

Cycles of Organizational Change Author(s): Henry Mintzberg and Frances Westley Source: *Strategic Management Journal*, Vol. 13, Special Issue: Fundamental Themes in Strategy Process Research (Winter, 1992), pp. 39-59 Published by: John Wiley & Sons Stable URL: <u>http://www.jstor.org/stable/2486365</u> Accessed: 12/08/2011 04:11

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at http://www.jstor.org/page/info/about/policies/terms.jsp

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



John Wiley & Sons is collaborating with JSTOR to digitize, preserve and extend access to Strategic Management Journal.

CYCLES OF ORGANIZATIONAL CHANGE

HENRY MINTZBERG and FRANCES WESTLEY Faculty of Management, McGill University, Montreal, Quebec, Canada

Much of the theory and research about change in organizations, by being presented free of rich context, creates a certain amount of confusion in the literature. This paper seeks to help remedy that situation by developing a comprehensive framework of change by organizations, built on various cycles: concentric to represent the contents and levels of change, circumferential to represent the means and processes of change, tangential to represent the episodes and stages of change, and spiraling to represent the sequences and patterns of change. This framework is fleshed out in conclusion by developing three models of change experienced by major world religions, labeled enclaving, cloning, and uprooting.

Imagine watching a marksman in a shooting gallery, firing at popping-up cardboard ducks and moving bullseyes of various kinds. You can easily understand the logic of the process (if not necessarily its purpose). Now pretend that a role of paper has been placed behind the target area, to unroll along its length as the targets move so that a hole is left as a record of each shot. Instead of watching the marksman, now you only get to see the traces on the paper. Would you be able to reconstruct the nature of the behavior as well as its context from these traces?

We believe that much of the published theory and research about organizational change more closely resembles the latter evidence than the former. Trace elements are assembled into explanations, which leave most of the behavior in question unexplained. Whole processes—even ones hardly more complex than that marksman in the shooting gallery—get reduced to some disconnected dimension, for example, some isolated content of change (of culture or of work processes), some particular approach to change

Key words: Change, revitalization, renewal, learning

('strategic planning,' 'organization development'), some distinct episode of change (restructuring renewal). By seeking to explain the part, we distort the whole. In reference to the most popular terms in the literature, 'turnaround' looks like the effects of a shotgun blast—a cluster of holes that may even have figuratively torn the paper apart—while 'revitalization' resembles some patterned sequence of holes—almost like a machine gun that has fired in slow motion.

We need to do better than this in our work on organization change, to view this phenomenon, especially, in a comprehensive way, of context and state and process (Pettigrew, 1985: 269). Accordingly, the view adopted in this paper is that change in organizations can be depicted as a system of moving cycles, shown in Figure 1, concentric (like a bullseve) to represent the various contents of organizational change at different levels of abstraction, circumferential (at any given level) to represent different means and processes of change, tangential (off any point of the circumference) to represent particular episodes of change and the stages they go through to break out of any established cycle, and spiraling (the trajectory of the bullseye) to

^{0143-2095/92/100039-21\$15.50}

^{© 1992} by John Wiley & Sons, Ltd.

represent the sequences of change and their patterns over time in an ongoing organization.

We use this set of cycles to lay out a framework by which change in organizations-how they themselves go about shifting behaviors-can be understood more systematically and more comprehensively. At the very least, it can supply the context that is so necessary for all specific considerations of change. More broadly, it can stimulate researchers and practitioners alike to think more comprehensively about the change processes that they study or undertake in organizations. We proceed through the four stages depicted in Figure 1, and then conclude with three models of overall change processes in organizations, drawn from the experiences of major world religions, in order to flesh out the various dimensions introduced.

CONCENTRIC CYCLES. CONTENTS AND LEVELS OF CHANGE

Change can take place in an organization from the broadest, most conceptual level (for example, in mindset or culture) to the narrowest and most concrete (for example, of a piece of equipment or a person in a job). Such change can also be considered to happen in two basic spheres: pertaining to organization, or basic state, and pertaining to strategy, or directional thrust. Table 1 lists some benchmarks in each, from the most conceptual down to the most concrete, while Figure 2 overlays this on our figure of concentric cycles, from the conceptual on the outer rings to the concrete on the inner ones.

