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Strategic Renewal in Large Complex Organizations: A Competence-based View

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How should organizations renew? By integrating the competence-based approach to the theory of the firm with the change mechanisms of organization theory, we develop four mechanisms of strategic renewal: venturing, restructuring, reanimation, and rejuvenation. We propose tentative propositions regarding their effectiveness in circumstances of urgency, risk reduction, and technological change.

INTRODUCTION

In the last decade many large organizations have felt strong pressures for change. The causes of these changes have been the pressures from new technology in its widest sense increasing globalization of markets, the deregulation of industries, the shift of firms from public to private sector, and the rise of new organizational forms such as the strategic network. In trying to respond, firms have adopted a wide variety of

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approaches including downsizing, outsourcing, re-engineering, corporate venturing, restructuring and rejuvenation. How can we explain the many differing kinds of responses of firms? Can we give guidance to researchers seeking to make sense out of the differing approaches? Can we even suggest logical choices to managers? To answer these questions, we suggest we need to return to first principles.

The theory of the firm addresses the question of why do firms exist and recent insights suggest that the answer is that they are mechanisms which exploit unique competences and knowledge (Nelson and Winter, 1982, Barney 1991, Nonaka, 1991). As explained by Conner and Prahalad (1996), this view stands in a contrast to other views such as those of minimizing transactions costs, or resolving principal–agent difficulties (Alchian and Demsetz, 1972; Williamson, 1975). However, the same literature does not deal with the question of how firms change and adjust to environmental shocks such as new technology. This has traditionally been the preserve of organizational theorists, and there is long tradition here stretching back to Barnard (1938), Chandler (1962), Pettigrew (1985), and Van de Ven (1986). As viewed from the perspective of the theory of the firm, these writers seem less concerned about the content of the change, and so there are obvious gaps between the two approaches.

In this chapter we seek to bridge some of these differences. Starting from the position of why firms exist and how they can change; we examine the inherent tensions in the change process, and in particular the tension that exists between change and stability. Next, we tie these ideas to those of competences (Sanchez, Heene, and Thomas, 1996), outlining the choices that firms have in terms of revitalizing or reordering competences, and the difficulties and risks they face in doing this. We trace the alternative mechanisms discussed in the literature and bring forward tentative propositions about their relative efficacy and risk profiles. Finally, we speculate on the possible appropriateness of some of our mechanisms to differing circumstances, as a simple contingency approach.

How do our concerns fit with the title of this issue? For many readers, technology may mean tangible items such as plant, processes, and manuals. However, the literature has long recognized that the technology of the firm extends into other areas, particularly questions of principles of organization (Levinthal, 1966; Loasby, 1996). Thus our attempts to join the literature and ideas on change management with those of competences can rightly be seen as an exploration in the subject "Technology and the theory of the firm" (Kogut and Zander, 1992).

The Paradox of Change and Stability

We begin by pointing out that the problem of change in organizations is a relative one, for we do not wish to suggest that organizations are ever in a state of complete stasis. As many have pointed out (e.g. Bate, 1994), organizations are always changing, but the natural pace of change may be too slow, particularly in a hypercompetitive environment or one facing technological shifts (D'Aveni, 1994). Competition threatens survival. But adjustment to competition is also risky; change may fail or firms may over-react bringing consequences which are more severe.

Put another way, organizations' which wish to adjust need to find a way to reconcile the paradox of conflicting forces for change and stability. The pressure for stability is not just inertia, there are also short-term forces which require organizations to maximally exploit their existing competences and capabilities. The pressure to change comes not only from the threats to survival but also from the desire to grow and be more successful. These conflicting pressures have long been recognized (e.g. Burns and Stalker, 1961) and many scholars have explicitly discussed the dilemma (Poole and Van de Ven, 1989; Handy, 1989; Kanter, 1988; Hampden-Turner, 1990).

