

**MANAGING DILEMMAS IN ORGANIZATIONS:
IRREGULAR OSCILLATION AND COEVOLVING CAUSALITIES**

Wladimir Sachs

CERAM Sophia Antipolis
Rue Dostoïevski – BP 085 – 06902 SOPHIA ANTIPOLIS CEDEX – France
Tel. +33 (0)4 93 36 08 25; fax: +33 (0)4 93 95 44 29; wladimir@sachsofone.com

Marleen Dieleman

Leiden University School of Management
Gravensteen, Pieterskerkhof 6 - 2311 SR LEIDEN - The Netherlands
Tel. + 31 (0)71 527 4683; m.dieleman@lusm.leidenuniv.nl

Jacqueline Fendt

Leiden University School of Management
Gravensteen, Pieterskerkhof 6 – 2311 SR LEIDEN – The Netherlands
Tel. +41 79 250 20 41; j@jaygroup.ch

Renata Kaminska-Labbé

CERAM Sophia Antipolis
Rue Dostoïevski – BP 085 – 06902 SOPHIA ANTIPOLIS CEDEX – France
Tel. +33 (0)4 93 95 44 84; renata.labbe@ceram.fr

Catherine Thomas

University of Nice – Sophia Antipolis
GREDEC– IDEFI FRE 2767
250, rue Albert Einstein, Bt. 2 – 06560 SOPHIA ANTIPOLIS VALBONNE
Tel. +33 (0)4 93 95 43 86; thomas@idefi.cnrs.fr

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Bill McKelvey

UCLAAnderson, 110 Westwood Plaza, Los Angeles, CA 90095-1481
Tel. +1 310-825-7796; mckelvey@anderson.ucla.edu

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Abstract

Many theoreticians search for balance or optimal mix so as to cope with the many ‘either-or’ dilemmas in organizations. This paper offers some early evidence that a more useful response may lie in oscillation between the opposing poles of dilemmas and that these oscillatory patterns are more efficiently adaptive if they are irregular. It also argues that the opposing poles of a particular dilemma, and the entire set of such poles stemming from multiple concurrent dilemmas at various levels and subdivisions of an organization, form a complex system of coevolving causalities. The paper is based on three extensive and original field studies, involving a Europe-based multinational, an Indonesian conglomerate, and ten multinational Swiss and German-based companies.

Keywords: Oscillation, Dynamics, Management Dilemma, Coevolution, Causalities

Introduction

In international business we have known for some time that executives frequently run into trade-offs between global efficiency and country sensitivity (Doz and Prahalad, 1986). More broadly, managers live in a world of opposites such as formal vs. informal organization (Roethlisberger and Dixon, 1939), mechanistic vs. organic (Burns and Stalker, 1961), or open vs. closed systems (Katz and Kahn, 1966). These and other opposites – the most highly cited now being March’s (1991) exploitation vs. exploration – are often viewed as dilemmas. De Witt and Meyer (1991) suggest that these and similar opposites confront managers with ‘paradoxes’. The prevailing solution to dilemmas advocated by many scholars is ‘balance’ (e.g., Bradach, 1997; Luo, 2002; Holmqvist, 2004) or ‘optimal mix’ (March, 1999), that is, attempt to benefit from both sides by striving for some kind of synthesis (De Witt and Meyer, 1999), or pursuit of ‘synergistic dynamics’ (Christensen and Foss, 1997). The problem is that balance between poles like globalization and localization or exploitation and exploration is ‘*impossible*’, as March (1999) puts it.

In three empirical cases that we have worked on, all characterized by at least one managerial dilemma, we have vainly sought for evidence of ‘balance’ approaches; we see, instead, patterns of oscillation between the opposing poles of the dilemmas – without exception. This prompts us to propose a theoretical generalization; it also invites the formulation of a conceptual framework to describe oscillatory dynamics in dealing with the many managerial dilemmas. This is what we aim to accomplish in this paper. We show how different propositions advanced are supported by at least one of the cases, and we suggest that published results from other cases may be reinterpreted in support of our approach. We do not propose that our framework supersedes approaches proposed by other authors.¹ More modestly, we claim that our approach is a useful alternative.²

We start with a discussion of management dilemmas, restating the irregular oscillation argument, moving on to contrasting dilemmas with management paradoxes. With that, we set forth our concepts and theoretical premises. We build from three recently completed empirical studies: two longitudinal long-time-frame cases of major corporations, one based in Europe (Thomas, 1997; Thomas *et al.*, 2005a, b), the other in Indonesia (Dieleman, 2005); and a comparative study of ten large multinational Swiss- or German-based companies (Fendt, 2005). Each of these studies reveals that management has to confront a variety of dilemmas and describes ways in which it copes with them. These cases demonstrate that managerial dilemmas are a pervasive and permanent feature of corporate life. They also show irregular oscillation and coevolving causalities. The use of three very different cases accords with Eisenhardt’s (1989) call for gaining added veracity via sequential case studies.³ We conclude with discussion of event- vs. ritual-based management approaches.

¹ We note, however, that in purely formal terms ‘static balance’ is a special case of ‘irregular oscillatory dynamics’. Indeed, the latter allows for static balance to exist over a given (typically short) time interval.

² Usefulness is a perfectly valid criterion of scientific validity, consistent with the philosophical posture of Pragmatism (James, 1907). For an extensive discussion of this issue see Sachs (2003).

³ Our work fits the multiple-case approach toward increasing veracity advocated by Eisenhardt (1989). We present very different cases, at different times, in different parts of the world, studied totally independently. The notion of oscillatory dynamics arose in the Thomas (1997) case. It then served to resolve some difficulties in interpreting data collected for the Dieleman (2005) case, and to reinterpret the results from the Fendt (2005) case.

MANAGEMENT DILEMMAS

The management literature refers frequently to ‘management dilemmas’ faced by organizational entities when they have to choose between two apparently incompatible courses of action. Perhaps the most prominently featured of such dilemmas is the one identified by March (1991) dealing with the simultaneous need for firms to improve exploitation of existing business while exploring new venues, a difficult choice in the context of scarce resources.

Table 1 lists additional dilemmas discussed in the literature. Many are well known so we simply list them for the record – they don’t need further discussion. What is common to all dilemmas is that we witness two opposing poles that are influencing an organization. The resulting behavior is typically somewhere between the two extremes: neither where it would be if one pole were completely dominant, nor where it would be in the reverse case of total domination by the other.

>>>Insert Table 1 about here<<<

Much of the literature deals with the question of how to ‘synthesize’ or ‘balance’ the opposing forces. For example, in the vast literature concerning the exploitation-exploration dilemma the search for ‘balance’ prevails.⁴ March himself advocates this in his seminal 1991 article (p. 71) although he evolves towards the concept of an ‘optimal mix’ (1999, 5). Many others agree to a greater or lesser extent: Tushman and O’Reilly (1996), Bradach (1997), Brown and Eisenhardt (1997), Tushman and Smith (2002), Warglien (2002), Cardinal, Sitkin and Long (2004). Christensen and Foss (1997) talk in terms of balance and equilibrium, but also focus on ‘*synergistic dynamics*’. Certain theoreticians ‘get stuck’ in the vain search for ‘balance’ or ‘static equilibrium’ between the opposing forces.

Alternatives to static balance date back to Ackoff (1981). One newer approach is called ‘*circular organizing*’ (Endenburg, 1988; Romme, 1999). Drawing, from seven research bases, Thomas *et al.* (2005a, b) propose ‘*irregular oscillation*’ as the best approach. Why? An analogy makes the point: riding a bike also disallows static balance – instead one weaves irregularly from side to side to prevent a fall. In management, we take the view that, like riding bikes, balance, synthesis, or

⁴ It must be noted however that some authors describe sequential rather than simultaneous achievement of balance between exploration and exploitation, but they mostly address life-cycle stages of organizational life. For a review of both the ‘simultaneous’ and ‘sequential’ approaches see Chen (2005).

benefiting from both opposites, calls for irregular oscillation from one opposite to the other. Why? Because as one resolves the tension of the one, the tension imposed by the opposite increases. In these instances, attempts to manage, improve, or impose one pole of the dilemma invariably sets up circumstances giving rise to the importance of the opposite (McKenzie and van Winkelen, 2004). This, then, raises a second problem.