At the broadest level, an organization can alter its culture and its corresponding strategic

Table 1. Contents of organized change

Statement of the local division of the local		
	Change in organization (state)	Change in strategy (direction)
more conceptual (thought)	culture	vision
	structure	positions
more concrete (action)	systems	programs
	people	facilities

vision, both pertaining to its members' overall perceptions, or collective mindset ('rethinking' or 'reconceiving'). This is the level that has been addressed in the literature by people such as Edgar Schein (1985) and Peter Drucker (1974). One level down, the organization can shift its structure and, again correspondingly, its portfolio of strategic positions, including businesses, products, and markets ('restructuring,' 'rearranging,' 'reconfiguring'), the level addressed by Jay Galbraith (1977), Michael Porter (1980, 1985), and the Boston Consulting Group of the 1970s and 1980s (Henderson, 1979), among others.¹ Below that comes the redesigning of systems and procedures on the organization dimension, and of specific programs on the strategy dimension ('reworking,' 'reprogramming'), the subject of much of the literature of information systems, operations research, planning, and budgeting. Finally, at the most concrete level shown, an organization can change its people (or their jobs) and its operations, including its machines, architecture, and other facilities ('redoing,' 'reducing'), the concern of fields such as organizational development and operations management. The scale of change in organizations thus ranges from the shift to a market economy in Poland down to the replacement of pens by personal computers for its economists.

Of particular interest is the interaction of these levels and contexts of change. For example, must changes of state and of direction accompany each other? To try to change culture without changing vision (or vice versa) would seem to make little sense, but people can certainly be changed without changing facilities (and vice versa). It would seem, therefore, that the higher up the scale, the more encompassing and integrated must a change be.

This would appear to apply not only across the two dimensions but down each of them as well. Change process can, in other words, logically be cut off on their way up the scale but not down. Indeed, the problem with many mergers and restructurings, as well as with strategic planning in general, is that they often tend to reconceive at a higher level without redoing at a lower one—following through with

¹ Restructuring could include privatization—a change in the structure of ownership—and structure itself might also be thought to include the core competencies.

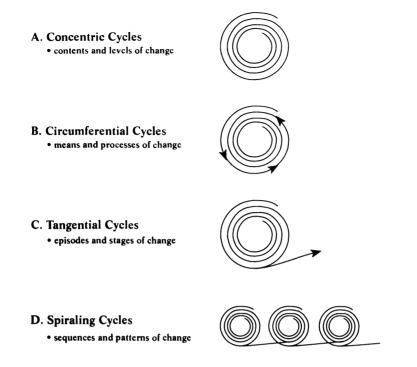


Figure 1. Overall cycles of organizational change

the consequential actions. Thus, to change culture without changing structure, systems, and people, or vision without positions, programs, and facilities, would appear to constitute an empty gesture—a change in thinking with no change in action (Westley, 1990). At the very least, any effort to render broad change in an organization would seem to require some rather specific actions, if only to 'unfreeze' people to predispose them to new behaviors.

But at lower levels, change would seem more easily to be piecemeal, isolated, and disjointed: clearly, people can be changed without changing systems, or for that matter programs, let alone cultures, as can facilities be changed without changing programs or people, let alone vision. Of course, there are times when concrete changes are used to stimulate more conceptual change (e.g., Goodstein and Boeker, 1991). Grass roots revolutions, for example, are classically viewed as changes in vision or culture long overdue. Such 'turnovers' (as opposed to 'turnarounds') result from an accumulation of concrete changes, in people, systems, and programs, etc.

The implication is that change can be conceived as deductive or inductive, as shown in Figure 2

from the outside in or the inside out. Deductive change, most commonly depicted in the literature of strategic management (see the discussion of the 'design' and 'planning schools' in Mintzberg, 1990), proceeds from the conceptual to the concrete, that is, from thought to action, as broad changes in concepts or perception are worked through deductively to their most tangible manifestations. (This might also be called nested change.) But organizational change can also be inductive, from the concrete to the conceptual, as the implications of tangible changes are generalized into broader perceptions-whether deliberately or in emergent fashion (as in the 'learning school.' *ibid*). For example, a discovery in a laboratory can remake a companydeveloping a new strategic position that can alter vision and culture (as in Edwin Land's conception of the Polaroid camera in 1 hour, in response to a request by his daughter to see a picture immediately [Westley and Mintzberg, 1989]). Of course, much important change is simultaneously deductive and inductive, much as Nonaka has described 'middle-up-down management' (1988).

