STRATEGY PROCESS

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MANAGING THE MNC AND EXPLOITATION/EXPLORATION DILEMMA: FROM STATIC BALANCE TO DYNAMIC OSCILLATION

Catherine Thomas, Renata Kaminska-Labbé and Bill McKelvey

ABSTRACT

Research on multinational corporations (MNCs) shows that they have tried various structural solutions to solve the dilemma of trying to “balance” global control and efficiency with local country-specific sensitivity, autonomy, and innovation, with the Transnational form preferred. Failings of the strategy-structure sequence lend credence to the emerging strategy-process perspective. To date, the best lesson for MNC strategy-process concerns pertaining to the global vs. country dilemma comes from March’s classic paper on “balancing” exploitation vs. exploration. 21st century MNCs exist in a more rapidly changing world, however, where static “balance” solutions may be insufficient. The tradition of “circular organizing” is one alternative to the failing “balance” solution; it offers a dynamic strategy-process approach to MNC management. Another is
Dupuy’s concept of “tangled hierarchies” where top-down and bottom-up influence forces are interwoven such that global exploitation or country-specific exploration dominates in timely fashion. It calls for clearly defined control and autonomy regimes, with space given for emergent rules governing the rotation rate. Key questions are: What is the optimal rate at which they should rotate supremacy, and how to get this to happen and persist? Since normal quantitative methods can’t track complex, nonlinear, emergent phenomena, an in-depth longitudinal case analysis was conducted of a global MNC in the cosmetics industry, as it progressed through its early years of formation. Our case covers twelve years, during which the MNC goes through several kinds of tangled hierarchies. The dynamics in our case are rich enough to illustrate many aspects of the “tangled hierarchy” approach, while also offering new clues about oscillation rates. A number of implications for managers are discussed. Principal among these is the “edge of chaos” idea, in which managers have to avoid too-fast or too-slow oscillation rates. Very fast rates can degenerate into chaos and then collapse into the exploitation or exploration “traps.” Firms also fall into the traps simply because managers don’t understand or can’t tolerate the idea of oscillation dynamics.

For some 50 years, experts on multinational corporations (MNCs) have struggled with a fundamental managerial dilemma: How to gain the efficiency advantages of global integration while at the same time remaining sensitive to exploration and innovation advantages stemming from country-specific marketing and production? The favored solution to date is Bartlett’s (1986) Transnational form, purportedly offering a solution to the dilemma via internal network structures. “Strategy/structure” research shows mixed results (Johansson & Yip, 1994). Harzing’s (2000) research partially supports the Transnational approach, but the details of how managers are to solve the dilemma remain obscure. Strategy-process theory and research may offer a way out.

One of the quickest ways for strategy-process theorists and researchers to get ahead of the dilemma is to build from March’s already classic paper of 1991, and a decade’s worth of subsequent research. March, too, focuses on essentially the same dilemma: How to gain the advantages of exploitation and exploration simultaneously. But, like the MNC studies, he also takes a static balance solution (p. 71).

Contrary to March’s findings, Kogut (2000) argues that social networks offer firms the advantages of both exploration and exploitation. Miles,
Snow, Matthews, and Miles (1999) also focus on the benefits of "cellular networks," which are made up of autonomous cells operating alone or by interacting with other cells, and which can produce continuous innovation. This may be true, but what keeps them from spinning out of control? Thus:

- Who has the authority to make strategic decisions relevant to autonomous, interconnected systems?
- How to control, orient, or regulate a cellular network of autonomous units, supposing the network innovates in random directions at shareholder expense without ramping any products up to market?
- What happens if there is no top-down control to set it straight, or control is so strong that the cellular network, lower-level autonomy, and innovation stop?

March (1999, p. 5) calls for an optimum mix of exploration and exploitation. But what does the word "mix" mean? It could stand for a static optimal design or some kind of dynamic cycling between the two. Most of March's readers appear to take the "static balance" approach (e.g., Tushman & O'Reilly, 1996; Bradach, 1997; Brown & Eisenhardt, 1997; Tushman & Smith, 2002; Warglien, 2002). Christensen and Foss (1997) talk in terms of balance and equilibrium, but also focus on synergistic dynamics.

Instead of viewing organizations as consisting of static structural designs – like the Transnational form – we treat organizational performance at the internal process level. In this view, performance is a consequence of finding appropriate rates of alternation between exploitation and exploration. Unlike March, however, who worries about what upsets appropriate balance, we propose a dynamic-cycling approach. We go back to the French social theorists, Dumont (1966) and Dupuy (1992), to suggest a shift from static balancing of organizational influences toward dynamic shifts in the dominance of one or the other opposing forces – what the French imply by hiérarchie enchevêtreée and we translate as tangled hierarchy. That organizational effectiveness is a function of the rate at which tangled forces such as exploitation and exploration forces rotate, is further advanced by Dupuy (1992). Reynaud (1987) and Reynaud (1993) develop the dynamics of how control and autonomy "rules" form and come to regulate the entanglement dynamics.

First, we analyze the exploitation-exploration trade-off via tangled hierarchy theory. Then we ground our theory with a 12-year long case study of a large cosmetics MNC. It goes through several dynamic phases: (1) five years of exploration dominance showing marginal profits; (2) a period of rapid
oscillation between exploration and exploitation with profits, which subsequently collapses into the exploitation trap; (3) a brief control/exploitation attempt; and (4) it eventually finds a timely oscillation between exploration and exploitation — and profits.

BALANCING CONTROL AND AUTONOMY IN MNCS: A PROBLEM

There is a long history of managers and academics trying to solve a truly endemic problem: How to balance between control and autonomy (Roethlisberger & Dixon, 1939), mechanistic and organic designs (Burns & Stalker, 1961), global control and local sensitivity (Doz & Prahalad, 1986), efficiency and learning (Bartlett & Ghoshal, 1987), exploitation and exploration (March, 1991), and so on. Invariably the solution is one of emphasizing “balance.” This tendency shows up in both the competitive strategy and organizational process literatures. This means it could also slip into strategy-process thinking as well. The balance approach is problematic in a changing world. Before we turn to a more dynamic solution to the problem, however, we track balance solutions in both the MNC and organization design literature.

The MNC Dilemma: Solved by Balancing Global Efficiency and Local Innovation

As the world’s economies came back to life after the WW II and the Korean Conflict, the MNC form of organizing emerged as companies attempted to cash in on economies of scale and scope. By 1980, problems in managing across countries had emerged (Doz, 1980). By the mid-1980s, the simple idea of a “global” firm selling products made in one country world-wide, with little, if any, change in product designs or marketing approaches had evaporated. More and more, MNC executives discovered that local country and culture-sensitive adjustments had to be made. The dilemma is: How to best manage the trade-off between global control and efficiency vs. local innovation and variety.

By 1986, Doz and Prahalad had zeroed in on how best to manage the trade-off between global efficiency and local sensitivities, introducing their Global Integration–Local Responsiveness framework. Their solution was to
create "balanced" managers by rotating them from country to headquarters and back, and so on (Doz & Prahalad, 1986). Alternatively, Bartlett (1986) introduced his Transnational form, later elaborated in Bartlett and Ghoshal (1987, 1998), as a method of "balancing" between the conflicting structural designs of the Global and Multidomestic forms. They defined Transnationals as balancing between the conflicting control and efficiency demands of Globals vs. the novel product and marketing innovations arising from local sensitivities dominating the Multidomestics. How? Bartlett and Ghoshal's (1998) solution is "integrated network configurations" coupled with "flexible coordination"; they say, this is what facilitates global learning and efficient performance. For them, however, networks are top-down creations. Flexible coordination, for them, means drawing on a variety of coordinating processes, practices, and tools.

