributes that are very distant to its core business, such as anxiety, comfort and play in public spaces. Hence, co-opetitive strategies deployed for innovation may allow an extension of firms’ boundary spanning otherwise overseen by corporate cognitive maps. The Smart Dust and Familiar Strangers inspire two propositions:

Proposition #5: Co-opetitive innovation strategies increase firms’ boundary spanning through the exploration and creation of unrelated assets

Proposition #6: Co-opetitive innovation strategies allows for more performing pre-emption strategies in open and rapid innovation architectures.

Discussions and conclusions

Co-opetitive strategies are “*metistic*”, borrowing from Detienne and Vernant (1974) studies of Ancient Greece. Instead of adopting symmetric or dissymmetric postures towards new disruptions, the two organizations we studied decided to adopt an isomorphic structure with the turbulent changes taking place. Agility (Atkinson and Moffat, 2002), mixed-motive designs (Schelling, 1960) and oblique strategies (Baumard, 1997) are used to deal with a political or technological environment where rigidity would provoke an immediate stumbling. The communality between the two cases resides in the integration of co-opetition within the *strategic thinking* of the firm. Instead of considering co-opetition as a burden that will be dealt with transactions, negotiations and compensations, both organizations integrate the co-opetitive dimension in their framing of the strategic situation. Instead of considering co-opetition as an external characteristic of their environment, they decide to *internalize* co-opetition into their daily routines, behaviour and problem solving. Accordingly, both organizations tolerate more diversity *within* their organizational core, hence corroborating Badal (2005) suggestion of the positive role of an interdisciplinary design of strategy formulation.

The second contribution of these two organizations is to bring a different light on strategy formulation processes. Traditionally (Ansoff, 1965), firms act sequentially. They distinguish formulation from execution, and influence from planning. Influence is perceived as an *ex ante* or *ex post* collateral process that correct stakeholders’ perceptions while strategies are being executed, or before they are launched. In both cases, there are no boundaries between formulation, execution and influence. Both organizations “forge the iron cage” (Abrahamson and Fombrun, 2002), while discovering, exploring, executing their strategy and influencing core environmental constituents. Doing so, both organizations exert a strong pre-emptive influence on the future of their stakes: the public diplomacy organization asks key stakeholders to help formulating the most adequate co-opetitive strategy, while Intel is gaining a

pioneering advantage in pervasive sensors technologies. Both organizations are extremely innovative. Probably, the integration of a higher variance within their strategy formulation acts as a mean of channelling their creativity, corroborating Starbuck's (1995) suggestions.

Both organizations have adapted strategy execution to their transient and mutable environments. They both favour fast prototyping and "bricolage", eventually accepting to temporarily jeopardize their core beliefs and challenge their founding ideology (Baumard and Starbuck, 2005). Intel is exploring emerging fields that would have otherwise escape its attention, or probably being framed as non relevant by its corporate decision makers. The Defence institution is experimenting geopolitical scenarios with their critical stakeholders that it would not even think of addressing face-to-face in a more conventional bilateral dialogue. Lenfle and Midler (2002) suggested that intense competition for innovation does request an incremental strategy formulation, where series of experiment adjust the trajectory as it emerges.

Goerzen and Beamish (2005) suggested that cooperative networks of innovation benefit from a greater diversity of contractual agreements and transactions. However, such an approach does not resolve inherent tensions due to simultaneous competition and cooperation. In such situations, as Astley and Fombrun (1983: 532) underline: "turbulence results from environmental interdependencies that are obscure to a focal organization". Co-opetitive strategy formulation "de-focalize" organizations through collective organized action *and* thinking. Instead of adopting conventional *individualist* modus operandi to cope with environmental stability, both studied organizations opted for co-evolutionary designs, where the organization and the formulation are mutually mutable. By moving its engineers within a shared research centre with UC Berkeley faculty and students, Intel managed to create an organizational "mutual fate" between the two entities. Sharing a "co-opetitive" interpretation of future disruptive changes help both organizations to generate mutually beneficial innovations. Doing so, they overcome a traditional obstacle that usually leads large incumbents to failure when dealing with architectural innovations (Henderson and Clark, 1990). One backdrop of co-opetitive innovation, however, lies in the weakness and implicitness of its networks of cooperation. Both organizations are vulnerable because the sustainability of their co-opetitive dynamics mostly depend upon interpersonal trust and intrinsic motivations of individuals holding the different cooperative or competitive nodes of the network. Although Granovetter underlined the "strength of weak ties" (1973), in a better access to information through sporadic and low density ties to organizational environment, Nooteboom and Gilsing (2004) also suggest that a high density of ties is essential to a co-opetitive environment. It seems that both organizations are obtaining such a density through a very careful selection of the leaders of their networks' clusters. The people in such positions that we met displayed a true passion for their field, were driven by an intrinsic motivation and not a transactional gain, were very tolerant to causal ambiguity and fuzzy hierarchies.

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