As the oscillating emphases between, say, exploitation and exploration, progress over time they coevolve as changes in one pole cause reactive changes in the other. An additional problem is that instead of the traditional emphasis on the coevolution of populations (Ehrlich and Raven, 1964; Kauffman, 1993) or entities such as firms and industries (McKelvey, 1997; Lewin and Volberda, 1999), oscillating dualities show the *coevolution of causal influences*, as opposed to entities like members of a population (Kaminska-Labbé *et al.*, 2005). In point of fact, managers face the coevolution of causal influences and tensions imposed by many equally attractive or equally unattractive opposites. Further, the idea of two opposing causal influences is just the beginning. Firms are replete with many other coevolving influences – upward, downward, horizontal and diagonal.⁵

Consider two activities where maintaining balance is critical: walking a tight rope and riding a bike. In both, ‘balance’ calls for dynamic, not static behavior. Even in *unchanging context* (in a vacuum or on a perfectly straight road) the rope walker and bike rider can only maintain stable balance by shifting weight left to right and from right to left and perhaps even by shifting the body’s center of gravity up and down or forward or backward. Furthermore, *uncertainly changing context* (winds, curves, road works, slippery roads, other traffic, etc.) impinge on a walker or bike rider in unexpected ways causing them to move suddenly to maintain balance. In either case, the *rate of*

⁵ Kaminska-Labbé *et al.* (2005) argue that Aristotelian causes are chief among those coevolving causalities. Among other things, Aristotle studied causes from the perspective of building a house. Thus, a grass hut in Africa and an igloo in Alaska differ because each is constructed of different *locally available* materials – *material* cause. Cheops’ pyramid of classic stone and Eiffel’s tower of new fangled wrought iron differ because their *vision* of what should be built was different – *final* cause. Their organizational *means of accomplishment* (barges and slaves vs. carts on wheels; getting the job done on time, under cost, and consistent with the vision; use of hierarchy and technology, motivation of workers, etc.), were also different – *formal* cause. Their use of *force and energy* differed as well; flowing river and strong backs to get stones to the site vs. use of fire to form cast- and then wrought-iron girders and wheels to transport them – *efficient* cause (Barnes, 1995).

oscillatory movement is irregular. We build our argument with this analogy in mind.

Aiming for static balance is ill suited to a fast-paced world (Brown & Eisenhardt, 1997). 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, therefore, 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 tastes (Sanchez and Mahoney, 1996; Halal & Taylor, 1999), more likely to engage in mergers and acquisitions for a variety of rationales (Fendt, 2005), or as products change from ‘things that clank’ to ‘things that change at the whim of a software programmer’. We advocate oscillation dynamics simply because the Knowledge Era calls for flexible organizations, not just knowledgeable ones (Prusak, 1996; Volberda, 1999; Jennings and Haughton, 2000; McKenzie and van Winkelen, 2004).

Dilemmas or paradoxes: It makes a difference

The dictionary defines dilemma as ‘any situation in which one must choose between unpleasant alternatives’ (Webster’s 1978, 395). It is identified as a special kind of a predicament that is a ‘complicated, perplexing situation from which it is difficult to disentangle oneself’ (p. 1121). Looking at these definitions one may object to March’s use of the term ‘dilemma’, since *a priori* there is nothing particularly ‘unpleasant’ about making a choice between exploration and exploitation. On the other hand, the use of ‘predicament’ sacrifices the idea of duality: conflicting attraction from two opposite directions. So we adopt the term ‘dilemma’, with the *proviso* that the choice may involve two equally pleasant alternatives. After all, it is not uncommon in everyday parlance to say something like ‘I have a dilemma: go for a hot date or attend a fascinating conference’.

The term ‘paradox’ is closely related in the management literature to ‘dilemma’. The dictionary defines the former as a situation ‘that seems to have contradictory or inconsistent qualities’ (Webster’s 1978, 1029). Or, ‘a statement that is seemingly contradictory or opposed to common sense and yet is perhaps true’ (Webster’s 1996, 842). The same situation can be seen as dilemmatic or paradoxical, depending on whether one adopts an *ex ante* or *ex post* view. Before a decision is made an actor – in a prescriptive posture – faces a dilemma: how to choose between two avenues that seemingly cannot be pursued simultaneously; after the decision is made and somehow the irreconcilable things did happen simultaneously, the actor – in a descriptive posture – is faced with the paradox: something that was not supposed to be feasible exists and therefore is possible.

Building on seminal work by Nicolis and Prigogine (1989), McKelvey (2001) focuses on adaptive tensions imposed on an organization by its environment. De Witt and Meyer (1999) base their view on the idea of ‘strategy paradoxes’. They start, however, by discussing ‘strategy tensions’ between two opposing poles of attraction, and settle for the term ‘strategy paradox’ only after considering ‘strategy puzzle’, ‘strategy dilemma’, and ‘strategy trade-off’ as acceptable ways of saying the same thing. The authors could have added terms like ‘quandary’ or ‘predicament’ to their list. They choose ‘paradox’, because in their view this way of looking at tensions ‘will help strategists to avoid ‘jumping to solutions’ and will encourage them to use their creativity to find ways of benefiting from both sides of the tension at the same time’ (p. 19). While we agree fully with de Witt and Meyer’s

goals, we object to the use of ‘paradox’, because in basic scientific logic anything that exists is by definition consistent. Indeed, a classic form of a ‘proof of consistency’ amongst a set of characteristics is to show *one* object that exists and has all of these characteristics (Whitehead and Russell, 1910). From this we conclude that a paradox is an indication of a dissonance between the nature of the ‘real thing’ and that which we assume about it. We settle for the term ‘dilemma’, because it evokes the duality as in the tension between two opposing forces, and by deference to March and the literature spawned by his seminal article.

Managing dilemmas: Some premises

Dilemmas.

We now set forth a series of premises summarizing the literature and cases from which we build our theory. For completeness, we start with an obvious one. Strategic dilemmas as discussed above are not a ‘once in a while’ occurrence in organizational life. On the contrary, organizations are faced with many dilemmas simultaneously and at virtually all times. Managers are constantly faced with difficult, sometimes heart-wrenching choices:

Initiating Premise: Management dilemmas are pervasive: at any time any given organization typically faces several such dilemmas.

Irregular oscillation.

As already argued, a dilemma is an interplay of two opposing forces. The two together constitute a unified ‘force field’: they cannot exist without each other; they are complementary, exerting mutual influence, each modifying its nature as a result of the change in the other. One of the best appreciations of this view of tensions is given by McKenzie and van Winkelen (2004) in their analysis of ‘excessive change’ vs. ‘excessive stability’ in activities such as competing, decision making, learning, networking, dealing with the environment, and monitoring. For each of these pairs, managerial attention to one pole automatically sets in motion forces increasing the tension imposed by the other.

Referring back to our opening analogy with walking a tight rope or riding a bike, we now restate the initiating premise of this paper. Various authors suggest that the answer to dilemmas may lie in some sort of moving back and forth between the defining opposites. Romme (1999) notes that

scholars have been struggling with the problem of balancing top-down vs. bottom-up power and control for over fifty years (Weber, 1947; McGregor, 1960; Likert, 1961). Dynamic circling between top-down, and bottom-up control appears in business firms in the U.S. (Ackoff, 1981, 1989), Holland (Endenburg, 1988), and Japan (Nonaka, 1988). Bartlett and Ghoshal (1990) describe a firm that creates a ‘...constant ebb and flow in the centralization and decentralization of various responsibilities’. Schoonhoven and Jelinek (1990) report on firms switching structures to cycle between efficiency and flexibility. Thomas *et al.* (2005a, b) build from several theories to set up their irregular oscillation theory: circular organizing (Romme, 1999), French theories about tangled hierarchies (Dumont, 1966; Dupuy, 1992), handling paradox (McKenzie and van Winkelen, 2004), a computational model of firms mixing centralization and decentralization (Siggelkow and Levinthal, 2003), the Thomas (1997) case, and research on irregular heartbeats and survival (Bigger *et al.*, 1996). We reduce this to the following:

Premise 2a: Whatever ‘arrangement’ is achieved between the two poles of a dilemma has a limited life-span; the more strongly one pole of a dilemma is activated the more forces are set in motion to reinvigorate the opposite; this results in oscillation between poles.

Premise 2b: While attention to one pole is brought on by the force of the other, the instigation of the reversal is set off by unexpected stimuli, and/or response to changes in external and internal environments; since either of these can occur with uncertain irregularity, the movement appears as an irregular oscillation between the opposite extremes.

Coevolution.

McKenzie and van Winkelen state the transition from the dilemmas to coevolution just about perfectly. In their view, *managers perform best when realizing that the more they work to fix one pole the more they deconstruct the opposite. Eventually a reversal becomes a necessity.* Furthermore, the reconstruction of one pole is always in response to problems created by the strength of the opposite. Interdependence can set coevolutionary dynamics in motion.