Empirical research on the MNC dilemma is "sparse and impressionistic," stemming from studies of a few "classic" MNCs (Hedlund & Ridderstråle, 1997, p. 334). Ghoshal (1997) also points to the absence of empirically verified conceptualizations. Though there are also weaknesses in her study, one of the best investigations on MNCs to date is that by Harzing (2000). She found that the Transnational form offered MNCs the best global–local balance. This form is characterized by decentralized network structure, subsidiaries as centers of excellence and product modification. Summing up, she says, "a Transnational company combines characteristics of both Global and Multidomestic companies; it tries to respond simultaneously to the sometimes-conflicting strategic needs of global efficiency and national responsiveness" (p. 115). The solution, however, still consists of balancing between global control and autonomy (Bartlett & Ghoshal, 1998).

Empirical research focuses on MNC structure. Prahalad and Doz (1987) downplay the role of organizational structure in global strategy, emphasizing instead other integrative management processes, such as global information systems, teams, task forces, coordination committees, and other cross-country coordination devices, as do Hedlund (1980) and Edström and Lorange (1984). The strategy-process concerns of MNC scholars in the 1980s — about managing Transnationals — got an analytical push by March's (1991) modeling of how to balance exploitation vs. exploration dynamics — another dilemma. We now connect the MNC global–local dilemma to the parallel problem inside firms by discussing March's dilemma, which is now a major focus of attention by many other researchers (Powell, Koput, & Smith-Doerr, 1996; Henderson, 1999; Lewin & Volberda, 1999; Marcus & Nichols, 1999; Luo, 2002; Siggelkow & Levinthal, 2003; Beckman, Haunschild, & Phillips, 2004; Holmqvist, 2004). The parallel is:
March's Dilemma: Solved by Balancing Exploitation and Exploration

March (1991) draws on Schumpeter (1934) and Holland (1975) to consider how organizations develop and use knowledge to explore new possibilities (searching new development opportunities) or exploit certainties (improving their existing technology). The existence of these two strategies is essential, but the fact that organizations have scarce resources implies an implicit or explicit choice between the two objectives. Exploration includes "... search, variation, risk taking, experimentation, play, flexibility, discovery, innovation," all of which depend on social networks, interaction, and member heterogeneity. Exploitation includes "... refinement, choice, production, efficiency selection, implementation, execution," things that call for more specialization, managerial focus, and control. Most of March's computational simulations focus on ways in which mutual socialization in social networks may dissipate the heterogeneity of organizational members, which is a significant basis of knowledge creation. These dynamics upset the balance between exploration and exploitation.

Investment returns from exploring new knowledge are uncertain and long term in nature, whereas organizations evolving in turbulent environments try to maximize their short-term value. Therefore, the perspective of an immediate income is sometimes more attractive: "The search for new ideas, markets, or relations has less certain outcomes, longer time horizons, and more diffuse effects than does further development of existing ones" (March, 1991, p. 73). Consequently, adaptive processes are designed to improve exploitation rather than exploration and can lead to suboptimal equilibria. Thus, "maintaining an appropriate balance between exploration and exploitation is a primary factor in system survival and prosperity" (March, 1991, p. 71).

Innovation depends on the combination and the exchange of diverse knowledge retained by different organizational members or subunits (Holland, 1995; Nahapet & Ghoshal, 1998). This requires heterogeneity of member knowledge and the existence of shared codes. Organizations learn from their members or subunits and accumulate knowledge through rules, procedures, and norms (Argote, 1999).

Shared codes and beliefs are affected by intra-organizational interactions enhancing the socialization of members or subunits (Whyte, 1957).
Socialization has both positive and negative input on innovation. On the one hand, it improves the capacity of exchange and combination (March, 1991) but on the other, it reduces diversity (Janis, 1972). March emphasizes that efforts to maintain appropriate exploration–exploitation balance in organizational learning imply conflicts between long- and short-term conceptions as well as individual and collective knowledge gains. **Balance** is continually eroded by too much top-down managerial control or bottom-up anarchy, loss of employee heterogeneity, effects of short- and long-run perspectives about costs and profits, changing emphases on reliability vs. novelty, turnover effects, and various ecological forces.

March (1991) does not really define just exactly what **balance** means. More recently, he calls for “… an optimum mix of exploration and exploitation” (1999, p. 5). To us, his use of the word “optimum” means that managers can study the conditions at hand and then “design” a stable or static optimum.

**Balance and Optimum Design vs. A Changing World: Still a Problem**

While American professors were elaborating their inventory optimizing models and fine-tuning their job shop scheduling algorithms, the Japanese invented “just-in-time” supply and computer-aided flexible production methods, thus illustrating the difference between fine-tuning in a static environment vs. thinking dynamically in a changing world. Static thinking and inattention to dynamics are still widespread problems in management research and practice (Eisenhardt, 1989; McKelvey, 1997). Going from industry drivers (1980) to the efficiency curve (1985), Porter (1996) says economic rents go to firms staying at the front edge of industry evolution. Prahalad and Hamel (1994) agree. As we move into the knowledge era (Prusak, 1996), and 21st Century economics (Halal & Taylor, 1999), competitive advantage comes from making moves faster than the competition (Fine, 1998; Jennings & Haughton, 2000).

The idea of aiming for static balance seems ill suited to a fast-paced world. At some point, the time it takes to arrive at an optimal design is slower than the rate at which competitive conditions change (Schön, 1971). Optimum designs slow firms down as they become more global, more dispersed, more integrated into multiple local cultures that change at varying rates, more hooked into leading-edge technologies, more dependent on rapidly changing consumer taste (Sanchez & Mahoney, 1996), or as products change from things that clank to things that change at the whim of a
software programmer (Prusak, 1996; Jennings & Haughton, 2000). In lieu of the prevailing static-balance approaches dominating strategy process to date, we propose a more dynamic approach.

**DYNAMIC METHODS OF GLOBAL CONTROL AND LOCAL INNOVATION**

*Circular Organizing*

Romme (1999) notes that scholars have been struggling with the problem of balancing power and control for over 50 years (Weber, 1947; McGregor, 1960; Likert, 1961). Dynamic circling between top-down and bottom-up control appears in business firms in the US (Ackoff, 1981, 1989), Holland (Endenburg, 1988), and Japan (Nonaka, 1988), now referred to as *circular organizing* (Romme, 1996, 1999). Based on his research in the Dutch company Endenburg Elektrotechniek, Romme shows that the trade-off between teams and hierarchy can be solved by a circular organizational design involving "the ability of the organization to switch between teams and hierarchy processes" (Romme, 1999, p. 806). Circularity is based on the principle of *double linking* which implies "that a team is linked to the next higher team in the hierarchy by means of its functional leader appointed by the next higher team, and a democratically elected representative or spokesman" (Romme, 1996, p. 415). In the decision-making process, functional leaders and spokespersons play completely different roles. The double link favors open discussion inside teams at each level until the consensus emerges. This model proposes a new perspective on the control and autonomy dilemma in which these two modes of coordination are not seen as in dichotomous stasis, but rather in dynamic oscillation.