One point that should be clear from our depiction is that organizations are always changing

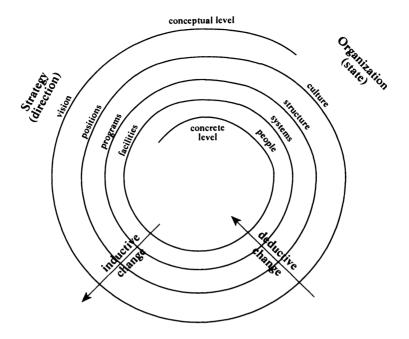


Figure 2. Levels of organizational change

at some level. But the characteristics of the change may vary by level. For example, while change may be more *frequent* at lower levels, it obviously tends to be more *strategic* (i.e. significant in its impact) at higher levels, yet slower, and, ironically, often less *complete*. (A machine can be replaced in minutes; some argue a real shift in culture, let alone the creation of a new one, takes years.) But as already noted, higher level change tends to be more *comprehensive*, less disjointed or piecemeal.

One thing that makes the literature on organizational (or so-called 'strategic') change so confusing is that so much of it is presented free of context. To the protagonists-actors or observers-change always seems strategic. But by locating it in context, for example in our diagram of concentric cycles, we can begin to contrast it with change that is more or less significant. Thus, for example, although much of the literature of 'organizational development' seems to have dealt primarily with changes at middle level or below, often these have been depicted as if they were strategic. But there is a difference between being strategic and possibly having strategic consequences. Any change, to be really understood, therefore, has to be viewed holistically and contextually as well as retrospectively.

Overall, as shown in Figure 3, change in an organization can be described as revolutionary, piecemeal, focused, or isolated, the latter two possibly incremental. *Revolutionary* change is all-encompassing. *Piecemeal* change shifts various elements independently, as in the rearrangement of a portfolio (of businesses, products, even people). *Focused* change may be encompassing at different levels, but only for one part of the organization (a function, a division, a location, etc.) *Isolated* change is specific, and as noted earlier, tends to be at lower levels.

CIRCUMFERENTIAL CYCLES: MEANS AND PROCESSES OF CHANGE

Change in an organization can be directed by a *focal actor* or by some broader *team* or larger group, acting through *consensus*. Or else it may arise in *emergent* fashion, as different actions combine to produce a nondeliberate change (Mintzberg and Waters, 1985). And the change may come from *top management*, or else it may arise at *middle management* levels or in the *operations* or in a *staff* group, perhaps some kind of detached *enclave*. And the change may, of course, also be directed from, or at least stimulated by, an *external* source (such as a

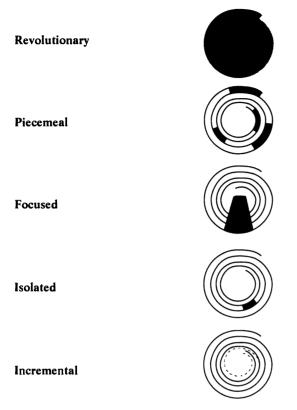


Figure 3. Comprehensiveness of organizational change

consultant, e.g., Ginsberg and Abrahamson, 1991). The change may be managed *formally*, for example in some kind of structured program of change, or else it may just occur *informally*, as in emergent change and even some deliberate change. Finally, the force for change, whether directed deliberately or evolved emergently, may be facilitated or embraced *cooperatively* by the rest of the organization or else challenged *confrontationally* or simply resisted *passively*, whether due to cultural blockage, bureaucratic momentum, or political reaction.

These dimensions can, of course, combine in all sorts of ways. We may, for example, find a formal change driven deliberately by top management and confronted informally below. Or a change may be encouraged informally by an enclave in the operations, but because it is so long overdue, be accepted cooperatively by everyone else in a sudden, informal consensus.

We have found it useful to reduce the various possible approaches to organizational change to three in particular: procedural planning, visionary leadership, and inductive learning (see Mintzberg, 1973, 1989: 121–128, 144–152, 210–217). It should be noted that in practice these approaches tend to combine, if not at a given point in time then over time. But we begin with a description of each as an ideal type.

Change by procedural planning, whether socalled 'strategic planning' or 'organizational development,' etc., is deliberate and deductive, typically considered to be 'formulated' conceptually by some higher level in the hierarchy in order to be 'implemented' by ones lower down. Staff groups do, however, often play key roles in what is commonly referred to as 'planned change,' whether as support to top management or as the actual champions of the change (as, again, in the tone of a good deal of the literature on planning and organizational strategic development).