Rejecting the Paradox: Inertia

In seeking to overcome the tension, the organization faces three generic choices. It can avoid the paradox rejecting attempts to change, it can accept the paradox and outsource the change problem to others, or it can seek to resolve the paradox by internal adaptation. Although the central thrust of this chapter is the exploration of resolution, it is necessary for completeness to explore the strategies of avoidance and acceptance because these represent viable alternatives and benchmarks to the difficult processes of internal change.

To some researchers, especially those from the population ecology school, it is futile for large organizations to attempt to change. Aldrich (1979) and Hannan and Freeman (1984: 152) see inertia as endemic inside large complex organizations, and, especially in the context of new technology, difficult to overcome. In the language of economics, the market selects out those firms which have the wrong competences (Barnett, Greve and Park, 1994; Barney and Zajac, 1994). The mechanism for renewal is the creation of new organizations which rise to displace the old. While it is clear that this may be one type of renewal process, it is not the only one. There is mounting evidence

that some large complex organizations have managed change, and that this has been done in a wide variety of ways, through many different mechanisms. It is this issue which we now address.

Accepting the Paradox: Outsourcing

According to the alliance or network view of organizations, the paradox of balancing capability exploitation and renewal can be *accepted* by the process of interaction with other organizations. According to network analysis the market is not abstract but concrete and exists everywhere as partners (Von Hippel, 1978; Hakansson, 1982; Matsson, 1987). Because they believe there is not clear distinction between competition outside the organization and cooperation inside, the process of competition as conceived by population ecologists or economists is too simplistic. Firms can and do use partners to overcome the tension.

The process of partnering has been seen as one which allows existing firms to capture new technology or new ideas in any one of its many forms (Contractor and Lorange, 1988). Sometimes these relationships can be *ad hoc*, and at other times they can be orchestrated and purposeful, and Miles and Snow (1986) have classified several of the differing possibilities for arranging networks. Although writers such as Bleeke and Ernst (1991) and Hamel (1991) give words of caution about the effectiveness of alliances in the process of transformation, the inherent attraction of spinning out from the vertically integrated firm is widely accepted. Many large, complex, vertically integrated firms commonly renew parts of their organizations by spinning out and spinning in. At the simplest level, there is a dynamic parent which, upon finding that one of its units is in crisis or maturity, spins it off. Under a new owner, or more often as a separate unit, it is freed from the direct controls of the old multi-unit organization. Separated from many of the forces of inertia, the innovation process can take hold. During the period of change, the spun-out division often continues to maintain links with its old parent, perhaps through trading. If the unit succeeds, it may be repurchased into the original firm, or bought by another complex organization. If it does not renew, it will fail but at no serious loss to the original organization.

That networks do provide an effective mechanism for renewal has been established through many different strands of research. Marshall (1920), writing at the turn of the century, documented industrial districts and noted that renewal was possible. Ouchi (1981) echoed the theme in his discussions of clans. More recently Thorelli (1986) and

Porter (1990) have noted the capacity of networks to effect change, and Lorenzoni and Baden-Fuller (1995) have highlighted the extraordinary capacity of innovation in strategic networks that have a strong central firm.

Notwithstanding the supposed advantages of networks, they are difficult to organize. In industries from machine tools to consumer electronics, many companies discovered that short-term flexibility resulting from transactions involving the externalization of supply for components, sub-assemblies, and other products had high costs in terms of loss of strategic interdependence and organizational learning capacity (Bartlett, 1993). We therefore turn to the third method of dealing with the paradox, namely that of *resolution* through change within the organization.

Resolving the Paradox: two Internal Mechanisms

Resolving the paradox of change and preservation means recognizing that continuous renewal inside a complex firm everywhere is misleading. Too much change will lead to chaos, loss of cultural glue, fatigue, and organizational breakdown (Volberda, 1996). While in the short term, organizations that are chaotic can survive, in the longer term they are likely to collapse (Stacey, 1995). The firm needs control mechanisms which prevent the fissuring (Sanchez and Heene, 1996). Our contribution is to emphasize that the two most important mechanisms are those which separate the change and stability either by *time* or by *place*.