*Managing the Rate of Exploitation–Exploration Reversals*

*Tangled Hierarchy*

Studying Hindu society, a well-known French anthropologist, Louis Dumont (1966), proposed a new concept of social order comprising an *entanglement* of individualism and holism. He indicates how the relationship of hierarchical opposition between the *englobing* level (the whole) and the *enclosed* level (the element) called *enclosing of the contrary* constitutes a formal model of social structure. Dumont shows that in holistic systems,
such as Hindu society, a hierarchy inside a hierarchy exists. For example, Hindu society is characterized by a continuing conjunction between religious and political power. The Brahman represents the sacred (most of the time the englobing hierarchy), that is, the religious sector dominates the political one. However, on the occasion of an economic or social disturbance, the hierarchy of Hindu society is inverted, with the Rajah (representing the political), dominating the Brahman. Eventually, the hierarchy reverts to its original form. In fact, social systems are always composed of entangled components that vary in their relative dominance.

The epistemologist, Jean Pierre Dupuy (1992), sees in the Dumontian model an illustration of a logical form that he terms as tangled hierarchy. Applying it to Hindu society, he proposes the schematization presented in Fig. 1. He shows, in Fig. 2, that the undoing (deconstruction) of a tangled hierarchy is always a tangled hierarchy but oriented differently. The englobing level of the initial hierarchy becomes the englobed level of the new hierarchy. In Fig. 1, the H1 form, sacred is the englobing level and dominates political. Fig. 2 shows the deconstruction of the H1 form into the H2 form in which political becomes the englobing level and dominates sacred.

Dupuy also discusses the rate of oscillation between the englobing and the enclosed levels by differentiating between oriented and symmetric tangled hierarchies. Oriented means that the oscillation rate is slow enough for an observer to easily distinguish between the englobing and the enclosed levels.

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**Fig. 1.** Tangled Hierarchy Applied to the Hindu Society (Dupuy, 1992).

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**Fig. 2.** Deconstruction of an Oriented Tangled Hierarchy (H1–H2).
As the inversion–reversion cycle speeds up, the dominance of one level over the other recedes. Symmetric means the rate of oscillation between englobing and enclosed levels is so high that their separate effects cannot be identified. This leads to a permanent deconstruction of the tangled hierarchy. We graphically depict this oscillation between H1 and H2 in Fig. 3. According to Dupuy, only the symmetric tangled hierarchy model corresponds to a real deconstruction of hierarchical effects in systems. However, this form is fragile and can lead to chaos.

Tangled Hierarchy in Firms
Building on Dumont and Dupuy, the French economist, Benedicte Reynaud (1987), defines three formal conditions for the existence of a tangled hierarchy. They are (1) recognition of distinct levels of social organization; (2) asymmetry in relations between those levels; and (3) their inversion. For application to firms we draw from Jean-Daniel Reynaud (1993), a French sociologist. According to him, in a firm there exist many different sources and domains of regulation. Two principal sources of regulation are: management and organizational groups. Managers define “official” rules, which constitute control regulation. At each organizational level, these rules fix or orient the activity, organization, objectives, etc., of groups at lower levels. At the same time, these groups define for themselves rules concerning the same subjects. Thus, an autonomous regulation reinforces or inhibits the control regulation.

These regulation processes exist between different organizational levels (corporate–divisions, supervisor–operators, etc.) and/or different functions and services. Also, a firm’s regulation rules may focus on various objects, such as work methods, promotion and access to managerial positions, remuneration, or the adoption of new production techniques. If
many sources and levels of legitimate regulation exist in a firm, the main problem is to understand the way they are created, combined, or interact.

When the interests of two parties are in opposition, a compromise may result; what Reynaud and Reynaud (1994) call joint regulation. Different types of compromise may be observed in everyday practices between opposing autonomy and control regulations. Effective and efficient joint regulation happens when there is a conjunction of regulation processes, that is, when they reinforce one another mutually. Also, a firm’s regulation rules may focus on various elements of organizing, such as work methods, promotion and access to managerial positions, remuneration, or the adoption of new production techniques. Autonomous regulation in the knowledge era becomes an organizational means of flexibility and innovation (McKelvey, 2001). We emphasize two kinds of regulation:

1. Control-dominated exploitation regulation: rules (official) defined by management (or group supervisor).
2. Autonomy-dominated exploration regulation: rules (informal) defined by some group.

Managers and/or group members have an option to define exploitation and exploration regulations jointly. These regulations could also be jointly defined between a division and a production site, or between functional vs. project units in a matrix organization.

For firms, the applicability of the concept of “tangled hierarchies” may be summarized as follows (Thomas, 1999) (see Table 1 for a glossary of key French terms):

1. Two opposing regulatory forces structure a firm: exploitation/control regulation and exploration/autonomous regulation. This results in hierarchical opposition. Because these forces are not separated, their constant interaction is a source of continuous tension.

2. In the foregoing configuration, a firm may be defined as a space of articulation between these two forces. Reynaud and Reynaud (1994) call this meeting place the space of joint regulation. The effectiveness of the joint regulation process comes from its capacity to maintain a clear separation between these two types of “regulations.” Regulation separation may be achieved by giving priority to either exploitation/control or exploration/autonomy regulations, and by delimiting the conditions under which this priority may be inverted or, in other words, by introducing a tangled hierarchy.
### Table 1. Glossary of Key Terms.

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<thead>
<tr>
<th>Tanglement Glossary (Dumont, 1966; Dupuy, 1992)</th>
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<tr>
<td><strong>Englobing of the contrary, or Hierarchical opposition, or Tangled hierarchy</strong></td>
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<tr>
<td>A hierarchy containing two opposing forces or social regulation processes — such as control and autonomy — which exhibit an inversion of the hierarchy, inside the hierarchy</td>
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<tr>
<td><strong>Englobing level</strong></td>
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<tr>
<td>The hierarchical level at which the <em>englobing</em> social regulation process/force holds dominance most of the time</td>
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<tr>
<td><strong>Enclosed level</strong></td>
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<tr>
<td>The hierarchical level at which a regulation process/force remains subordinate to the <em>englobing</em> force most of the time</td>
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<tr>
<td><strong>Inversion or Reversion</strong></td>
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<tr>
<td><em>Inversion</em> of the hierarchy inside a hierarchy; a situation in which the <em>englobing</em> level inverts to become the <em>enclosed</em> level, and vice versa</td>
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<tr>
<td><strong>Oriented tangled hierarchy</strong></td>
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<td>A <em>tangled hierarchy</em> that has a clearly observable <em>englobing</em> level</td>
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<tr>
<td><strong>Symmetric entangled hierarchy</strong></td>
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<tr>
<td>A tangled hierarchy in which the rate of <em>inversion/reversion</em> is so high that it becomes impossible to make a distinction between englobing and enclosed levels</td>
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<tr>
<th>Regulation Glossary (Reynaud, 1993, 1999)</th>
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<tr>
<td><strong>Rules</strong></td>
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<tr>
<td>General term that includes formal rules, conventions, norms, and routines. Rules set in motion by up- or downward forces that may become entangled</td>
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<tr>
<td><strong>Regulation process</strong></td>
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<tr>
<td>Process of creation and maintenance of the rules</td>
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<tr>
<td><strong>Top-down control regulation</strong></td>
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<td>Rules created by a high-level authority — top management — and imposed in a top-down manner</td>
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<tr>
<td><strong>Autonomous regulation</strong></td>
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<td>Rules created by a group that are imposed on all group members</td>
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<td><strong>Sources of regulation</strong></td>
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<td>Any entity in an organization that creates rules and asserts their legitimacy</td>
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<tr>
<td><strong>Joint regulation</strong></td>
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<tr>
<td>Compromises among different sources and levels of regulation (entangled regulations) that emerge from daily interactions in the joint regulation space where the two processes/forces entangle</td>
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3. Hierarchical opposition, such as exploitation-oriented vs. exploration-oriented regulation may occur within the same organizational level, such as when a problem of competence sharing arises between different services (i.e., engineering, production, or sales), or between functions and projects (such as when a firm adopts a matrix form where horizontal and vertical coordination hierarchies interact – seen in Phase 3 of our case analysis).