This is formal change, in fact favored in the vast part of the conceptual and even perhaps empirical literature. As such, it is generally assumed to be received cooperatively by the rest of the organization, although no shortage of empirical research attests to a good deal of resistance to change imposed formally from above (see, for example, a review of evidence on strategic planning in Mintzberg, forthcoming, Chapter 3). But being formal, such change, when it occurs, has a programatic quality, suggesting that it has less to do with developing strategy than with programing the consequences of strategies already developed (or, put differently, 'strategic planning' would more appropriately have been labeled programing' 'strategic [Mintzberg, forthcoming]).

Visionary leadership is an informal approach to change driven by a single leader, who is typically the chief executive officer but need not be if another person of vision can get the focus of the organization's attention, so to speak. It generally begins with a new conception for the organization-a reconceived vision-and so may work its way pervasively through the concentric cycles of our figure, hence taking the form of revolutionary change. Its informality means especially that the leader tends to maintain close contact with the details of the operationalization of his or her vision. That way adaptation can take place en route, so that, while the vision itself may seem largely deliberate, the details of its 'implementation' can emerge.

Visionary leadership appears to be a cooperative process, at least when successful, perhaps because visionary leaders are often charismatic ones as well (Conger and Kanungo, 1988). But new visions can also be resisted and even confronted before they are accepted in a broader consensus. Often that resistance comes from middle management levels, a response of bureaucratic elements to a rather organic process, sometimes forcing visionary leaders to appeal directly to 'front line' operating personnel, as we found in our own research (unpublished) of the changes rendered at the SAS airline by Jan Carlzon (Mintzberg and Westley, 1989).

Inductive learning is necessarily informal, indeed often unexpected, because the very nature of the learning process is such that no one can be sure where it will end up. Hence, it is emergent rather than deliberate, can take place anywhere in the organization, and can pertain to the most narrow, isolated change or the broadest, most encompassing one. Thus, to take examples at the two extremes, a worker can learn a new way to work, change behavior, and share it with no one else, or a chief executive can learn a new strategy and then get everyone in the organization to pursue it (Mintzberg and McHugh, 1985; Quinn, 1980).

But perhaps the most interesting forms of organizational learning occur between these grass roots and leadership forms, or at least combine them, for example when learning in some isolated pocket of an organization gradually comes to pervade the behavior of the organization at large. Indeed there is a growing literature on strategic change brought about in just this way, as managers at middle levels pick up ideas from the operations, and champion them up the hierarchy as broader strategies (e.g., Nonaka, 1988; Burgelman, 1983a,b). Because they are novel and unexpected, such changes can, of course, be responded to either cooperatively or confrontationally. Indeed, we might expect a mixture of the two, with the organization tilting one way toward changes that are comfortable or long overdue, the other way toward changes that are disrupting or proactive.

These three processes of change might be seen as substitutes for each other. That is, an organization can proceed with a given change through formal planning, informally driven leadership, or emergent learning. But we prefer to consider them as complementary. In a sense, vision may be thought of as the soul of organizational change, learning the blood flowing through its veins, and planning the skeleton that holds it together. A sequential relationship might be most explanatory, as illustrated in Figure 4, around some given level of our figure, which explains why we refer to these cycles as circumferential.

What this cycle suggests is that a full process of change (at any level) proceeds through the steps of conceiving the change (learning), shifting the mindset (vision), and programing (where necessary) the consequences (planning). It begins with a learning process. In other words, all change is new and in some sense unexpected: it must, therefore, be learned (or imported-copied or borrowed from some external source that has already done the learning). In this step, a plethora of ideas and initiatives may in fact express a restlessness with the old order. Some are discarded and others are retained until reinforcement causes some kind of convergence, much as Weick (1979) has described 'sense making' using the enactment-selection-retention model.

The next step forces a synthesis, to unify individual initiatives into a common mission, code or myth (Starbuck, Greve, and Hedberg, 1978; Wallace, 1961), in other words, a revised mindset. Whether the learning is focused or scattered, it has to become the basis for a new perspective, in effect, a new vision of some aspect of organizational life, however specific. (Here, therefore, we are using the word vision in a general sense, as perspective, not strictly with regard to overall strategic vision at the outer ring of our circle.) The change process may not necessarily be driven at this step by visionary leadership per se, but we believe most significant successful change has to be driven by a new vision, in other words, some kind of reconception, which serves as a conceptual umbrella by which to make conscious the emergent learning.