In *spatial* separation, one part of the organization is responsible for undertaking the process of change and renewal while the other parts remain relatively stable. The classical view of the process of change is that it is undertaken by a specialist research and development group. More often, there is a self-appointed function such as marketing, or production which is seen as the spearhead of new ideas. In multi-divisional organizations the process of change may be undertaken by the upper tier (Chandler, 1962), the lower level (Bower, 1970) in one or two divisions, or a group of business units which are charged, or have appointed themselves as dynamic agents. In general, in spatial separation, the groups that are changing and the groups that are stable are clearly delineated with differential roles. Of course, those that are stable are not immune from change, for effective adjustment requires ideas generated by the dynamic sections to be carried over into the rest of the organization.

We suggest that the other method of resolving the dilemma is to

have the whole organization alternating between periods of stability and periods of renewal. Such methods of orchestrating change have been discussed in the literature under many guises such as *punctuated change* by Tushman and Romanelli (1985), holistic change by Child and Smith (1987), and revolutions by Pettigrew (1985). Such changes are most apparent in organizations experiencing major change programmes, such as turnarounds. The detail of temporal change usually shows some spatial adjustment as well. For example, top management may be in a state of change while other parts are stable, and then the baton is handed down to the next level for it to change while top management regain some sense of stability. Looked at systemically, there are clear cycles. In Lewin's (1954) terminology, there is a cycle of *unfreeze, move, refreeze*, often repeated.

In making these opening remarks on the possibilities of resolving the dilemma of stability and renewal, we have purposefully been quite general, and focused on broad categories of processes. The literature relating to both these methods of managing change is enormous, and is dealt with at length in the next section. This categorization, even before a review, allows us to anticipate our later discussion on a potentially important difference between the two mechanisms: namely, the approach to time and risk. We suggest that the method of spatial separation of change and stability allows the organization to experiment in one place while keeping the other part constant. This method of managing change appears to be one of risk control, for some of the dangers of failure are contained simultaneously allowing variety (which spreads risk) to increase. Set against this containment is the factor that speed may be sacrificed. Temporal separation allows the whole organization to adjust to sharp and sudden shocks more holistically and quickly. Under temporal separation, the possibilities of failure may be greater if the change process loses control. Moreover, variety is not increased but the speed of execution may be faster. We advance our first hypothesis which will be explored and tied to prior literature more substantially later:

> The mechanism of spatial separation will be most effective where the organization needs to contain the risks of change and is not concerned with speedy reaction to outside events. In contrast, temporal separation will be more effective where there is a pressing urgency for the whole organization to respond collectively.

Before we explore this issue in greater detail, we turn the reader's attention to the content of the change, using the competence-based perspective.

THE CONTENT OF CHANGE PROCESSES, RE-ORDERING AND RENEWING COMPETENCES

The newly emerging competence-based theory of the firm (Sanchez, Heene, and Thomas, 1996) provides us with a framework for rethinking the content of renewal. There are important antecedents for this theory. For example, Nelson and Winter (1982) in their *Evolutionary Theory of Economic Change* present firms as repositories of routines which endow them with a focus to search, yet at the same time suppress their attention span and capacity to absorb new information. The routinization of activity, constitutes one of the most important aspects of a firm's potential competitive advantage. In a similar way, in the *resource-based view*, the firm is seen as a bundle of tangible and intangible resources and tacit know-how that must be identified, selected, developed, and deployed to generate superior performance (Penrose, 1959; Learned *et al.*, 1969; Wernerfelt, 1984). These scarce, firm-specific assets may form a basis for a competence. Like population ecologists, however, those posing the resource-based view of the firm have traditionally been pessimistic about change. In general, they assume (often implicitly) that firms are stuck with what they have, and have to live without what they lack.