Effective joint regulation appears in Japanese firms (Aoki, 1994; Nonaka & Takeuchi, 1995). Aoki shows how Japanese firms use “conventions” distinguishing between responsibilities of operational units (including their degree of autonomy in the decision-making process) and higher-level managers. They describe conventions determining conditions under which the hierarchy between control and autonomous regulations may be inverted. Aoki notes further that new conventions structuring the exchange of information between different services appear. They may concern, for example, the nature of events that need to be communicated or the media that should be used. Conventions facilitate the relationships between different functions and services. Similarly, Nonaka and Takeuchi note that in a “hypertext” form, in contrast to a matrix structure, an organizational member is involved in only one regulation process (vertical or horizontal) depending on the context and the type of a decision. In a hypertext form there is no equality of structural forces and their regulation processes – the inversion–reversion of one opposing structure over another depends on the task and its context. In circular organizing, Romme (1999) describes the use of “double linking” as the Dutch way of governing by circling between the forces of administrative control and bottom-up consensus.

THE CASE STUDY

After describing our method of analysis we will present the case. Initially, the latter was the cosmetics division of an international corporation. Beginning from 1996, it was restructured into a holding company, now composed of three divisions (one prestige and two mass market).

Empirical Method

The dynamic nature of the research questions clearly suggests the use of qualitative methodology. Our data come from a case study – a commonly
recognized way to uncover complex forces showing multiple, nonlinear, and emergent dynamics. The choice of this empirical approach is also motivated by the three criteria proposed by Yin (1989): research questions defined in terms of "how," the novelty of the investigated field, and the exploratory nature of the research which makes control of actors' behavior unnecessary. The research perspective is longitudinal, narrative, and process-oriented. The empirical observation is nonparticipative and covers 12 years in the life of a firm. Data are collected via three of the six sources of evidence identified by Yin (1989): interviews, documents, and direct observation. These several sources of information improve the level of "completeness" and "saturation," which are two key internal-validity criteria proposed by Mucchielli (1991). Information obtained from interviews was complemented by data gathered from direct observation and official documentation.

It is important to note, however, that in this study interviews constitute the most important source of data because they are "...pertinent when one wishes to analyze the meaning that actors want to attribute to their practices, or to events of which they could be active witnesses; when one wishes to discover value systems and normative frames of reference on the basis of which individuals orient and determine themselves" (Blanchet & Gotman, 1992). Interviews were mainly conducted within one production unit of the prestige market division in three phases (1994, 1998, & 2001). The data collection and analysis was an iterative process and it proceeded in several stages. The first set of exploratory interviews allowed the construction of an interview guide. The second stage consisted of interviewing employees occupying positions at the corporate and the divisional levels. The objective of the final stage was to present the initial results to selected participants and to enrich these results with another series of interviews. In total, three people interviewed held positions at the corporate level and six at the divisional level.

Based on the process-analysis model proposed by Desreumaux (1986), the research was designed to gather and analyze data concerning: the actors, conscious or not of the processes and their partial understanding of the sense of the context; the driving forces of organizational dynamics; and time, the stages and rhythms of the evolution of organizational design. Data analysis was conducted according to the methodology proposed by Huberman and Miles (1991). It involved data condensation, its presentation in figures, and finally, formulating conclusions.
Managing the MNC and Exploitation/Exploration Dilemma

The Firm

In 1990, an international corporation, which we call *Omega Group*, decided to diversify into cosmetics via an acquisition strategy. Our analysis covers the 12 years from 1990 to 2001 during which the firm underwent three distinct development phases.

**Phase 1**, from 1990 to 1996, was marked by sequential acquisitions of various small entrepreneurial cosmetic firms. In 1990, *Omega* acquired the production and research unit where our data collection took place, as well as one “mass-market” brand. At this time, it owned four production plants in Europe, three of which were aimed at prestige markets and one at the mass market. In 1992, *Omega* extended its mass-market business by acquiring a leader in the American market, two more European brands, and one Chinese production company. During this period it became a true MNC in the cosmetics sector.

Up until 1996, *Omega’s* cosmetics division was divided between two relatively independent subdivisions, specialized by type of market: prestige or mass. This period was marked by the first attempt to rationalize the activities of each division by making production activities more efficient, especially where surplus capacity existed. As a result, the production plant we analyzed, which specialized in production for the prestige markets, was put into direct competition against three other plants. During this period, local entities were highly autonomous. In 1996, the company realized it had produced a strong record of innovation but was barely profitable.

**Phase 2**, from 1996 to 1998, focused on restructuring the cosmetics division. *Omega’s* strategy was to become Europe’s third major cosmetics corporation. Consequently, it regrouped all of its cosmetic business into one financial holding company, to be listed on the New York Stock Exchange. Then, the newly constituted managerial team of *Cosmetics Holding Company* initiated a restructuring aimed at realigning its different units into three Divisions (see Fig. 4): *Prestige* and *Mass Market* – each being composed of Sales, Marketing, and R&D units; and *Operations* – comprising eight production plants situated in Europe, US, and China. Operations developed activities in both types of markets (prestige and mass) simultaneously. Moreover, management tried to implement a balance between global integration and local responsiveness by introducing horizontal coordination among the three Divisions; they were looking for synergies (mainly in Operations) by better coordinating the international purchase committees,
logistics, production, and quality control. Finally, management developed centralized, vertical coordination of certain key functions (Human Resources, Finance, and Information Systems) by introducing Shared Service Centers. These service centers offered their resources to all three Divisions (Fig. 4). The horizontal coordination across production, sales, marketing,
and R&D units proved difficult. This resulted in the postponement of the introduction of *Cosmetics Holding* onto the NYSE and in turnover on its Executive Committee.

*Phase 3* began in 1999 with a restructuring of *Cosmetics Holding*. The new managerial team introduced a matrix MNC design, imposing specialization by market type. Three *business units* (profit centers) were created: *Prestige*, *Mass Market Europe*, and *Mass Market – Rest of the World* – Fig. 5. Each of these units – headed up by a “Division President” – included the following functions: Finance, Human Resources, R&D, Marketing, Sales, and

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<th>ORGANIZATION OF THE COSMETIC HOLDING 1999</th>
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<tbody>
<tr>
<td><strong>EXECUTIVE BOARD:</strong></td>
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<td>Chief Executive Officer</td>
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<td><strong>Division Presidents</strong></td>
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<td>President</td>
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<td><strong>Executive vice Presidents (E.V.P.)</strong></td>
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<td><strong>Functional coordination</strong></td>
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<td><strong>Prestige Market Division</strong></td>
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<td>Finance</td>
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<td>Financial Manager</td>
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<td>Financial Mgr.</td>
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**E.V.P.:** Executive vice President  
**S.V.P.:** Senior vice President  
**V.P.:** Vice President

*Fig. 5.* Organization Chart of the Cosmetic Holding Company (1999).
Operations \((\text{vertical axis on the matrix})\). At the same time, the cross-unit coordination of some of these functions was strengthened by creating positions of "Executive Vice President" for Finance, Human Resources, Marketing and Operations \((\text{horizontal axis on the matrix})\). The Division Presidents and Executive Vice Presidents made up the Executive Committee.