Then, once the implications of the change are fully recognized, there may be a need to program formally its consequences, for example to work through its desired effects on various parts and procedures of the organization—work processes, facilities, positions, budgets, etc. And that is the role of formal planning, which, as suggested in

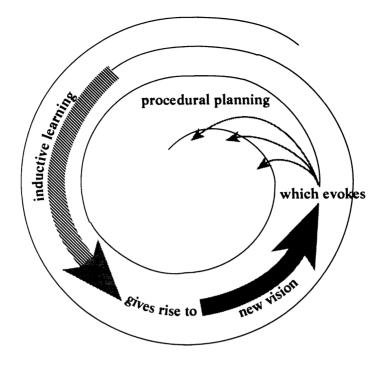


Figure 4. Sequences of the means of change

Figure 4, can continue around the spiral, burrowing more deeply, more pervasively, and more concretely into the organization.

Organizational change can, of course, proceed without the planning step, which is depicted in Figure 5 under the label informal change process. If the vision step is bypassed instead, we can label it implicit change process. We do not believe, however, that the learning step can be bypassed, unless the organization takes advantage of learning from outside its own boundaries, which we label imported change process. (In our experience, however, attempts to bypass both learning and vision, that is, importing outside learning without passing it through internal vision-without internalizing the concept of the change in the mindset of members of the organization-instead going straight to procedural planning, tends to be dysfunctional. Hence we label it mindless change process in Figure 5. Yet it is all too common, for example with many organizations currently seeking to apply programs of 'total quality management' by formula instead of tailored adaptation, as the Japanese have been careful to do.)

Any of those cycles of change can take place at any level in our concentric cycles—in other words around any one or more of its circumferences. Thus, a chief executive can learn a new vision, lead the change, and eventually program it through the planning process to shift the entire organization (much as in Quinn's [1980] depiction of 'logical incrementalism'). Or a factory foreman can do the same thing with respect to one small change in a corner of the organization (Westley, 1990). Either way, such change generally begins with informal learning at a conceptual level and can end with formal planning directed at the next more concrete level, thus navigating circumferentially around one or more cycles.

These may also be thought of as cycles of disintegration/integration. Inductive learning plays the role of disintegrating the previous behavior while deductive vision and planning work together to integrate the new behavior, the former by putting it into conceptual context, the latter by formally institutionalizing it into the organization's steady state. Thus, we designate the left side of our figure as being more concerned with informal innovation, the right side with

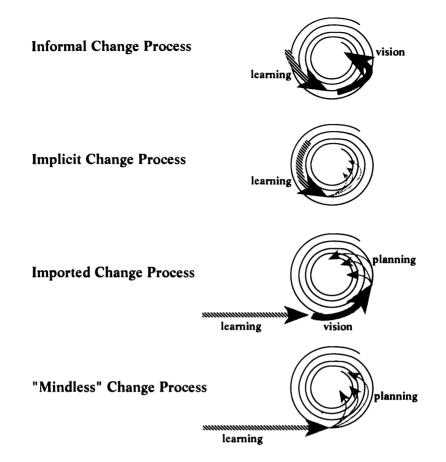


Figure 5. Shortcutted processes of organizational change

formal institutionalization, with vision in between as capturing the learning and converting it for action. The cycle begins again when new learning starts once more, perhaps as the old order has become too rigid, unresponsive to the environment or the needs of the organization.

TANGENTIAL CYCLES: EPISODES AND STAGES OF CHANGE

Given the contents of change in organizations and the processes by which these can be arrived at, we turn next to the actual *episodes* of change, and the distinct *stages* of change these constitute in organizations. We refer to these as *tangential* cycles because, as depicted in Figure 1, such changes take organizations to new places.

It should be noted initially that organizations are always changing. Just as Desmond Morris

noted years ago (1967) that, as human beings, we are in perpetual need of both experimentation and order, so too organizations cannot survive without change to adapt to shifting conditions and stability to exploit the changes they have made. The organization that never changes eventually loses synchronization with its environment, while the one that never stabilizes can produce no product or service efficiently. Accordingly, there is always change embedded in the stability of an organization, just as there is always stability embedded in its change. Some things must remain fixed as other things shift.