In biology, coevolution explains predator-prey, host-parasite, symbiotic, and species-niche relationships and changes over time that are mutual-causal (Ehrlich and Raven, 1964; Thompson, 1982, 2005; Kauffman, 1993). Mutual causality may lead to deviation minimization (negative feedback) or deviation amplification (positive feedback) (Maruyama, 1963; Arthur, 1990). These kinds of coevolution have also been recognized in firms and industries (McKelvey, 1997, 2002;

Aldrich, 1999; Lewin, Long and Carroll, 1999; Lewin and Volberda, 1999; Van de Bosch, Volberda and Boer, 1999; Eisenhardt and Gahmic, 2000; Burgelman, 2002, 2003; Helfat and Raubitschek, 2000; Cardinal, Sitkin and Long, 2004). For two influences to coevolve it is not enough that they coexist in shared space and time. Each must respond to what the other does, back and forth, with the result that each improves its fitness. For example, we keep inventing new antibiotics and the bacteria keep improving their ability to survive the antibiotics – each improves and the cycle continues. Coevolution is also affected by changes in the environment – for example, natural resources, foreign governments, and wars affect the coevolution of ethnic groups in Africa. The case of the Indonesian company reveals persuasively the coevolution of crony capitalism in confluence with a market-style strategy. Tying dilemmas, oscillation and coevolution together, we get:

Premise 3: The opposing forces creating a dilemma are complementary. They co-evolve and represent the ‘opposite sides of a coin’, each can be appreciated in its own right, but they cannot be separated (Figure 1).



Figure 1: A dilemma is a tension between coevolving opposites

Purposeful systems & coevolving causalities.

Ever since Darwinian selection theory removed teleology from biological theory, biologists have not viewed coevolution between, say, bees and flowers, foxes and rabbits, or species adapting to deserts or rainforests as guided by some kind of driving purpose – it is just a function of genetic structure and surviving offspring.

Beginning with Sommerhoff’s (1950) ‘*directive correlation*’ and Ashby’s (1956) ‘*requisite variety*’ concepts, analytical biologists and later systems thinkers (Churchman, 1968; Ackoff, 1971) began to move away from the traditional view of a system as a ‘set of elements with a non-empty set of relations defined on it’ (Mesarovic, 1964; Klir, 1969; Young, 1964). This mathematical or formalistic conception of ‘system’, that one of us refers to elsewhere as the ‘structural relational’ approach (Sachs, 1976), is too limited to take into account complex phenomena in society, or even biology (Angyal, 1941; Rapoport, 1970; Trist, 1970).

A more appropriate view, named ‘systems approach’ rather than ‘systems theory’, is offered by

Churchman (1968), Ackoff (1971), Ackoff and Emery (1972) and Sachs (1976). It is based on the notion that the elements of the system are bound by a purpose (Rosenblueth *et al.*, 1943; Churchman and Ackoff, 1950). Elements have a relation if, collectively, they have attributes relevant to that purpose that none of them have separately. In this view, considering elements or subsystems in isolation from the whole results in loss of essential properties. Needless to say, organizational coevolutionists include ‘intent’ as an important factor (Koza and Lewin, 1999; Channon and Damper, 2000; Greenfield, 2002).⁶ In this they have been inspired by the notions of ecology (Emery and Trist, 1972; Dove, 1993).⁷

The notion of purpose or managerial intent ties together the Initial Premise (simultaneity of multiple dilemmas in the organization) with Premise 3 (coevolution of opposing poles in a dilemma) and allows us to advance Premise 4, illustrated in Figure 2:

Premise 4: The entire set of dilemmas present in the organization at any given level (e.g., those in Table 1), and at any given time, forms a system: the dilemmas coevolve.

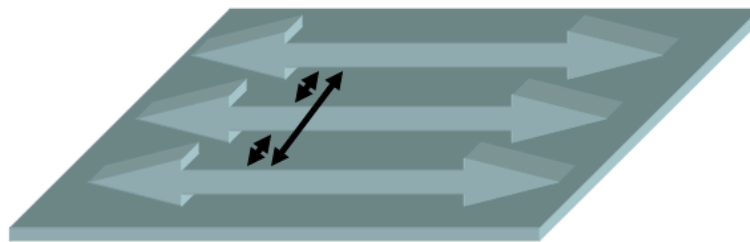


Figure 2: Complexity arises as at a given organizational level multiple dilemmas coevolve

Hierarchical and cross-boundary causalities.

Organizational complexity results not only from horizontal interplay at the same level, but also from the vertical interactions of different levels. The organization, which is purposeful, has subunits that are also purposeful, and they in turn may also have purposeful subunits. Thus, coevolutionary forces can be expected at each and every level, and their oscillatory dynamics are likely to follow different patterns. To illustrate, the picture in Figure 2 recursively replicates at each level. Furthermore, the

⁶ Since the 1970s one of us has (Sachs) translated the concept of ‘purposeful system’ to ‘sistema intencional’ and ‘système intentionnel’ to communicate with Spanish or French speaking audiences.

⁷ We also note that Kaminska-Labbé *et al.* (2005) point out that Aristotle’s notion of ‘final cause’ is essential, along with other Aristotelian causes, to comprehend complex organizational causalities. The notion of ‘final cause’ is precursory to that of ‘purpose.’

same dilemma occurring at different levels can also coevolve differently and different dilemmas at different levels may also coevolve. This is depicted in Figure 3.

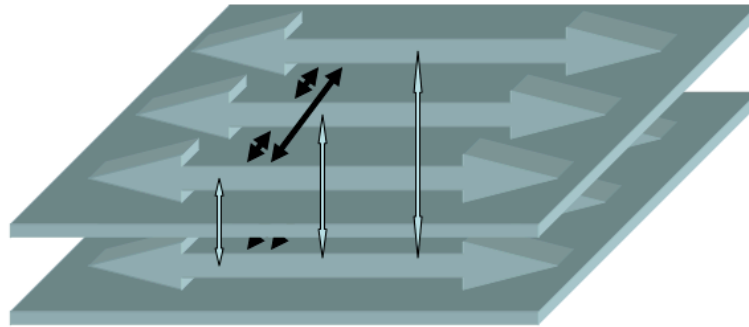


Figure 3: Complexity increases from coevolution of dilemmatic fields at different organizational levels

Similarly, for organizations with multiple divisions, we can expect the complexity depicted in Figure 3 to replicate among divisions. Furthermore, similar dilemmas experienced at different levels of different organizational units may be dealt with differently, and the dilemmas in one place may influence dilemmas in another. This rising complexity is expressed in Premises 5a and 5b:⁸

Premise 5a: The complex ‘ecology’ of co-evolving dilemmatic forces is horizontally recursive: it replicates here and there at every level of the organization:

Premise 5b: The complex ‘ecology’ of co-evolving dilemmatic forces is vertically recursive: it replicates across and between all divisions of the organization.

Thus, in multi-divisional organizations, the complexity depicted in Figure 3 replicates in every division, and dilemmas from different divisions and levels can coevolve as shown in Figure 4.

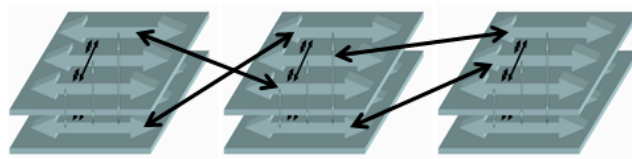


Figure 4: Complexity increases further from coevolution of dilemmas across divisional boundaries

Figures 1 through 4 show a progressive build-up of organizational complexity and illustrate six

⁸ This is highly suggestive of ‘fractal geometry,’ applied to study of organizational complexity by Andriani and McKelvey (2005). Fractal geometry has been developed to make sense of the rough, recursive and irregular shapes of most natural objects, from cauliflowers, to coastlines, trees, and galaxies. As Mandelbrot (1975, 1) writes: ‘Clouds are not spheres, mountains are not cones, coastlines are not circles, and bark is not smooth, nor does lightning travel in straight lines’. A fractal (Mandelbrot and Hudson, 2004, 118) is ‘a pattern or shape whose parts echo the whole’. A cauliflower is a good example of a fractal structure; its fractal nature is vertical by levels and horizontal as well since each part at a single level is virtually identical.

types of coevolution: (a) between opposing poles of a dilemma, (b) among dilemmas at the same level, (c) among dilemmas at various levels and (d) among dilemmas in different subunits, departments, and divisions of an organization.