The objective of this design was to reinforce global control and efficiency, while preserving local sensitivity and adjustment. When our analysis ended in 2001, \textit{Cosmetics Holding} was profitable, had 8,000 employees, and showed $1.8 billion in sales. The \textit{Prestige} business unit employed 3,000 people and recorded $620 million in sales. It owned two production plants, sold 5,000 different products, and introduced 400–500 new products per year.

\section*{RESULTS}

Analysis of \textit{Omega}'s Cosmetics Division reveals the links between tangled hierarchies and exploration–exploitation strategies as it evolved through the three time periods. This section primarily focuses on the interactions between one production plant and higher-level management — the Executive Committee. Several distinct forms of tangled hierarchy may be observed during the three phases.

\textit{Phase 1: Innovation, with Autonomous Regulation Englobing (H2)}

\textbf{Oriented Tangled Hierarchy — H2 Form}

Phase 1 (1990–1996) began when \textit{Omega} adopted a strategy of rapid growth by acquiring entrepreneurial firms, but leaving them autonomous. The two subdivisions of the Cosmetics Division also remained very independent. Priority clearly was given to fostering differentiated lower-level autonomy: when new products were created, for example, a person responsible for a particular brand could simply submit his/her project to the production plant of his/her choice in each of the Prestige or Mass Market subdivisions. That the Cosmetics Division faced a production surplus eventually led to a strategy of forcing interplant competition. Plants took up this challenge and began competing with each other. Which plant a particular brand chose was dictated by production costs, speed by which a new product could be produced, production flexibility, and quality of service. Each production plant was forced to innovate/explore both to satisfy its Divisional clients and to guarantee its survival within the Cosmetics Division. However, two broad decisions
remained centralized at the Division-level Executive Committee: investments and worldwide strategic choices. The latter mainly concerned the acquisition of new brands or new production plants. We characterize this specific decision-making process as an oriented tangled hierarchy of an $H2$ type (Fig. 1).

During this period everyone bought into the strategic vision to innovate, with strong priority given to local autonomous regulation—exploration dominance. This led to the reinforcement of informal, horizontal links between marketing, R&D, sales, and production. The emergent internal subunit competition forced each production plant to anticipate and innovate to satisfy the needs of the other subunits and innovate. The production plant we studied, autonomously developed a number of organizational and process innovations differentiating itself from competing plants. Beginning in 1992, inspired by pharmaceutical innovations, this plant created specific zones where “sterile” and “clean” products could be produced. Completely new in the cosmetics industry, these advances allowed production of cosmetics with almost no preservatives, reducing allergy risks for users. This particular innovation came about at the same time as important broader market changes—sterile and clean products were in keeping with increasingly important ecological preoccupations by customers and the growing prevalence of allergies. These methods also better supported new formulas in which the benefits of the active agents were not diminished by the use of preservatives. The plant also completely computerized its production processes in order to increase reliability and flexibility. Finally, it strengthened its supply chain management and, as a result of all these efforts, it was the first plant of the group to obtain ISO 9002 certification in 1994. The tangled hierarchy of the $H2$ type fostered a climate of exploration that produced many, many innovations—but little profit.

Phase 2: A Symmetric Tangled Hierarchy, Efficient but Fragile

Oscillating $H1 \leftrightarrow H2$ Hierarchies

In 1996, a stagnation of the prestige market and rapid growth of the mass market caused major restructuring of the industry and led to concentration of product lines dominated by a few international leaders. In addition, because of overproduction and in order to improve profitability, Omega’s top management reorganized the Cosmetics Division, resulting in Cosmetics Holding Company. During Phase 2, the Company attempted to manage the balance between global efficiency and local sensitivity affecting its Operations Division by creating four top-management International Committees
(Purchasing, Scheduling, Production, and Quality), making it an H1 form (control englobing). The committees were to improve coordination across its two “Marketing Divisions” and the eight production plants in Europe, US, and China comprising the “Operations Division.”

At this point, top-management’s strategy became one of launching a “globalization program” to find synergies aimed at cost reductions, while simultaneously keeping flexibility at the local level. Indeed, management of certain functions, requiring a subtle mix of control and autonomy (i.e., rapid inversion-reversion between attention to one or the other tangled opposing regulations) was accomplished company-wide by the creation of International Committees. These also fostered the company-wide spread of best practices – a clear shift to an exploitation approach.

To further illustrate the symmetric tangled hierarchy, we focus on purchasing, representing 70% of a typical plant’s costs. Our analysis of the supply coordination activities of the International Purchasing Committee (IPC) showed that, as organized, it was extremely difficult to identify the englobing regulation level. The priorities alternated rapidly, depending on the particular time impact of the decision (short term–long term), as well as on the involvement of purchase managers at different production plants. It seemed that there was a constant deconstruction of the tangled hierarchy depending on the particular stage of the decision-making process. Thus, over time, IPC evolved from the oriented tangled hierarchy of H1 type into a more flexible, efficient form giving balanced importance to autonomous regulation. These dynamics resulted in a symmetric tangled hierarchy, which oscillated very rapidly between H1 and H2 – as we depict in Fig. 3. We now describe the parallel opposing hierarchies during this phase:

**Detailing the H1 Half of the Cycle: Control Regulation Dominant.** The IPC Officers formed a hierarchy where control regulation corresponded to the englobing level of the H1 form – the exploitation half. The Prestige Division’s President and the two (mass and prestige) Division-level International Purchasing Officers met every 15 days. They negotiated next year’s prices with core suppliers, announced bidding for new products (60% new products annually), and resolved temporary problems (quality, delays, price increases, etc.). For the latter, representatives from the concerned production plant often joined the meetings. Generally, the President listened to his subordinates, which secured them a very important position in the entire process. The job of plant-level Purchasing Officers included:

- organizing operational purchases (follow-up of orders, deliveries, prices, quality, etc.);
Managing the MNC and Exploitation/Exploration Dilemma

- evaluating suppliers (prices, quality, and delays), for example, over 30 suppliers were eliminated by the initiative of the Purchasing Officer of the plant we analyzed; and
- participating in different types of professional events in order to meet new suppliers, discover new techniques. Each plant was free to establish contracts with new suppliers for an amount not exceeding €150,000.

Local plant managers had some leeway to sidestep strict application of IPC Officers’ proposed rules. They had considerable autonomy to innovate in their elaboration and implementation of purchasing strategies. So, even though control regulation was the englobing level, regular inversions to autonomy influence inside the englobing control hierarchy were possible. These inversions occurred because the local actors had their say (they actively participated in the evaluation of suppliers), held a certain amount of power (mainly in contracting with suppliers), and enjoyed considerable legitimacy. In fact, the value system of the plant-level Purchasing Committee, similarly to the IPC, recognized local initiatives. Consequently, over the progression of the inversion–reversion cycles, the exploration tradition — the enclosed level — regained its strength, becoming equal in influence and brought about the rapid oscillation between H1 and H2.