Change typically takes the form of *episodes*, distinct periods in which some shift or set of them takes place. Such shifts may be precipitated by changes in the external context, such as in technology (Tushman and Anderson, 1987; Pettigrew, 1988) or by changes in the internal context, e.g., changeover in key personnel within the organization (Doz and Prahalad, 1988), or interactions between intention and stress (Huff, Huff, and Thomas, 1992). A good deal of the popular literature concentrates on anecdotes about such episodes, as does even a certain amount of the research literature, whether that be an eventful weekend at a supermarket chain (Mintzberg and Waters, 1982) or an eventful vear at an automobile company (Iacocca and Novak, 1984). At a more conceptual level, episodes may be described as patterned responses to specific problems or opportunities, as in Meyer's (1982) discussion of 'adaptation to environmental jolts,' or else as more intendedly pervasive responses to broader sets of conditions. Perhaps the best known of latter, and certainly the most commonly described in the literature, concern episodes of so-called turnaround and revitalization.

Turnaround tends to be depicted as a relatively rapid episode of change, directed from a central source (typically a new chief executive), and highly deliberate, taking the organization to a new place with little hesitation (although often with confrontation). Much of the literature, in fact, considers this to be the appropriate behavior for an organization in serious trouble: one forceful leader can focus all change efforts. The literature (e.g., Hofer, 1980) has long distinguished operating turnaround (essentially rationalization and cost cutting, to stop the hemorrhaging, more recently including structural delayering and the like), from strategic turnaround (which may take place at the level of positions or of vision).

Revitalization suggests a slower, more adaptive and persuasive episode of change, developing in small steps taken throughout the organization. Here change is depicted as steadier and more cooperative: an attitude of change infuses the organization rather than being infiltrated from the top, as in turnaround. This implies a supportive culture in which organization members are 'empowered' to engage in the continual change processes of organizational learning. (The literature on 'venturing' [e.g., Burgelman, 1983 a,b] is essentially about revitalizing through learning.)

Both these descriptions tend, however, to be stereotyped, turnaround about galvanizing change from the top down, revitalization about sustaining it from the bottom up, the former more intrusive, the latter more infusive, and one more focused on the strategic dimensions of state, the other on the organizational dimensions of process. The implication of these depictions is that revitalization is largely a process of inductive learning, while turnaround is one of procedural planning or else visionary leadership. But no matter how popular such depictions may be in the popular and even research literature. we conclude they remain rather simplified. Revitalization can, for example, be planning-led too: that, indeed, is the intention of the popular programs of organizational development, including such contemporary manifestations as 'total quality management,' in theory at least. And it can also be led by visionary leadership; indeed revitalization is often preceded and stimulated by visionary turnaround. Doz and Prahalad (1988) talk of the visionary's role in 'incubating' change. Likewise, turnaround can be driven by inductive learning, as when an enclave uses its experience to force the entire organization to change (a situation we shall elaborate below). In addition, Allaire and Firsirotu (1985) add to these two, 'reorientations' at the less radical end of change and 'transformation' at the more radical end.

Episodes of change may in turn be considered to cluster into distinct stages in the lives of organizations. Greenwood and Hinings (1988), for example, discuss the stages (they call them 'tracks') of inertia, aborted excursions, reorientations, (or transformations, which may take the form of linear progression), oscillations, or delay, and unresolved excursions. In our own research on the tracking of strategies in organizations over long periods of time (Mintzberg, 1978; Mintzberg and Waters, 1982, 1984; Mintzberg and McHugh, 1985; Mintzberg, Brunet, and Waters, 1986, 1988), we divided the histories into distinct periods, and then labeled each in its own terms, basically a word or phrase to describe the behavior of the entire organization at some stage. For our purposes here, we have grouped these different labels together to suggest a possible typology of stages of change in organizations, as follows:

Stage of development

The organization is building itself up, and so there is almost continual change throughout, as people get hired, facilities get built, systems and programs get established, strategic positions get firmed, structure gets elaborated, and culture gets created. Perhaps the only stability may be the personal energy and drive of a founding entrepreneur, as well perhaps as a broad umbrella-type vision, which shape the new organization. Little procedural planning tends to occur at this stage, but usually a great deal of inductive learning.

Stage of stability

This is a relative term, which means that the broad aspects of organization and strategy are set—culture and vision to be sure, perhaps also, for the most part, organization structure and strategic positions—while more concrete aspects may be undergoing marginal change, driven perhaps by procedural planning. The organization is concentrating its resources on set strategies in a set structure, and fine tuning everything else.

Stage of adaptation

This is similar to stability, the main difference being that the marginal changes at more concrete levels may be influencing more conceptual (but not the most conceptual) levels of change, notably of organization structure and strategic positions. The organization, in effect, is adapting to its situation, perhaps expanding its size and elaborating its activities, perhaps undergoing moderate renewal, evolving in some sense. Again, procedural planning may remain a strong process, but inductive learning is gaining in importance.