This view that firms are stuck and find difficulty in changing has received echoes in later literature. Thus there is the idea that core competences can become core rigidities (Leonard-Barton, 1992; Burgelman, 1994; Barnett, Greve, and Park, 1994); or a competence trap (Levitt and March, 1988; Levinthal and March, 1993) and that high productivity can only be achieved at the cost of decreased flexibility (Utterback and Abernathy, 1975).

Speaking from a normative viewpoint, Teece, Pisano, and Shuen (1992) have suggested that firms can and should remain in a dynamic capability-building mode. New competences and capabilities should be built and incorporated into the firm. By implication, some old ones should be discarded. We examine quite simply two mechanism by which this may take place. The first mechanism is that of new rankings of competences at the "core" of the firm and the second is the process of altering a subset of these competences. To facilitate the discussion we elaborate a working distinction between competences and routines. Our definition echoes ideas set out by Prahalad and Hamel (1990), Grant (1991), Amit and Schoemaker (1993), and Sanchez, Heene, and Thomas (1996). Although we make this distinction between "routines" and "competences", the literature clearly has many similar terms to encompass our ideas, and uses our words for a variety of different meanings.

> We view *competence* as involving shared knowledge among a large group of units within the complex firm, whereas a *routine* is seen as the province of only one or, at most, a few units. A competence therefore draws on several routines which have been refined, stored, and codified, or socialized.

Using this definition, let us think of the firm as having a set of competences C1 . . . C*n*, and a set of routines and capabilities R1 . . . R*m*. By our definition some or all of the set C1 . . . C*n* reside in all (or nearly all) of the firm's units, whereas R1 . . . R*m* appear infrequently, perhaps only in a single unit.

The firm can significantly change its operations by altering what is in the "core" and what is in the "periphery". For example, if it alters the set of the competences by dropping one (C1, for example) and expands one of the periphery routines into a new competence (R1, for example), then the nature of the activities of its units will change. Those units which had C1 as a key competence may disappear. In contrast, some new units may appear which take on board R1. The process by which this change takes place can be one of socialization, or codification, or both (Nonaka, 1991).

Examples of firms undertaking such actions are numerous. Xerox, for example, recently moved some new marketing skills from the periphery to the core when it redefined the business from one of *photocopies* to that of *document processes*. In the privatized utilities in the UK, firms which were once in the public domain and had little concept of marketing or customer service have been obliged to add skills and capabilities to their existing routines. Typically these have substituted for highly honed skills relating to the political process of obtaining money out of the UK Treasury. Prahalad and Hamel (1990) also give a number of examples of this process where firms are extending their core. Other writers have alluded to the reshaping of organizations which have decided to reject businesses which once were around some competence now no longer deemed to fit.

> We label the process which alters the role of some competences and upgrades peripheral routines as a *reordering mechanism*, reflecting the fact that it alters the hierarchy of routines and competences.

In the second possibility, the firm alters one or more of its competences, from something it has to something which did not previously exist in the organization. This process means that a competence (C1, for instance) is changed to C1′, where C1′ is unlike any other C or R. Under this kind of change, all parts of the firm which participated in C1 will also have to change.

An example of such a process of change occurs when large complex organizations shift from being, say, inflexible producers of service along a standardized line to a more flexible producer of service along flexible lines. The adjustment process of the major Western car assemblers from mass production to flexible production, so aptly documented by Womak, Jones, and Roos (1990), is one example. Kotter and Heskett (1992) document similar changes at British Airways, which moved from a production-oriented airline (passengers should alter their schedules and behaviours to fit our needs) to a more customer-oriented service firm (we are here to serve the customer).

> We label the process which alters a competence into something the organization did not previously possess as one of revitalization, to indicate the nature of the technical change.