**Detailing the H2 Half of the Cycle: Autonomous Regulation Dominant.** Due to the inversions discussed above, and as the experience of the plant-managers increased, the englobing level changed from H1 back to H2 — see Fig. 3. Even so, to reduce purchasing costs, the IPC Officers decided to proceed with a “value analysis,” thus again imposing control dominance. At the company level, focus turned to high-volume production stocks where even a 1% saving in volume resulted in high-cost savings. For example, a reduction of the perfume content in scent products yielded savings of roughly €1,000,000. At the plant level the value analysis included reviews and changes of suppliers, as well as product and production innovations. The value-analysis exercise brought to light the importance of plant-level inputs. It was only at the plant level, and by involving employees in different aspects of business processes (suppliers, purchasing services, production, and marketing), that value-creating innovations emerged. This sequence is illustrated by the following example.

A supplier new to the packaging business signed a contract with one of the production plants. Initially, the local buyer limited himself to a few contracts, but later engaged in significant cooperation with this supplier in order to find ways to reduce production costs and thus the overall price of packaging. High costs were detected in two areas:
(1) a high percentage of waste during a stamping/cutting operation where package shapes were cut out of large sheets of aluminum and cardboard; and (2) the manual assembly of a cosmetics "celebrity collection" because one of the bottles was too large for a machine to handle. The partnership between the plant-level buyer and the supplier gave rise to the following solution: the packaging designs were changed in order to minimize the stamping waste and the shape of the bottle was changed so the machine could do a final automated placing of bottles in the shipping boxes. The supplier made a prototype and proposed a price that ultimately saved € 720,000. The supplier and the local buyer, supported by the IPC, proposed these modifications to the Division's Marketing Department, which accepted them promptly because they considered that the change in the packaging would not diminish customer satisfaction. In this example, exploration regulation clearly became the dominant influence.

This example shows that the role of the IPC officers evolved from that of managers exercising control to that of support. In short, the H1 tangled hierarchy evolved into an H2 tangled hierarchy. Then, what began as an inversion to autonomy within the H1 control form, over time resulted in a rebalancing of autonomy and control. Both H1 and H2 forms achieved equality, that is, the whole became a symmetric tangled hierarchy. What started as inversion–reversion within the newly established H1 form in Phase 2, progressed into a rapid oscillation of \( H1 \Leftrightarrow H2 \) – seemingly both control and autonomy dominating at the same time. We detailed each half in "slow motion," but in reality they were alternating so rapidly that one could not say, at any given time, that either control or autonomous regulations really englobed the other. This, according to Dupuy (1992) is the only form that corresponds to a true deconstruction of hierarchy. Thus, the IPC appears to have adopted a true cellular network form as described by Miles et al. (1999),\(^3\) because its functioning tended toward becoming a symmetric tangled hierarchy.

It is important to note, however, that this type of an organization – \( H1 \Leftrightarrow H2 \) rapidly oscillating between up- and downward forces – is very fragile. The retirement of the IPC President (Company VP) at the end of 1997 marked the end of this regulation process. The new Company VP also became President of the IPC. However, not having participated in the emergent regulation of the symmetric form and in the progressive balancing of down- and upward influence, he adopted a very centralizing approach by creating a top-level "global buyers" function for different purchase categories. This gave a clear priority to standardization at the expense of flexibility – exploitation dominating. The organization adopted an H1 type tangled hierarchy and tried as much as possible to limit the traditional opportunities for inversion. This return to centralization, compounded by a decreasing understanding by key actors of a context they no longer shared,
destroyed the existing joint regulation. Autonomous regulation emerged "undercover" in opposition to control regulation, as typically is the case within Taylorist-style organizations (Roethlisberger & Dixon, 1939). This caused a very conflictual and chaotic situation. Isolated decisions were taken in plants; for example, a contract equivalent to €600,000 was negotiated without involving the IPC.

Phase 3: Exploitation Englobing, but with Interacting Opposed Regulations

**H1 Oriented Form**

A revised approach with control regulation dominating (englobing) became necessary because of the fragility of the previous form, the bad experience with the control-oriented new IPC President (who was fired), the difficulty of getting the symmetric form to spread to other committees, divisions, and plants in the Company, and the necessity of reinforcing coordination across different levels. Phase 3 began in 1999 when a matrix structure was introduced, with the three Divisions as Strategic Business Units forming the vertical axis, and Functions forming the horizontal axis (Fig. 5). Strong horizontal Functional coordination across-Divisions, especially at the Operations level, matched vertical Function-based control in each Division. The englobing level remained one of top-down control regulation (exploitation) – H1. However, the various plant-level managers regained their autonomy: the inversion of the hierarchy within the H1 form was, therefore, also happening (exploration) – illustrated in the H1 half of Fig. 2. The inversion allowed for the emergence of truly interactive opposed regulations, as described by Dumont and Dupuy. Simons (1991, 1994) also argues that influence systems, when they are used interactively, can be a proactive and dynamic tool to gather information and stimulate discussion in decentralized businesses. Interactive control [influence] systems are "a powerful tool in guiding and energizing the competitive evolution of the firm" (Simons, 1991, p. 61).

The matrix form fostered the emergence of multiple tangled hierarchies. Concerning the Operations activities, there were three sets of tangled hierarchies (indicated by the large arrows in Fig. 5): (1) inter-level ones running up and down between the Prestige Market Division's President and the Operations Managers (vertical arrow); (2) inter-level ones, running left and right between the Operations Executive Vice President (higher-level), VPs, and the lower-level Operations Managers (envision this as a horizontal hierarchy in the matrix) (horizontal arrow); and (3) the intra-level ones
running between a Division’s President and the Operations Executive Vice President (diagonal arrow). Thus, there were two H1 hierarchies (one vertical and one horizontal) in which control regulation (exploitation) represented the englobing level. The intra-level tangled hierarchy recognized the regulation necessity between the vertical and horizontal regulating processes. In this case, concerning the Operations activities of the Prestige Division, the englobing level was the Operations Executive Vice President. However, in each inter-level tangled hierarchy, plant-level managers kept their exploration autonomy, hence timely inversions to exploration occurred. In the same way, in the intra-level tangled hierarchy, inversion is also possible.

The oriented tangled hierarchy depended on the horizontal functional coordination axis of the matrix structure having very strong involvement by the Executive Vice President Operations and his team, composed of four Senior Vice Presidents (SVPs) and four corresponding Vice Presidents (VPs) in the Prestige Division (see Fig. 5). This structure resulted from the decision to enhance synergies inside the operations activities, between the corporate level and the local level (production plants) and between the key operational functions: development, purchasing, planning, and quality. In periodic meetings, the SVPs/VPs articulated different types of regulation pertaining to control, coordination, and local sensitivity, that is, they managed the inversion-reversion between exploration and exploitation. Two meetings were organized each month at both plant and corporate levels. The objective of the first meeting was to monitor results. The objective of the second one was to strengthen coordination between Marketing and Operations, especially as it pertained to launching of new products, which occurred frequently in the Prestige Division. Some managers were present for meetings at both levels, thus assuring inter-level coordination. This was especially the case for the managers responsible for Operations and Product Development and for the Purchasing and Planning VPs.