SUGGESTIVE EMPIRICAL SUPPORT VIA CASE ANALYSES

All three cases are original and based on very extensive multi-year presence in the field. They all rigorously apply the standard case-study methodology (Yin, 1989). The first and the third cases have given rise to book-length monographs (Thomas, 1997; Fendt 2005). The first case has been summarized in several publications (Thomas, 1999, 2003; Thomas *et al.*, 2005a, b). The second case study is still under way, but summaries of the findings are available in Dieleman (2005) and Dieleman and Sachs (2005a, b). Complete method details are given in these other sources.

Case 1: Control vs. autonomy oscillating

This case concerns a large multinational cosmetics firm – disguised under the name ‘Omega Group’. The company originated in Europe and is headquartered there, but starting in 1996 production was guided from New York. The period covered is 1990 to 2001, and the field research concentrated on the purchasing organization, through which the overall corporate strategy was appreciated. Several sources of information were used, chief among them extensive interviews with key management, access to confidential company information, including minutes from meetings, and other published and private information. The interview transcripts were subjected to rigorous and formalized content analysis with cross-checking by an independent researcher.

Research focuses on the issue of how the company dealt with the dilemma of enforcing centralized control for the sake of efficiency and optimization of available resources as opposed to fostering autonomy to encourage innovation in product and market development as well as innovating in manufacturing and other support activities. Because Omega is a multinational corporation, this dilemma is a particular case of the broader global-efficiency/country-sensitivity or exploitation/exploration dilemmas discussed earlier.

The study is grounded in a theory developed by the anthropologist Dumont (1966) in his seminal study on hierarchy in traditional Hindu society. Dumont shows that most of the time the spiritual

power (the *Brahmin*) has precedence over the secular power (the *Rajah*), and calls this the H1 form of hierarchy. However, when circumstances warrant the hierarchical relation *inverts*, taking the form called H2. Societal regulation in India is based on the oscillation between the H1 and H2 form, as conditions demand. His fundamental insight is that of ‘*englobing*’ – i.e., spiritual power is always dominant, but within this *englobing* hierarchy there is always legitimacy for ‘*inversion*’ to secular power as conditions warrant, but limited in terms of time and/or domain of competence.

This work is further developed by Dupuy (1992) who applies it to all manner of systems, including organizations in modern societies. Dupuy also introduces the idea that the transfer of power in many organizations follows some kind of rhythm, which can vary in rate – from virtually nonexistent where organizations are trapped in one state to quite rapid, with the latter usually being rather fragile and short lived. Dupuy terms the former condition ‘*oriented*’ (the system is predominantly *englobed* by one pole); the latter condition he termed ‘*symmetric*’ (the oscillations are so rapid that neither pole is easily discerned).

In 1990 Omega undertook to diversify into cosmetics via acquisitions of entrepreneurial companies. During the period of the study the cosmetics division underwent several distinct phases, as shown in Figure 1, and clearly illustrating the oscillatory dynamics discussed here.

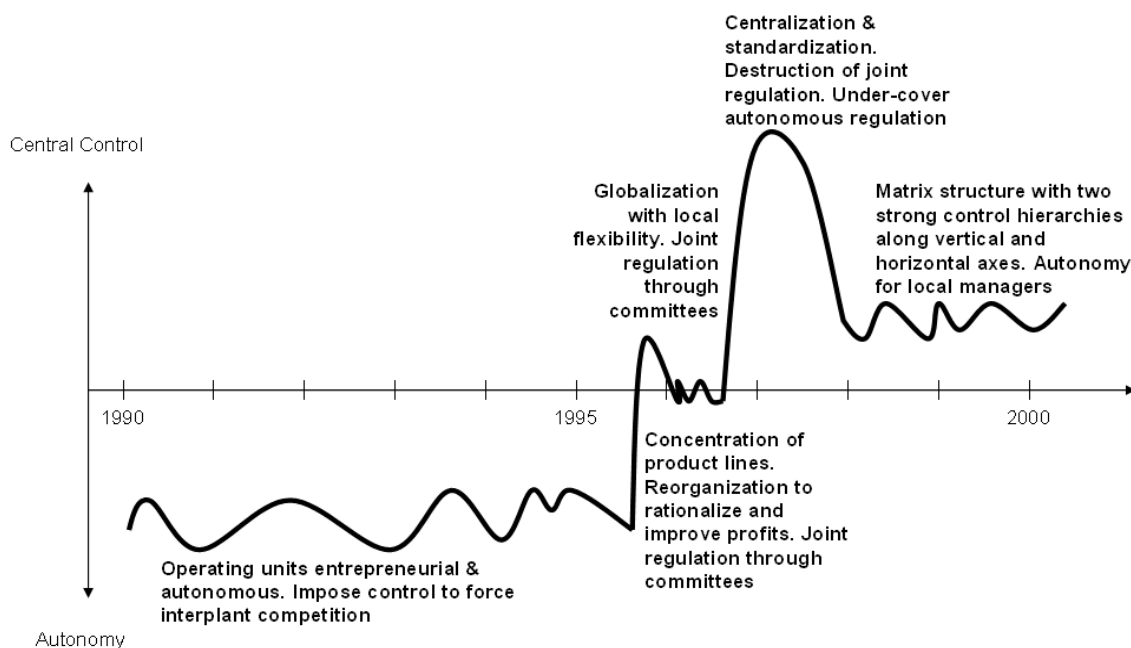


Figure 5: Omega group oscillating between control and autonomy

During the first phase the firm grew rapidly through acquisitions, adopting an H2 hierarchy with local autonomy and initiative dominant. Central control was subordinate, exercised indirectly, by imposing strict competition amongst plants, to deal with production overcapacity. The H2 hierarchy fostered exploration and many innovations, but minimal profitability.

During the relatively short second phase the firm oscillated between the H2 and H1 forms. The firm had to face stagnation of some markets, growth opportunities in others, and increased concentration of product lines among few international leaders, as well as overcapacity and low profitability. At first the response was to move from the H2 form to the H1 form, imposing a divisional structure with control as a dominating force. To preserve some local autonomy, however, central control was exercised by functional committees in which organizational subunits were represented and had a voice. Later the company oscillated rapidly between the H1 and H2 forms, adopting the H1 \rightleftharpoons H2 symmetric form. Control was promoted via a 'globalization program' aimed at synergies and cost reductions. However control was exercised via committees which frequently invited local input and 'listened to the field'. Over time, local managers regained some autonomy, and the regulation system started to rapidly oscillate between control and autonomy. This kind of a rapidly oscillating organization is very unstable and it fell apart upon retirement of the top manager. Next, Taylorist control (i.e., control without *inversion-reversion*) was adopted, with strong preference to standardization over flexibility and destruction of joint regulation mechanisms (the committees). Autonomous regulation went 'under-cover', as is typically the case in Taylorist organization (Roethlisberger and Dixon, 1939). This created chaos and eventually this form of organization was abandoned and the manager using it was fired.

In the last phase, the firm adopted a more moderate H1 form, with control dominating, but autonomy having a timely role as well. Indeed, a matrix organization was put in place with two strong control functions, both across horizontal and vertical dimensions. However local managers regained their autonomy and thus opportunities for inversion reappeared. This allowed for emergence of truly interactive *opposed regulations*. This phase supports Simons (1991) argument 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, 61).

Case 2: Crony capitalism vs. market opportunity oscillating

This case deals with Salim Group, Indonesia’s largest conglomerate, which during the Asian Crisis of the late 1990s came to symbolize the corrupt crony economic system that developed under the thirty-year reign of Suharto. The Group traces its origins to Liem Sioe Liong (who later changed his name to Sudono Salim), an immigrant from the Chinese Fujian Province, who in 1938 settled in a small Javanese town of Kudus, then a colonial backwater of the Dutch East Indies. With help from his kinfolk and Chinese clan connections he became active as a small local trader (Twang, 1998). Thanks in large part to crony connections between the founder and Suharto, the group of companies grew to be the largest in Indonesia, boasting at its peak revenues representing no less than 5% of the country’s GDP. To gain perspective on this figure, consider that a U.S. company with comparable relative weight would have to earn about \$600 billion annually, the bulk of it from domestic activities.

The study covers the entire span of time from the late thirties to the present, but field work focuses on 1994-2003 and, in addition to extensive documentary evidence, is based on 55 structured interviews, including rare ones with Anthony Salim, the current CEO and the founder’s son. Collecting reliable data is not an easy matter, as transparency is not one of the salient characteristics of Indonesia (during and after Suharto) nor of the Salim Group. While many individual facts cannot be verified, including getting a full list of Salim companies, the study frequently proceeded based on preponderance of evidence furnished by the massive sources collected and analyzed.