In Table 4.1 we show the two processes of reordering and revitalization for a simple multiple-unit organization which has two competences C1 and C2 and two peripheral routines R1 and R2. C1 and C2 are present in each unit, whereas R1 and R2 appear only once. In the process of revitalization, C2 is transformed into C2′, which alters both units. In the process of reordering, we assume that C1 is dropped from the core and R1 is upgraded. This means that a unit is lost and a new one is acquired.

Is the distinction between *reordering* and *revitalization* a meaningful one? We suggest that it probably is, because the content of the processes may differ. Moreover, we suggest that the difficulties of the two may also differ. The process of downsizing and reshaping of portfolios (reordering) appears to be different from the process of

TABLE 4.1 A simple example of reordering and revitalizing

	C1	C2	C2′	R1	R2
Initial position					
Unit X	*****	*****		******	
Unit Y	*****	*****			*****
Revitalize					
Unit X′	*****		******	*****	
Unit Y′	*****		******		*****
Reorder					
Unit X	*****	*****		******	
Unit Y					
Unit Z		*****		******	*****

substituting new competences for old ones in the core. Judging by the difficulties faced by complex companies, we suggest that in general, for a given firm, it is easier to engage in *reordering* than in *revitalization*.

> Reordering is less risky than revitalization in a large complex organization.

Comparing Four Renewal Processes

By superimposing two methods of managing change (spatial separation and temporal separation) on two differing change consequences (reordering and revitalizing competences) we identify four mechanisms for renewal (see Table 4.2). These which we will consider in turn are labelled as Venturing, Restructuring, Reanimation, and Rejuvenating. By examining their differing risk and time profiles we aim to suggest the different contextual factors which favour use of each of these different mechanisms.

Venturing

In discussing the general problem of renewal, Van de Ven (1986) has drawn attention to "the structural problem of managing part–whole relationships" and noted the benefits of "venturing". Drucker (1985: 161–163) expressed the view that (new) flexible units should be organized separately, and should have substantial autonomy. Galbraith

Table 4.2 Four mechanisms for strategic renewal

	Spatial separation; risk control is vital	Temporal separation: speed is vital
Revitalizing some of the existing competences	*Reanimating* Bottom-up processes typically involving double-loop learning	*Rejuvenating* Holistic change programmes aimed at revitalization
Reordering "core" competences and peripheral routines	*Venturing* Top-level processes of moving competences around including creating new units and selling old	*Restructuring* Top-down process of restructuring divisions, setting of new priorities, defining new products

(1982) stressed the importance of "reservations" which are totally devoted to creating new ideas, while Peters and Waterman (1982) used the term "skunk works" for this phenomenon.

This kind of venturing clearly fits the category of *spatial separation*. However, in the general discourse, it is not always clear if these writers are talking of *reordering* or *renewal*. Among those who explore the subject further, there is the suggestion that it is reordering of existing competences and routines which is the issue and not revitalizing a competence. For example, Kanter (1983, 1988: 184–191) distinguishes between the "generation" of an innovation which, in her view, required frequent contact and closer integration with other parts of the organization, and the "completion" or implementation of the innovation in flexible modes, for which segregation or isolation from the rest of the organization would be helpful. It is clear that in Kanter's model the organization is required to lend its core ideas, stores of knowledge, and routines to help develop the new venturing unit.

Building on Burgelman (1983a,b), MacMillan (1985) and Block and MacMillan (1993) have taken up the research further, by examining the nature of corporate venturing. They find a wide variety of innovatory possibilities, all of which share the feature of some spatial separation. Such separation brings costs, such as the difficulty of integrating the new ideas back into the old organization. But it also brings some benefits, the new ideas are typically insulated from the inertia of the centre, and have the possibility to flourish without being suffocated.

Bearing in mind these findings, we tentatively suggest that the process of venturing has the lowest risk of any of the renewal processes, in the sense that failure can be contained and variety increased. However, as a mechanism for orchestrating change throughout the whole organization, many such as MacMillan (1985) note the obstacles. Of the four mechanisms it is potentially the slowest, because of the delays involved in first developing the ideas and then in transporting them more widely.