The budgetary process developed to support the matrix structure illustrates how joint regulation inside tangled hierarchies emerged. Indeed, the modified budgetary process improved the Company’s capacity to identify different decision arenas and to better manage the performance outcomes separating them. Moreover, the budgetary process favored the elaboration of an efficient compromise between different regulation processes by providing an alternative means for promulgating various kinds of initiatives and sanctions (Thomas, 2003). Specific regulation processes emerged to govern how the tangled hierarchies dealt with control and autonomy.
The budgetary process brought about a distribution of initiatives among managers by creating domains of decisional competencies and their interaction modes, that is, the ability to understand opposing regulation processes and coordination links among all parties. In transactive memory terms (Argote, 1999), this is equivalent to finding out "who knows what about what" and, thus, who is best qualified to make specific budgetary decision inputs. The elaboration of budgets was no longer based solely on a vertical distribution of centralized and nonshared knowledge, but rather led to the distribution of different kinds of knowledge throughout the Company. All of the interconnected, budget-related activities delineated during the budgetary process, in reality an organizational learning process, generated a true "cognitive flexibility" (Amintas, 1995). Frequent, but not too rapid, cycling between exploration and exploitation was legitimated.

The budget-development process embodied a network of decisions producing various informal rules indicating the interaction between the different regulation processes. These emerged thanks to a shared understanding of interactions leading to decisions concerning different businesses and managerial hierarchical levels. Budgetary processes defined areas of responsibility delimiting solutions acceptable at each level. These areas were not defined a priori, but evolved based on constant interaction. Discussions at each of two meetings allow progressive elaboration of rules (more or less formal) determining at which level decisions should be made, and which services were concerned. Regular attendance in both meetings at the two levels of those responsible for Operations, along with the matrix-related Functional VPs, facilitated the development of inter-level regulation conventions. These two meetings allowed the top managers to regularly involve themselves in the decisions of subordinates as per Simons's "interactive control system."

The following example from the case illustrates Simons's (1991) strategic flexibility.

Because of a recent price war in the components market, margins on purchases by one of the production plants had rapidly diminished. A new Purchasing VP initially had the typical reaction: he increased quantities purchased in order to take advantage of the price war, a decision well within his responsibility. However, this decision was quickly overturned at the next monthly meeting, because it would affect overall plant performance in a negative way, leading to increased inventory carrying costs for a product that would soon be obsolete. One part of the problem was transferred to a superior level by involving the purchasing SVP, so that he could negotiate with the suppliers (vertical interactive control and group activation of control regulation – exploitation). Solutions were also developed at the local level (exploration) to compensate for the loss and to maintain results (interactive intra-level control across plant and
activation of autonomous regulation). For example, a value chain analysis was conducted between plant-level purchasing and development managers in order to simplify and standardize packaging. Their proposed solutions were validated (or rejected) by the Division’s Marketing Department. In addition, the decision to standardize product-description leaflets was retained. This fostered more effective renegotiation of prices with suppliers.

Discussions of both local and overall costs and performance results led to quick appreciation of strategic decision implications (timing and success of new products, competitors’ actions, changing consumer needs), and to collective corrective actions (interactive inter- and intra-level regulation processes). “Thus, by using a control system interactively, top managers can guide organizational learning and thereby unobtrusively influence the process of strategy-making …” (Simons, 1991, p. 50). The interactive profit planning systems used by the Cosmetic Division were particularly well adapted to high-speed environments where competitive advantage was based on fast-paced product or market innovations. The Phase 3 oriented tangled hierarchy, H1 form, favored exploitation while simultaneously providing room to adapt to the changing external environment.

CONCLUSION AND MANAGERIAL IMPLICATIONS

Research on MNCs shows various structural design approaches to solve the dilemma of trying simultaneously to retain global control and efficiency, while maximizing local country-specific sensitivity, autonomy, and innovation (Harzing, 2000). The Transnational design has emerged as the preferred structural solution. Its failings, however, have led to a “strategy-process” perspective, wherein internal managerial processes take precedence. To date, the best lesson for strategy-process concerns about the efficiency vs. innovation dilemma comes from March’s (1991) paper about balancing exploitation vs. exploration approach – with much follow-on research (Tushman & O’Reilly, 1996; Bradach, 1997; Luo, 2002; Tushman & Smith, 2002; Warglien, 2002; Beckman, Haunschild, & Phillips, 2004; Holmqvist, 2004).

Twenty-first century MNCs live in a more rapidly changing world (Halal & Taylor, 1999), suggesting that static “balance” solutions are insufficient. We draw on the tradition of circular organizing (Romme, 1999) and several French theorists to bring a dynamic perspective to the failing balance solutions heretofore tried on MNCs and in strategy-process approaches.

The French view sees MNC organizations consisting of entangled regulation processes resulting in tangled hierarchies (Dupuy, 1992). One
regulation process exerts downward control influence; another exerts upward autonomy influence. Depending on environmental constraints, one or the other should dominate (oriented tangled hierarchy). However, inside both the H1 (control and efficiency dominating) and the H2 form (autonomy and innovation dominating) an inversion of the hierarchy between autonomy and control is possible. Dupuy (1992) also sees that the rate of oscillation between the two H forms varies. This oscillation rate view is quite opposite to the traditional MNC or exploitation–exploration balance approach. Furthermore, even though adapting to a constraining environment calls for one H form to dominate for a lengthy period of time, say H1, Dupuy says there should be "timely" inversion to the opposite englobing level (H2), with a reversion back to control after autonomy issues are cleared up.

Since longitudinal quantitative methods cannot capture the kinds of dynamics predicted by the French theory, we conducted an in-depth document-and-interview study of a cosmetics MNC as it progressed through its early years of formation. Our case analysis covers 12 years and divides into three phases, during which the MNC goes through three different forms of tangled hierarchy:

1. A tangled hierarchy of the H2 form – where exploration and autonomy dominate (the englobing level), with very infrequent inversions to control. In this phase, innovation clearly prevails, but there is little profit. The H2 form dominates for five years.

2. A symmetric tangled hierarchy that oscillates rapidly between the H1 and H2 forms. Here exploration and exploitation regulation processes oscillate rapidly (the frequency measured approximately in days), and profits are forthcoming. The theory predicts that this form is unstable and, indeed, the organization falls apart upon the retirement of a key individual. Thence, exploitation and exploration influences compete against each other or ignore each other, and unprofitability reappears. No englobing form is apparent.

3. A tangled oriented hierarchy of the H1 form with timely inversion to autonomy and then reversion back to control – exploitation dominates but legitimacy also prevails for frequent exploratory emphases; profits improve along with incremental innovation. Inversion–reversion changes measured more or less in weeks.

Each tangled form is unique, creating different oscillation rates between exploitation and exploration. We found three main forms – one at each phase of development.
Managing the Inversion–Reversion rate inside an H1 or H2 Tangled Hierarchy

Lesson One
Tangled hierarchy theory holds that managers have to maintain separation between opposing regulation processes and forces – clear-but-separate regulations assuring efficiency and clear-but-separate regulations assuring autonomy and innovation – but not to the point where dominance is frozen in one regulation force over the other. In other words, it is necessary to continuously define each hierarchy’s span of decision responsibilities and modes of interaction – each must respond to the other – with top-down and bottom-up forces “separate-but-interacting.” The existence of both clear priorities and shared meanings established via these interactions facilitates the emergence of negotiation flexibilities.