The study is a broad-based historical investigation of the Group’s overall strategy, especially in the period encompassing the Asian Crisis and the regime change. An interpretation of the data in light of theoretical contributions stemming from the cosmetics study (Thomas *et al.*, 2005a, b) reveals a strong oscillatory pattern, albeit among the opposing forces of a different dilemma. Indeed, there is strong evidence in support of a pull from the crony political system and the Chinese ethnic community on the one hand (the study calls this the ‘relationship-based’ model), vs. a pull toward a more conventional business strategy (called the ‘market-based’ model). Figure 6 illustrates the oscillatory dynamics along this dilemmatic space.

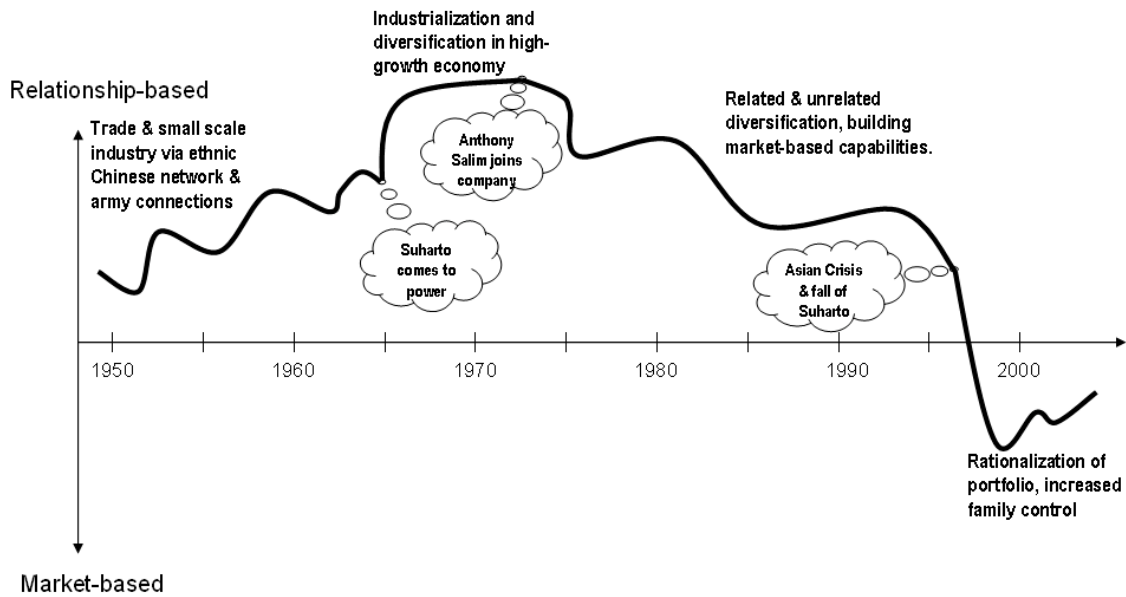


Figure 6: Salim group oscillating between cronyism and conventional business strategy

In the early days the poor immigrant from China set himself up in business thanks to help from family and clan members, connections that he carefully maintains and nurtures to this day, albeit on much greater scale than at the genesis. Liem traded with the local garrison of the Indonesian army, with the father in law of the sitting President serving as a facilitator. As luck would have it, this brought him into contact with a then little known commander named Suharto (Elson, 2001). In the early days of Indonesian independence life was difficult for Liem: the leftist government was not business friendly and the economy stagnated with high inflation. All of this changed when Suharto came to power after a coup in 1965 and remained in charge for the next thirty years. The economy started growing rapidly (an average of 7% per annum), fuelled by government-sponsored import-substitution, and the context became favorable to business. The regime steered business opportunities the way of friendly capitalists, as long they were competent and willing to share in the bounty. The Salim group benefited immensely in the period: it got exclusive or quasi-exclusive rights, giving it monopolistic positions in several sectors; it got subsidized loans and inexpensive access to materials and other inputs. Import barriers were set-up by the government to protect its domestic markets. The Group diversified in many directions, seizing every opportunity at hand. In the words of Anthony Salim, his father operated on a motto ‘all business is good’ and ‘the group evolved not by design, but by necessity. Whatever opportunity was good, we just grabbed’. Starting in the late 1960s the Group

grew at a very substantial rate (Robison, 1986).

The Group was not setup like a Western-style conglomerate, with a single holding company and consolidated financial statements, although at some point it started sharing corporate services provided on an out-sourcing basis by other companies in the Group. The ownership varied, according to circumstances, although the Salim family and a few close associates, one of whom was Suharto's step-brother and cousin, maintained control directly or indirectly through a pyramid structure. Not all businesses were profitable: some of them were set-up as favors to cronies or simply were 'propositions that one could not refuse'. Salim was in business with several of Suharto's children.

In 1972 Anthony Salim joined the company. This Western-educated man, born to wealth and privilege in Indonesia, was naturally a very different person from his father, and he increasingly steered the Group into more conventional market-based directions. The Group diversified abroad and established working relationships with MNCs and professional business intermediaries. In Anthony Salim's words:

From 1972 that's when the crossover occurred. When we start to become much more by design rather than opportunity driven. Design in the selection of the business opportunity.... We still have the contacts and contracts with the government. From 1979 we started to sort of elevate ourselves from government to market based enterprise. We do understand a lot of political implications, because we try to choose that it is much more on business directions rather than government related business – which is still good. Another characteristic is that of course we start to balance our portfolio. We have no pretension to hide that we have started to invest outside Indonesia since 1975, when we created our Singapore and Hong Kong companies.⁹

The Group continued its friendly relationship with Suharto and his regime, and benefited from it immensely. It must be said, however, that Suharto, while undoubtedly brilliant at 'unconventional fundraising', preferred to steer business the way of cronies that were competent. In his own words 'The development... of [Salim's]...companies is not a collusion between me and Oom Liem, but the government's effort to reach self-sufficiency by utilizing a businessman who is willing to work'. (*Australian Financial Review*, 26th September 1995). Thus the push towards becoming more market-based enhanced the pull and the profitability of the crony system.

⁹ This quote is from one of the authors' (Dieleman) interviews with Anthony Salim.

All of this came crashing down in 1998 with the Asian Crisis and the fall of the Indonesian regime, accompanied by mob violence against the Salim family and Group assets. The company survived much diminished, and rationalized its portfolio. It still has most of its activities in Indonesia, where it continues to be a player in the murky waters of that part of the crony system which survived the regime change and reorganized itself to thrive again (Robison and Hadiz, 2004). Its ambition is to have 50% of turnover in other near-by countries and to increasingly become a market-driven firm.

Case 3: Post-merger tensions oscillating

This case deals with the question of how Chief Executive Officers, specifically in Switzerland and Germany, cope with the demands placed on them in a post-merger & acquisition (M&A) situation. In addition to being grounded in a broad review of relevant theory and vast documentary evidence, the study includes two major sources of field-gathered evidence. The researcher was herself a rare female CEO of an important Swiss company and later of Swiss Expo, a fair *cum* exhibition that every quarter of a century mobilizes the entire society to reflect upon itself and look into the future. In these capacities she became a media personality and had extensive contacts with the business elite of her region. She kept a detailed professional diary and in the study distils it into seven ethnographic-style tales illustrating various facets of the mergers and acquisition game. Grounded in this experience, she then conducts ten formal case studies of major corporations that recently have been involved in significant acquisitions or mergers. The backbone for each case are four structured interviews, two with the Chief Executive Officer and two with one of the top lieutenants, each interview pair conducted with an interval of approximately six months. Interview transcripts were subjected to formal content analysis, with validation by both the respondents and a second researcher.

The study did not set out to look in particular for any oscillatory patterns or even for dilemmatic situations. But the results that emerge support the theory advanced here. The basic finding is that Chief Executive Officers in post-M&A have to concurrently manage at least four very distinct internal organizational realities, as shown in Figure 7. The two original organizations (the acquirer and the acquiree) continue to exist for varying intervals of time after the acquisition is formalized. The new combined organization starts to emerge during that time. And there is some sort of a transient organization, frequently referred to as the 'integration team', which manages projects

specifically related to combining the two organizations. At times there may be more than the four difficult-to-manage realities: the original organizations may themselves be in an unfinished post-acquisition or post-merger phase; or as some interviewees indicated, stress at work may translate into difficulties at home; or external events such as economic crises or personal illness and tragedy may come into play.