> Venturing is the slowest but most controllable of all the processes of renewal.

Restructuring

Explaining the mechanisms by which change takes hold across the whole organization has long been the concern of the classical administrative theorists such as Barnard (1938) and Selznick (1957). They have typically described a multi-level approach to management, with top

managers having a highly important role in the process. In the same vein, Chandler (1962) has explored how corporate management is the primary initiator of managerial action, while front-line managers were the implementers of top-down decisions. In summary, all these writers see very deliberate managerial processes, with spatial separation by level.

Because the idea of competences was not well developed at the time of many of the writers, we can only speculate as to whether their models favour ideas of *revitalization* or *renewal*. Doubtless many would not accept the idea of so limited a description, but nonetheless we suggest that the bias is towards *reordering*. The processes are manifestly top down and about *selection* of what is currently within the organization.

The notion of a very top-level process being one which emphasizes reordering is clearly taken by Hamel and Prahalad (1989). They see renewal of organizations as stemming from the strategic intent of the CEO dependent on superior industry foresight. Such a process of renewal is highly stylized, and is probably very exceptional. Evolutionary perspectives, such as Cyert and March (1963), suggest that strategy in large complex firms is rarely centralized at the top management, and it is usually multifaceted and less well integrated (Van Cauwenberg and Cool, 1982).

In thinking about the contexts and nature of *reordering* we suggest that the risks involved are essentially greater than those involved in venturing, if only because the change is taking place on a larger scale. The failure of top managers to execute such change is well documented, and so the risks are not trivial. However, there is an advantage, we suggest, in speed. Because of the top-down administrative process, with the parallel exercise of power, the possibilities of achieving a quicker transformation seem more likely.

> Restructuring is a quicker, but more risky way of managing a change process than that of venturing. It will be relatively more effective in achieving reordering of competences.

Reanimating

Bower's work (1970) on the management of the resource-allocation process has suggested that an effective and powerful process of change is through originating, developing, and promoting strategic initiatives from the lower levels, often called bottom-up or middle-up (cf.

Sanchez and Heene, 1996). His ideas have been echoed in a stream of research including Kimberley (1979), Quinn (1985), and Bartlett and Ghoshal (1993) which suggests that renewal can emerge from autonomous behaviour of individuals or small groups at lower levels of the organization (Burgelman, 1983a). It is usually argued that front-line managers have the most current knowledge and expertise and are closer to sources of information critical to innovative outcomes. Within the *reactive bottom-up, emergent perspective* the role of top management is seen as retroactive legitimization (Burgelman, 1994) or judge and arbiter (Angle and Van de Ven, 1989).

While there is no clear suggestion from this literature, we suggest that it relates most directly to *revitalization*. Questioning existing processes by means of an emergent perspective suggests a process of new competence building from the lower levels through double-loop generative learning (Argyris and Schön, 1978; Senge, 1990). It is suggested that interaction with the market and demanding clients help front-line managers to alter the status quo. We compare this process with that of the reordering or exploiting already developed competences which is believed to take place at the upper levels by single-loop, adaptive learning. Upper level learning helps ensure the exploitation of existing competences and their transfer around the organization. Because reanimation may be in part emergent, it is not fully controllable by top management, although clearly controllable by the organization. The emergent process may be slow and halting, giving rise to possibilities that top management may fail to provide the legitimization until a passage of time after the appearance of some outside triggers, as documented in Burgelman's (1994) study of Intel.

> Reanimation will be a process most suitable for the revitalization of competences, in which risk is controlled but at the cost of speed.

Rejuvenating

The possibilities of radical change have recently emerged in the literature, mainly based on a number of documented cases. In contrast to simple turnarounds (Slatter, 1984) where organizations go back to their roots and eliminate unprofitable activities and shed worthless routines, rejuvenation is the taking hold of wholly new processes to substitute for outdated routines and capabilities. These have been documented by Beer, Eisenstat, and Spector (1990), Grinyer, Hayes, and McKiernan (1988), and Baden-Fuller and Stopford (1994). The typical features of

such change processes are that they are holistic, complete, and undertaken quickly. Guth and Ginsberg (1990) explain their close affinity with Schumpeter's (1934) notion of renewal.