Lesson Two
Managers have to find the right inversion–reversion rhythm within one or the other oriented tangled hierarchies.

a. The more solidly stable are the regulations defining decision objectives and responsibilities corresponding to the englobing and enclosed levels (oriented tangled hierarchy), the rhythm of inversion–reversion can be faster because it would not disrupt (deconstruct) the oriented H1 or H2 form.

b. Our case results also suggest that the dynamic rhythm can be faster inside an oriented tangled hierarchy of H1 type (control regulation englobing) than in an oriented tangled hierarchy of H2 type (autonomous regulation englobing). Decades of theory and practice in Organization Development demonstrate that it is much harder to start up autonomous structures and keep them going than is true for control-dominated ones (French, Bell, & Zawacki, 1989; Mirvis & Berg, 1997).

c. A word of caution, however. If the limits and the nature of the span of decisional responsibilities corresponding to the englobing and enclosed levels change quickly and if the rhythm of inversion–reversion is too rapid, the tangled hierarchy is permanently deconstructed. The result is a symmetric tangled hierarchy in which rapid oscillation between the H1 and H2 forms occurs – cycles measured in days – as opposed to inversion–reversion within one or the other oriented tangled hierarchy forms. As the case demonstrates, the symmetric dynamic is the most effective, but also the most fragile. Points a, b, and c are illustrated in Fig. 6.
d. Bottom line is that managers must take charge of two kinds of dynamics: (1) manage the stability of the oriented tangled hierarchy of the H1 or H2 kind; and (2) manage an optimal inversion–reversion rate within one or the other H1 or H2 form. Inversion–reversion cycles in the “weeks-to-a-month” range appear optimal in our case.

The essential requirement is to keep an oriented tangled hierarchy from collapsing into a symmetric one. While the latter may be more effective, it is also more fragile. It tends to fly apart and freeze into stasis, with no inversion–reversion dynamic occurring. In referring to symmetry, Dupuy (1992) says it leads to “chaos and violence” (interpret “violence” as meaning tension, conflict, turnover, and instability).

**Lesson Three**

Applying the foregoing rate-timing lessons to the MNC and exploitation–exploration dilemmas suggests that:

a. an oriented tangled hierarchy of the H1 type favors global control, efficiency, and exploitation but pursuing timely inversions within the hierarchy fosters the introduction of country sensitivity, autonomy, exploration, and variety. If there is no inversion, as is the case for rigid, Taylorist firms, falling into the Exploitation Trap is likely. In addition, in the H1 form the rate of inversion–reversion needs to be fairly high (see the placement of H1 on the curve) because this produces shared codes
improving coordination and the firm’s capacity to exchange and combine new knowledge with exploitation as its priority.

b. A symmetric tangled hierarchy – no observable englobing level – seems to be the most effective organizational form for simultaneously fostering explorative country sensitivity and exploitative efficiency. This form is the closest to Miles et al.’s entrepreneurial cellular networks. It is capable of combining independence and interdependence. This form appears to be the most fragile and can deteriorate rapidly to chaos and then to either Trap.

c. An oriented tangled hierarchy of the H2 type favors exploration. The existence of inversions inside this englobing hierarchy allows the introduction of control regulation to focus and coordinate innovation. Note that the rate of inversion–reversion needs to be moderate so as to limit over-control and efficiency effects while also maintaining a high degree of exploration-relevant diversity.

Managing the Oscillation Rate between H1 and H2 Over Time

Lesson Four
Considering the fact that the symmetric tangled hierarchy is fragile, managers should aim for oriented tangled hierarchies of H1 or H2 form, depending on their strategic objectives for the given period (global efficiency/exploitation englobing vs. country sensitivity/local exploration/innovation englobing, with timely inversion–reversion rhythms within either englobing form). One can suppose that in the evolution of a firm, it is necessary to alternate between H1 and H2. Seemingly, H1 should dominate longer to allow the firm to be more profitable – as illustrated in the case.

Lesson Five
We note that, as shown in Fig. 6, managers have to hold their oriented H forms in a somewhat narrow space on the curve. Positioning in the center, at the symmetry position is the best, but it is unstable – there is the risk of quick collapse (down the arrow) and thence into one or the other Traps. Positioning on the slope on either side as an oriented H1 or H2 is optimal. But even here there is also the danger of the “slippery slope” – either oriented H form can easily slide down toward the Exploitation or Exploration Traps. These are mostly one-way slides, usually changed only by CEO firings. This finding parallels Brown and Eisenhardt’s (1997) conclusions about competing at the edge of chaos. In the absence of the strong culture-based legitimacy of an englobing hierarchy and an appropriate inversion–reversion rhythm,
the tendency will be entrapment in either control or autonomy dominance. This parallels the Bureaucracy vs. Chaos arches in the Brown and Eisenhardt (1998) perspective and the dysfunctional bouncing from one to the other extreme as is evident in the recent case analysis by Cardinal, Sitkin, and Long (2004).

Lesson Six
The record shows that in many firms the oriented hierarchy changes only with CEO change – think Jack Welch at GE, Lou Gerstner at IBM, Percy Barnevik at ABB, and John Reed at Citibank. Thus, for some period of time – usually years – the dominant perspective has to be one of solving the driving environmental constraints; either efficiency or innovation is called for. This view fits with Porter’s (1985) focus on the efficiency curve. Economic rents come only when firms establish competitive reputations at the low cost or product differentiation ends of the curve. Note, however, that we add the oscillation rhythm idea – even at, say, the low-cost end of the curve one has to keep exploring for continual improvements in production efficiency. For continued success with either of Porter’s strategies, attention to the opposite can never be far away.

Lesson Seven
Periodically Boards can expect to change the fundamental H1 or H2 competitive orientation, usually with a CEO change. CEOs good at driving toward efficiency usually are not very good at attracting and encouraging the kinds of innovative, entrepreneurial cellular networks that Miles et al. (1999) talk about. The opposite is also true. Eventually, shareholder value is best achieved by re-establishing the dominance of the opposing orientation. The cosmetics firm in our case went five years before making the switch, along with considerable turnover at the top. Over what turns out to be a seven-year span, Cosmetics Holding struggled with what the oscillation rate should be. Beginning around 2003, they have begun to show conflict over the idea of shifting to an oriented H1 form as englobing, wherein Marketing would become dominant over Production. We can only wonder if the timely inversion–reversion rate will continue.

NOTES

1. Her results are based on 287 returned questionnaires from a sample of 1,650 firms; 104 represented out of 122 MNCs in US, Japan, and seven European countries
(22 countries total); response rate by individuals surveyed was 20%; dependent on “single informants” and “only perceptual measures” as she puts it.

2. The English definition of the French word, “enchevêtée,” is “... tangled, entangled ...” in this order, with no further distinction made. Dumont talks about opposing hierarchies (plural). Dupuy seems to refer to a tangled hierarchy (singular). In French the two terms are used interchangeably. We will begin with Dupuy’s tangled hierarchy, but then talk about entangled control and autonomy forces as we progress.

3. Plants were autonomous cells; innovation, competition, and need to cut costs forced the development of network links; the IPC generated vertical links between plants, Divisions, and supra-Division management.

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