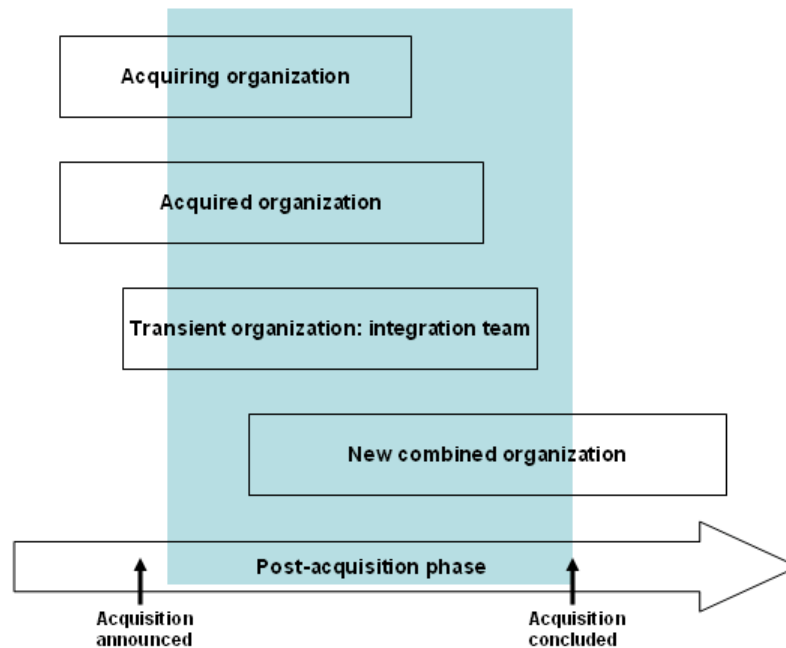


Figure 7: The multiple realities of a post-acquisition transition

In addition and simultaneously to these conflicting internal organizational realities, the CEO must manage the diverse and often conflicting expectancies and/or pressures from internal and external stakeholders, such as managers, employees, board members (internal) and shareholders, customers, suppliers, analysts, banks, unions, lawyers, executive searchers, societal activists and, last but not least, the media. Each of these realities requires the CEO to handle a different culture, to accept a different tempo, to trade off different dilemmas. All of this happens in an environment of very high stress: established rules and comfortable positions are upset, anxiety and competition is high, and the temptation to manipulate or obfuscate information is high. The CEO is bombarded with urgent problems and pulled in all manner of directions by opposing forces. Couched in terms of our theory, he lives in a maelstrom of dilemmatic forces.

Besides proposing a new understanding of the post-merger organization as being four juxtaposed organizations each needing dedicated management attention to trade-offs (cf. Figure 7 above) the study identifies and explains fourteen key inhibitors to executive learning, for example: the post-merger exception, CEO overstaying or under-staying, success, isolation, homogenous environments, cultures of management, lack of trust, excess of trust, personal agenda, distraction, dilemmas and paradox, time pressure, adulation and expectations of omniscience and media pressure. There are all sorts of dilemmas embedded amongst the elements of this list.

In the original study, additional clusters of choice-points and trade-offs influencing post-merger performance are purported and contextualized, namely managerial discretion, the success trap, the use of discourse and metaphor in acculturation, the CEO and his or her self, management vs. leadership, the global mindset, the management of dilemmas and polychotomy, and trust vs. distrust. The study furthermore analyzes the CEO attitudes and coping mechanisms vis-à-vis the dilemmas faced and reveals three categories:

- The *'cartel leader'* is what you would imagine from the label: he does not consider the finer points of life and bulldozes his/her way forward.
- The *'aesthetic leader'* pays close attention to communication, appreciates the finer nuances of things, and is very attentive to his/her social status.
- The *'videogame leader'* is very adept at quickly switching from one situation to another, not letting problems in one situation affect her/his ability to deal with another, and s/he is a natural 'oscillator'.

The researcher proposes a fourth ideal category: the *'holistic leader'* that in some ways is a synthesis of the above. Figure 8 summarizes the three empirical categories, illustrating each with interview quotes, and characterizing it in terms of strengths and weaknesses in coping with managerial dilemmas. It shows how the ideal fourth category emerges from combining the strengths.

>>> Insert Figure 8 about here <<<

The notion of holistic management thus supports the central thesis of this paper, namely that multiple dilemmas have to be dealt with simultaneously in various organizational units and frequently across unit boundaries and organizational levels. Table 2 lists a selection of the innumerable dilemmas described by the respondents.

>>> Insert Table 2 about here<<<

HOW THE CASE DATA SUPPORT THE PREMISES AND PROPOSITIONS

Initiating premise

As stated, our starting premise is not controversial, and is included here only as the baseline initiating point. The remaining premises are the theoretical backbone of this paper, and we now address the extent to which they are supported by the three rich and original empirical studies. It must be noted, however, that rereading accounts from other empirical studies allows one to see additional evidence supporting some elements of our theory. For example:

- In case studies of innovation in eight different firms, Pettigrew and Fenton (2000) mention tension dichotomies such as: hierarchy vs. networks; vertical accountability vs. horizontal integration; being in charge vs. empowering; centralizing vs. decentralizing; standardizing vs. customizing; identifying (owning) vs. sharing knowledge; continuity vs. change; stability vs. innovation.
- McKenzie and van Winkelen (2004) broaden *stability* to include exploitation, efficiency, cost control, selection, coordination, structure, institutionalization, and standardization. They broaden *change* to include exploration, flexibility, innovation, variation, specialization, spontaneity, fluidity, and development.
- We show a variety of additional tension dichotomies in Table 1 – classic ones such as formal vs. informal, simplicity vs. variety, and mechanistic vs. organic, as well as more recent ones such as exploitation vs. exploration, focus vs. diversification, revolution vs. evolution, and competition vs. cooperation.

Premise 2a

The way of coping with managerial dilemmas is through oscillatory dynamics, whereby whatever ‘arrangement’ is achieved between opposing forces has a limited life-span and eventually evolves towards a new relative weighting of the poles. Interestingly, Case 1 was picked for study right at the time that its Phase 1 was nearly finished, meaning that the researcher had no idea at all that, over the rest of the time, the dynamics hypothesized by Dupuy (1992) would materialize. By pure chance the cosmetics firm turns out to provide the strongest evidence in support of this Proposition. The Indonesian case also reveals an oscillatory pattern. Figures 5 and 6 (the ‘oscillograms’ for Cases 1 and 2) are very graphic in their *failure* to show anything close to ‘balance’, equilibrium (straight lines), or even pendulum-like rhythm. In the Swiss-German study the videogame executive is clearly a natural ‘oscillator’ and the proposed ideal behavior, the holistic executive, suggests a strong degree of oscillation. In this case, however, the number of oscillations could not be tracked in a way that results in any kind of reasonably correct graphic of the changes in the many polarized tensions involved – as

depicted in Cases 1 and 2.

Premise 2b

The first two cases also hint at the idea that the oscillatory patterns are irregular. The oscillograms for both cases show no steady rhythm of any kind. Indeed, it would be surprising if there were a rhythm. Mandelbrot (1975) and Andriani and McKelvey (2005) show that rare is the thing in nature that is regular, the movement of planets notwithstanding. Coevolution makes irregularity the norm for the following reason: even if one assumes that phenomena intrinsically oscillate rhythmically, say in a sinusoidal pattern moving back and forth in between the two extremes, but that each has its own characteristics, say the amplitude and the frequency of the curve, then superimposing such curves resulting from interaction would necessarily produce a ‘ragged’ irregular outcome. In other words, whatever internal rhythm there might be to begin with will necessarily be overwhelmed by ambient complexity.

There is a growing set of findings in cardiology showing that our heartbeats are irregular – ranging from rapid to slow irregularities in fractal structure – (Bigger *et al.*, 1996; Huikuri *et al.*, 1998) – heartbeat regularity is a sign of impending heart attack or death. In short, heartbeat irregularity is driven by uncertain events, not by preference, plan, or regularity. Since heartbeat irregularity is at the basis of human life in an expectedly changing world, we extend this finding, based on some corroboration in our cases, to suggest that irregular oscillation is required if organizations are to be efficaciously adaptive.