Stage of struggle

Here the organization has lost its sense of direction and has yet to develop a new one. It is struggling, groping to find a new direction and an altered state. This may be a time of no more than perceptual change, in that efforts are directed at learning a new mindset rather than trying to change actual behaviors, which may better be described as in a state of continuity, sustained by procedural planning in the absence of clear leadership. Or else, changes in the environment may have so upset standard procedures that many of the operating behaviors may also be in a state of flux. At worst, a period of struggle may represent a state of limbo or delay, the official leaders of the organization not knowing which way to turn (and no new informal leadership appearing). At best, this is a stage of experimentation, comprising perhaps multiple and even disconnected efforts, directed at learning a new vision and culture from which other changes can flow. Periods of struggle are also often ones of confrontation, involving many political challenges and a good deal of volatility in general, for better and for worse.

Stage of revolution

This describes pervasive change in an organization, when a great many elements are shifting at once, from strategic vision to physical facilities and from broad culture to specific people. Such a stage need not be sudden-organizations can change in revolutionary ways over several years (for which Miller and Friesen [1984] prefer the label 'quantum,' restricting revolution to rapid change). Often these are preceded by reconceptions, commonly after stages of struggle, in which there is first a change in mindset-typically in the strategic vision of the leadership-before more pervasive changes in behaviors can take place. Other times, however, revolutionary change will occur before it is fully understood, in emergent fashion, and so reconception (in the form of justification), from struggle, will occur after revolution.

If we consider these five basic types of stages development, stability, adaptation, struggle, and revolution—in terms of our three processes of change, we can see that they overlay quite conveniently on our Figure 4, as shown in Figure 6.

Development is driven by visionary leadership, initially at the most abstract of our content levels, leading to inductive learning at more concrete levels. Stability (which often, in fact, follows the stage of development), tends to be driven by procedural planning, with the conceptual levels remaining set while the concrete ones are fine tuned. Adaptation (which can grow out of a stage of stability) involves inductive learning at intermediate or more concrete levels, although these can induce important change at more conceptual levels. Struggle (which can result from a stage of adaptation) can lead the

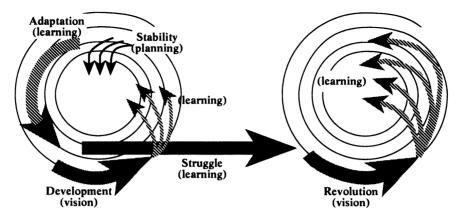


Figure 6. Stages of organizational change

organization out of its established situation, as experimentation and confrontation at intermediate or more concrete levels combine as learning devices to help reconceive the state and direction of the organization. Finally, revolution (which often grows out of a state of struggle) remakes the organization, first perhaps in mindset (the reconception), as a new vision and a new culture are learned and established, and then in behavior, as all kinds of inductive learning follows at more concrete levels (although at times, as noted, action can also proceed reconception).

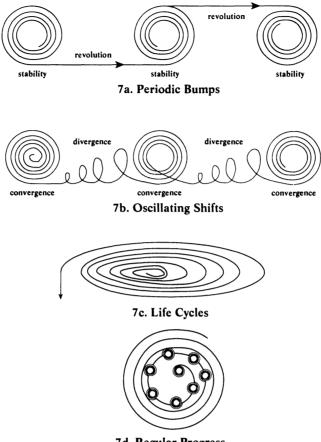
These stages may, or may not, actually form the sequence implied above (a point we shall return to shortly). But even when sequenced differently, each would seem to tend to position itself as shown in Figure 6.

SPIRALING CYCLES: SEQUENCES AND PATTERNS OF CHANGE

At the broadest level, change episodes and stages sequence themselves over time to form patterns of evolution that describe the overall history of an organization. Again there is a literature of organizational change that focuses here, among the best known publications being Chandler's (1962) history of the stages of growth of the large American enterprise and Utterback and Abernathy's (1975) dynamic model of process and product innovation. But overall, this is a less developed literature than that of episodes and stages and less convergent in its theoretical development. In our research on strategy formation cited in the last section, we also found a number of different such patterns, including periodic bumps, oscillating shifts, life cycles, and regular progress, as shown in Figure 7.