Although there is no suggestion that these processes of change are exclusively focused on one kind of competence change, documented examples typically dwell on the effectiveness in *revitalizing* old outdated competences. The change processes are typically encompassing of new thought processes (Spender, 1980) as well as routines. Tushman and Romanelli (1985) and Tushman and Anderson (1986) refer to such episodes as *punctuated changes.*

The dangers of such holistic change programmes are not so well documented, except insofar as they often fail to start. For example, in Stopford and Baden-Fuller (1994) it was noted that many firms which tried to engage in such holistic programmes failed to reach beyond the stage of ambition. The necessity of mobilizing the whole top team to achieve such revolution is well established, and represents a considerable challenge. In addition, there are many other hurdles to cross.

> Rejuvenation represents one of the most difficult kinds of renewal processes. It requires the organization to revitalize existing core competences at a speed and in a holistic manner which carries severe dangers. On the one hand, the risk is that the process may not start. On the other, there is a risk that when started the organization will disintegrate into chaos and so lose what it already has.

Table 4.3 provides an overview of the four propositions stated above.

TABLE 4.3 Contextual factors which favour different renewal mechanisms

	Spatial separation	Temporal separation
Revitalizing some of the existing competences	*Reanimating* A middle-up process which may be especially suited to revitalizing existing competences when speed is not vital but controlling risks is important	*Rejuvenation* A process which is most risky, because the scope of the change is large and the content of the change is most difficult
Reordering "core" competences and peripheral routines	*Venturing* A process of change which is best suited to occasions where speed is not important, and where the need to control risk is high	*Restructuring* A process of change most suited to attempts to reorder processes when speed is of importance

New and Existing Technologies of the Firm

When do firms have to apply which mechanism? Or are the mechanisms equal? We do believe that there are some contingencies under which certain mechanisms are more effective than others. One of these contingencies is technology (Van de Ven and Garud, 1988). In Table 4.4 we consider two kinds of technology evolution: those that are new to the firm and those whose roots lie in the firm. We briefly discuss four possibilities relating to the table.

Table 4.4 Technology and mechanisms of strategic renewal

	Competition is perceived benign by the firm; change is not urgent (spatial)	Competition is perceived to be intense and change is urgent (temporal)
Technologies new to firm (revitalizing)	Slow change of competence by local initiatives (peripheral change by reanimation)	Fast change of competences by holistic, multi-level initiatives (fundamental change by rejuvenating)
Technologies existing in the firm (reordering)	Risk reduction by corporate venturing (technology variation by venturing)	Quick response by combining competences across industries (managing technology convergence by restructuring)

Technology Variation

When competition is perceived to be benign to the firm, the firm can renew by creating variety and expanding by drawing on existing technologies. The mechanism of *corporate venturing* allows the firm to diffuse knowledge and technology throughout the firm. We argued that such an approach of intra-reordering of competences and routines is not speedy, but, more importantly, reduces the risks of the firm. By stimulating a variety of initiatives, the chance of survival of the firm is increased (Fast, 1979; Block, 1982; Block and MacMillan, 1993).

Converging Technologies

In contrast, firms that operate in emerging industrial complexes in which many technologies converge have to respond quickly. In order

to have a competitive advantage, these firms need superior "inter-reordering" capabilities in order to combine competences across multiple industries. One can expect to see incumbent firms becoming enveloped in a skein of inter-organizational relationships involving partial equity holdings and joint ventures (Teece, 1984). *Restructuring* their business, creating inter-industry joint ventures are adequate renewal mechanisms for such firms.