While the natural tendency of the heart may be to produce a regular heartbeat, in fact, it constantly has to adjust the rate at which it beats, in response to stimuli of all kinds such as variations in physical effort (sleeping, sitting, climbing, jumping, running), psychic state, biochemistry of blood, temperature, and so on. If it did not have this capacity to adapt and produce an irregular rhythm, it would fail at its essential role. This is why, for a simple undertaking such as measuring one’s pulse, we are advised to do so in consistently similar conditions, before a meal, to be relaxed, to try and think no thoughts ... an attempt of sorts to isolate for a fleeting moment the heart from its environment (in technical jargon achieve the resting heart rate). Cardiologists prefer to monitor heart rhythm for 24 hours with an ambulatory device (Holter Monitor) rather than a snapshot (ECG). They

define arrhythmia as variations in heart rate that cannot be explained by contextual events.

Premise 3

The poles of a dilemma coevolve. This is clearly visible in both Cases 1 and 2. The Cosmetics firm shows tensions as it evolves over time – going from innovation to introducing control to rapid oscillation between control and autonomous innovation to control dominating at the exclusion of autonomy to control dominating but also encompassing timely *inversions* to autonomy with subsequent *reversion* back to control dominance. This case shows that the firm cannot be effective if either ‘opposite’ stands alone for very long. The case also demonstrates that the single-minded pursuit of one pole undermines the effectiveness of the other, with overall profitability at stake.

As the Indonesian conglomerate progresses, management is torn between the desire to realize maximum profit from the system of corrupt crony relationships that led to its phenomenal success, and the desire to become a conventional corporation, implementing market-based professional practices and diversifying its risk. The two cannot exist without each other: managerial competence is the ‘cover’ used by the political masters to justify steering business the company’s way, and probably the major factor influencing their choice of this particular crony rather than another. And the drive towards a market-based corporate strategy is fed by the enormous advantages afforded by the crony capitalism system. Some new business ventures are launched because they make sense from a conventional managerial point of view, others to enhance or develop the crony relationships or simply because political and ethnic obligations make it infeasible to proceed otherwise.

Premises 4 and 5a and b

The various management dilemmas facing a corporation at any given time may form a horizontally dispersed, multi-level coevolutionary system. The Swiss-German study provides considerable evidence supporting this premise. Indeed, recast in terms of our theory, it shows that the central problematique facing top executives in a post merger or post acquisition situation is that of coping with several distinct realities, with each of these consisting of several distinct organizations progressing through several stages. Each reality shows polarized tensions generated by opposing systems. These can include formal and informal collective objectives and personal agendas that motivate actions in opposite directions. The Cosmetics case shows control and autonomy coevolving

at various levels of the firm (Thomas *et al.*, 2005a, b) and a recent analysis by Kaminska-Labbé *et al.* (2005) shows the poles of the dilemma coevolving in response to the coevolving internal and external causes as the firm evolves from 1990 to 2001. This case also shows all the coevolutionary dynamics occurring from bottom to top of the organization.

CONCLUSION: FROM RITUAL TO EVENT-DRIVEN MANAGEMENT

Based on insights derived from three extensive and original case studies, as well as literature from various fields of management – especially coevolutionary theory – this paper lays ground for a general theory of management dilemmas and coping mechanisms. It posits that multiple dilemmas confront an organization at all times and at all levels, and that these dilemmas consist of coevolving opposites, that they coevolve with each other at the same organizational level, across levels and across organizational levels. We show that the best way of coping with a particular dilemma is to oscillate in the space defined by the opposing forces, but that too slow or too fast an oscillation may cause rigidity or instability and chaos.

Mandelbrot (1975) points out that there is very little regularity in nature. But there is plenty of it in man-made systems: engineers and bureaucrats are ‘regular kind of guys’. As Case 3 shows, however, even man-made systems are driven by contextual events. We may have to rethink strategy processes in organizations, moving away from regular planning cycles. The answer probably lies in giving more prominence to control and monitoring, but perhaps also to spontaneous initiatives and creativity. Ironically, as far back as 1963, Brian Goodwin, in his book *Temporal Organization in Cells*, shows ‘...how molecular control systems, such as feedback, repression, control of enzyme activity – in other words, the intrinsic local logic of a complex system – gave rise naturally and spontaneously to oscillatory behavior and global patterns’ (quoted from Lewin, 1999, 29). In other words, more control gives rise to more oscillation! For now we are oscillating between several possible answers.

Hearts are at the core of life. The autonomic system by which hearts respond to tensions imposed on bodies may be one of our best sources of managerial guidance about dynamics – both strategic and organizational. Hearts just respond to demands; they don’t rely on past doctrine or ritual; they don’t ‘think’ about it. They just respond as quickly and as best they can. As soon as their beats become

regular, bodies are in trouble. We do not want to imply that firms should be as mindless as autonomic systems, but on the other hand we definitely call for event- rather than ritual-driven management.

We are well aware that that overcoming local rituals is not easy for managers to do. Personal preferences, social structure, cultural solidarities, past behaviors that worked, expectations, and feelings of comfort – many of which appear in Morgan's book, *Images of Organization* (1986) – all put ritualized responses ahead of event-driven responses. Another classic treatment of this tendency appears in Scott's classic, *Organizations: Rational, Natural, and Open Systems* (1981).

How about prescriptive consequences of the theory advanced here? The literature is virtually unanimous in calling for the managerial process to be a continuous one, with constant adaptation to changing contextual conditions. In most corporations the planning process is run on an annual cycle, tied to the budgeting process, and in principle at least, every cycle provides an opportunity for questioning and possibly modifying the current strategy and management practice. Elaborate control and monitoring systems are supposed to support this process.¹⁰ Thus, in one way or another, the idea of 'rebalancing' is central to the managerial process, and it may result in oscillation between the opposing forces of the dilemmas permeating a corporation's life. In public life as well, lawmakers increasingly build review processes into legislation, with the most extreme case being the so-called 'sunset clause': a law goes out of existence automatically at a preset date unless re-enacted by an explicit act of the parliament. As is frequently the case, Peter Drucker (1999) is maybe the most radical proponent in proposing a process of organized abandonment and of putting every six to twelve months every product, process and organizational unit on trial for life.

Methodologically, we develop a graphical way of visualizing the coevolutionary complexity of an organization, showing through a progression of Figures the gradual increase of complexity as one considers four types of coevolution. We track the oscillatory dynamics of a firm through two kinds of oscillograms (Figures 5 and 6), the second of which introduces causal mapping in the form of 'balloons' depicting major influences on the evolution of the organization.

¹⁰ See for instance some of the textbooks on strategy: Gervais (1995), Kaplan and Norton (2001), Mintzberg and Quinn (1996), Rue and Holland (1989), Thompson and Strickland (1998), Weill (1992), Wheelen and Hunger (1984).

These graphical methods are useful didactically and help visualize complexity, but they are not appropriate to handle large databases. We come close enough to making operational some of the key concepts, such that one can envision future researchers making use of matrix coding and analysis to achieve more detailed and more systematic results. For instance, a massive source of company decisions (such as meeting records or newspaper articles) could be coded to account for the dilemma being addressed, interactions with other dilemmas, and with external. The point of balance between dilemmatic opposites and the strength of mutual influences could be coded on Likert scales (e.g., -5 to +5). This kind of a database could be exploited through clustering techniques and cross-sectional studies dealing with a particular dilemma or cause.

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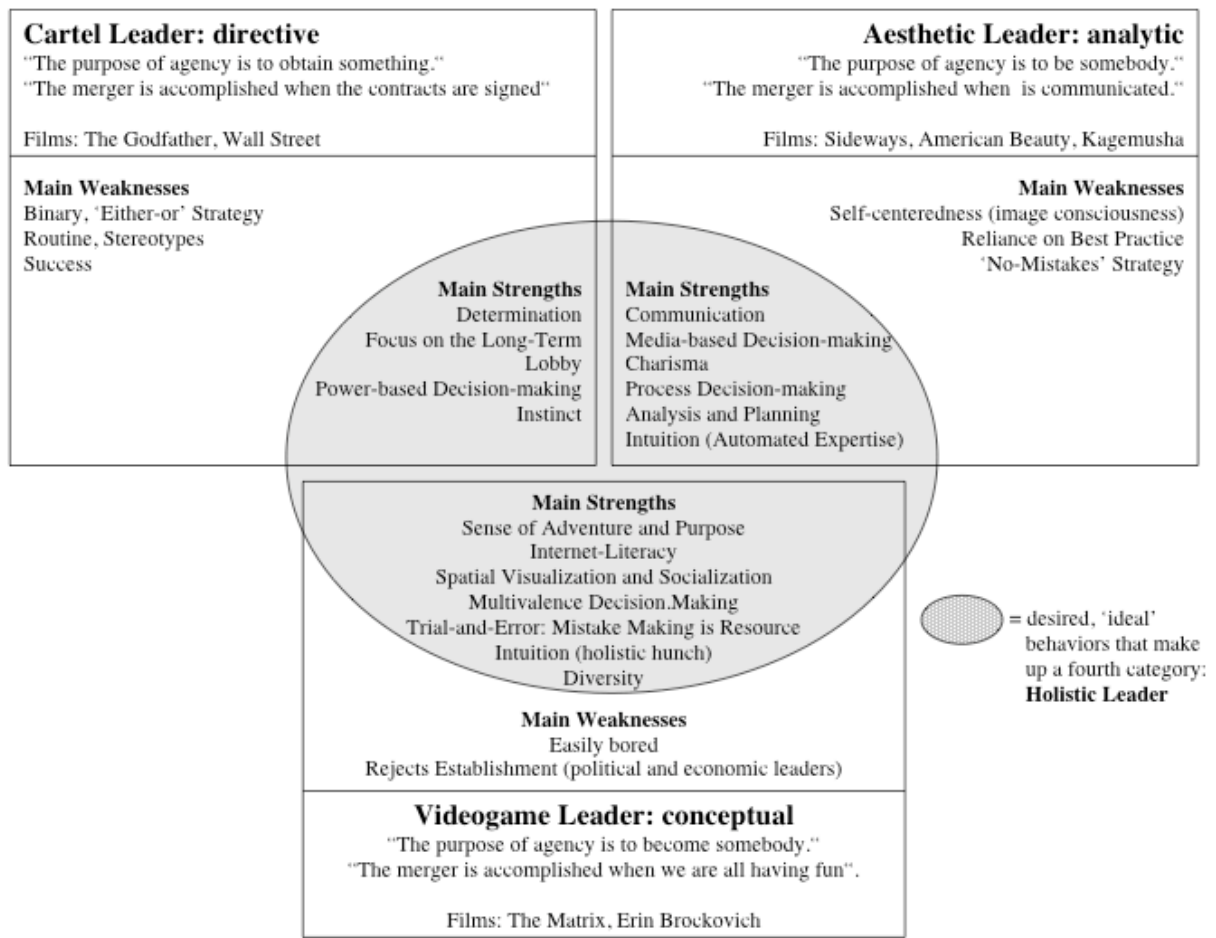


Figure 8: The three coping styles and the emerging fourth 'ideal' category

Table 1: Examples of managerial dilemmas in the literature

Dilemma	Sample literature
A. Strategic dilemmas	
Globalization vs. localization; Global efficiency vs. country sensitivity	Bartlett (1986), Harzing (2000), Doz and Prahalad (1986), Markides and Charitou (2004)
Exploration vs. exploitation	March (1991), Bradach and Eccles (1989), Tushman and O'Reilly (1996), Bradach (1997), Brown and Eisenhardt (1997), Sutcliffe, Sitkin and Browning (2000), Tushman and Smith (2002), Warglien (2002), Thomas et al (2005a)
Focus vs. diversification	Makridakis (1997)
Relationship-based vs. market driven	Dieleman (2005), Dieleman and Sachs (2005a,b)
B. Leadership dilemmas	
Control vs. autonomy	Roethlisberger and Dixon (1939), Thomas <i>et al.</i> (2005a,b)
Competition vs. cooperation	Zeng and Chen (2003), Hirshleifer and Coll (1988)
Programmatic (top down) vs. organization-driven (bottom up)	Eriksson and Sundgren (2005), Ackoff (1981, 1989), Endenburg (1988)
Empathic vs. callous	Fendt (2005)
Efficiency vs. learning	Bartlett and Ghoshal (1998), Schoonhoven and Jelinek (1990)
Methodical vs. creative	Fields (2004)
C. Organizational dilemmas	
Centralization vs. decentralization	Bartlett and Ghoshal (1997)
Specificity vs. diffusion	Putsis <i>et al.</i> (1997), Hampden-Turner and Trompenaars (2000)
D. Cultural dilemmas	
Universalism vs. particularism	Blau (1962), Hampden-Turner and Trompenaars (2000)
Heterogeneity vs. homogeneity	Gibson and Vermeulen (2003)
Achieved vs. ascribed status	Hampden-Turner and Trompenaars (2000)
Individualism vs. communitarianism or collectivism	Hampden-Turner and Trompenaars (2000), Hofstede (1997), Moore (2005)
Inner vs. outer direction, context vs. internal-driven	Coff (1997), Hampden-Turner and Trompenaars (2000)
Goal-oriented vs. incremental	Lam and White (1999)
E. Temporal dilemmas	
Revolution vs. evolution	Meditz and Sachs (1979), Sachs (1999), Shapiro and Varian (1999)
Sequential vs. synchronous	Eisenhardt and Brown (1998), Hampden-Turner and Trompenaars (2000), Chen (2005)
Stability vs. change	Leana and Barry (2000)
Short-term vs. long-term, speed vs. giving time	Roach (1996), Vickers (2000), Crossan <i>et al.</i> (2005), Fendt (2005)
Mechanistic vs. organic	Burns and Stalker (1961)

Table 2: Selected quotes of managerial dilemmas from leaders in case 3

Managerial dilemmas	Respondents' quotes
A. Personal dilemmas	
Perception of Dilemmas	“I constantly need to manage paradoxes (...) I'm not saying that you must be schizophrenic to be a good leader, but you must be able to deal with opposites.” “You must be ambivalent in top management, cut Gordian knots – or corners for that matter... Anyhow, it's no longer 'either – or', it's 'it – and the contrary of it'!”
Personal vs. company goal alignment	“If my CEO decides to go along with the proposed merger, he get's a €30 million compensation. Frankly, could you make an objective decision under such circumstances?”
Work/life balance	“Everyone speaks of work/life balance, nobody's ever seen it... not at my level, anyhow.”
Meaning of life	“I love my job, I <i>never</i> wanted to do anything else. Mind you, as a kid I wanted to be a pediatrician. I would have been a good doctor, I think. But I'm happy, I don't regret it... but one day I'll surprise everyone – I'll do something completely different!”
B. Strategic and organizational dilemmas	
Merger of equals vs. acquisition	“A merger of equals is a misnomer, a bluff. There's no such thing, there's always an underdog.”
Organizational focus	“10 years after our last merger people still thought the 'A-way' and the 'B-way'... this was not going to happen here! Even at the risk of destroying some value, we were determined to focus entirely on the new organization: new company name, new brand, new leaders...”
Exploration vs. exploitation	“Exploration or exploitation? What kind of an obsolete question is this? Both, of course! Diversity or focus? Short-term or long-term? That's the problem nowadays, you have no black/white choices anymore.”
Revolution vs. evolution	“M&A is a special situation, like a revolution. A revolution is extremely stressful – but, hey, you can ask people almost anything! Everybody goes the extra mile. When you switch down to evolution mode, to ease the pain and stress, the 'organization's adrenaline level goes down and it gets much harder to make people excel.”
Stability vs. change	“The difference in post-merger is the extreme uncertainty – it causes people to resist – or desist! So you somehow have to give people a hold, stability – and yet bully them to change all the time!”
Short-term vs. long-term, speed vs. giving time	“Post-merger management is like driving a Go-kart: you must have your feet on the brakes and the accelerator at the same time.”
C. Leadership and cultural dilemmas	
Authority/control vs. autonomy/empowerment	“My job is the big picture, I delegate a lot. But I also pay attention to detail. Sometimes I don't let go until I'm right down to the bone.”
Empathic vs. callous	“I needed to be both emphatic and perfectly callous, impassible. It's a paradox. Regarding the individual fate you must show understanding but regarding the whole organism, you must proceed in a perfectly cold and rational manner.”
Efficiency vs. learning, thought vs. agency	“I'm a doer, I get things done. That's my job... well, and a thinker... I try to be both. But if I must be boxed, I'm a doer.”
Culture amalgam vs. new culture	“In my experience there's no such thing as a “mixing of cultures”, that you first have 'A' and 'B' and then gradually something resembling 'AB'. Even if you intend this. It's all bullocks, alas.”
Inner vs. outer direction, context vs. internal-driven	“Once the media are after you, you're a punching ball. You don't really control events anymore. All you can do is react – and hope the media get bored soon!” “One thing is clear: the moment you announce your merger, the head hunters are there... and your competition, too... to create havoc in your team that you really don't need, believe me”