New Peripheral Technologies

When faced with a resource-rich environment, firms can undertake competence renewal at low risk by organizing change in specialized subparts of the firm such as New Business Development Departments, R&D departments etc. Starting with a peripheral change in their technology, in the end such a *reanimation* may lead to a new competence throughout the firm. Smith's (1996) study of strategic renewal within Regional Bell Operating Companies is illustrative. She shows that resource-rich organizations can construct new capabilities in the telecommunications service industry through chaotic international expansion activities. Newly developed technologies in their unregulated businesses could only be deployed through top management support through a focus on certain types of telecom services, project types, and countries. Although the speed of renewal is slow, the process itself is reasonably controllable as firms reintegrate their mainstream activities with their newstream activities (Ansoff and Brandenburg, 1971).

New Core Technologies

When firms face fierce competition involving radically new technologies, speed is most important. The crisis is one that may confront the entire organization, and requires a comprehensive response, not a partial one. Although the creation of separate change units accelerates progress in new areas of opportunity, it often leads to problems of morale, disruption, and reassimilation. A dramatic corporate-wide transformation may be necessary with holistic transformation of all managerial levels. Such renewal processes are explored extensively by Stopford and Baden-Fuller (1994) in their case studies of rejuvenating mature firms.

Of course, we realize that firms do not always have a free choice.

Some firms have become used to a particular mechanism of renewal and this mechanism becomes a part of their administrative heritage. Moreover, many firms use two or more of these mechanisms sequentially or simultaneously. Nonetheless, to remain effective, firms should continuously reflect on their mechanisms of renewal and be willing to change it when necessary. Table 4.4 summarizes our discussion.

Discussion

The approach in this chapter has a number of obvious limitations. First, is it right to make a clear distinction between revitalization and reordering? While theoretically there appears to be a difference, in practice the boundaries are not so clear, and managers do not see it this way. However, we suggest that our partitioning may be justified and adds useful insights to those who research or practice. In a similar way, are we right to draw distinctions between differing kinds of change programmes? It is obvious that most mechanisms can take place at the same time in a firm, but with differing degrees of intensity, so our distinctions can only make sense in the context of emphasis. Researchers often suggest that one style dominates, but again we must be careful. The distinctions often exist only from a particular perspective. As Weick aptly points out, often strategy is present only after the event, not during or before.

We suggest that neither of these criticisms are unusually damaging. They are well known and understood in the literature, and we have learned to live with them. Probably more serious is the suggestion that firms cannot choose among change mechanisms. The historical perspective of research suggests that even when managers believe they have free choice, their latitude is very limited. History severely constrains the possibilities for action. For example, if a firm has recently undergone a holistic rejuvenation programme, it is probably impossible to undertake another successfully. Restructuring may also be resisted and the choice may be between venturing and reanimation.

The real test will be in the empirical work. Does our model help explain events in large complex organizations, and does it help managers? We suggest that to explore this issue we need data which cover both time series and cross-sections; only with pooled data can we get at both the process issues and those of competitive content. This is very demanding, and although we are engaged in the work we do not underestimate the difficulty.

Conclusions

In much of the literature on strategic management the discussion of the content of change is separated from the discussion of process. While this has facilitated a great deal of progress, it has also created an artificial dichotomy (Sanchez and Heene, this volume). Here, we explored the usefulness of putting the two sides together, and have shown how the subject of corporate renewal is capable of further insight by this process. Our chapter is an early exploration of ideas, which need refinement and testing. Even so, they suggest the value of this matching approach.

All organizations face a dilemma of encouraging renewal and assuring preservation. Stability is necessary for internal cohesion and to prevent self-destruction. Renewal is necessary because most organizations cannot routinely innovate as fast as the market requires, especially in periods of disequilibrium or hypercompetition. By posing somewhat artificial distinctions between competence reordering and competence revitalization, and by contrasting processes of change which resolve the paradox by spatial or temporal means, we have identified four mechanisms for renewal, and suggested a matching of processes to tasks in different contexts.

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