A pattern of *periodic bumps*, shown in Figure 7a, is perhaps most common, especially in more conventional organizations (those of mass production and mass service). Here, as in that old quip about the life of a soldier being months of boredom interrupted by moments of terror, the organization experiences long periods of relative stability, at least at the broadest level (in overall organization and basic strategic thrust), interrupted periodically by dramatic revolutions as episodes to wrench it back into synchronization with its environment. In effect, the organization is less inclined to adapt itself continuously (in a revitalizing way) than to seize on to a particular structure and strategy and pursue both singlemindedly. Change may be taking place continuously at the concrete levels, and there may even be an occasional adjustment at a relatively conceptual level, but for the most part serious change is delayed until absolutely necessary and then effected in revolutionary fashion, much like turnaround (Miller and Friesen, 1984; Tushman, Newman, and Romanelli, 1987).

Our study of Volkswagenwerk (Mintzberg, 1978), from its development after World War Two until 1974, fit this perfectly. A long period of postwar stability, in which the basic strategy was continuously elaborated, finally met market resistance in the late 1950s. The company's response was adaptation—piecemeal addition to



7d. Regular Progress

Figure 7. Patterns of organizational change

strategic position, the grafting of a new, larger model car of the same strategic perspective on to its existing product line-followed by another period of stability. But by the mid 1960s, it had become clear that this graft would not suffice, and there then followed a period of frantic groping (struggle) followed by revolution-a dramatic turnaround in which the basic concept of the company's product line was reconceived into a new vision (from highly functional bodies with rear air-cooled engines to more stylish bodies with water-cooled front-wheel drive engines). The story of the Steinberg supermarket chain (Mintzberg and Waters, 1982) was similar, except that here the two major episodes of strategic change over the 60-year history were driven by visionary leadership-self-induced reconceptionsrather than as responses to external pressures.

Our study of U.S. strategy in Vietnam

(Mintzberg, 1978) exhibited more frequent changes, bumps in almost regular steps, perhaps driven by the intense nature of that situation. Here the organization escalated its commitment one step at a time, each seemingly incremental but in retrospect, all of them together revolutionary. Major changes took place in 1950, 1954, 1961, 1965, 1968, 1969, and 1973. Of course, this was a study of one area of a broader organization (the United States government), but such a pattern can likely be found in self-contained organizations as well.

Our study of the National Film Board of Canada (Mintzberg and McHugh, 1985) showed a somewhat different pattern, of oscillating shifts, or cycles of convergence and divergence, illustrated in Figure 7b. Because of the many projects undertaken—one for each of the films that was made—and the corresponding 'adhocracy' nature of the organization (Mintzberg, 1979), there was the possibility to converge or diverge around different themes. This happened in surprisingly regular cycles, with about 6 years of convergence around particular themes repeatedly followed by about 6 years of divergence and experimentation. Some of the episodes of convergence took place suddenly, but were never leader-led so much as the result of implicit consensus among the many filmmakers. In that sense, they may be considered examples of grass roots (learning driven) turnaround, although the overall story may better be described as periodic waves of revitalization.

Air Canada (Mintzberg et al., 1986), up to the end of our study period (but not beyond, when it has experienced some major bumps), tended to follow a rather regular pattern-development elaboration, and stability-much like the initial pattern shown in Figure 6, with the stages sequencing themselves in an orderly fashion. In fact, when we consider in general the occasional bump as equivalent to a mid-life crisis, we can see the most obvious sequence in that figuredevelopment, stability, adaptation, struggle, and revolution-as a life cycle, adding on the end, of course, the stage of demise, as illustrated in Figure 7c. (See Chandler, 1962, and Withane, 1988, for other descriptions of strategy life cvcles.)

Finally, in our study of McGill University (Mintzberg and Rose, in progress), we found not so much periodic bumps as *regular progress*, as depicted in Figure 7d. This, perhaps, was the most steadily revitalizing of all the organizations we studied, with central leadership in general and strategic vision as well as procedural planning in particular being relatively unimportant, compared with inductive learning at the base level, carried out mostly by the academic faculty, isolated in particular departments.

These various patterns in fact fit different forms of organizations rather well (as described in Mintzberg, 1979, 1989). Our spiraling cycles, of patterns of change over the long term, can be described as being either of a pendulum nature or more gyroscopic. The conventional machine bureaucratic organizations (Volkswagen, the U.S. military) seem to change in occasional revolutions, like a pendulum changing direction, in order to sustain their necessarily tight coordination during stages of stability. They resist serious change most of the time, but periodically are forced to accept it by outside pressures when it becomes overdue. Thus high level change tends to take the form of turnaround, whether planning led or vision led. This may form an overall pattern of periodic bumps, or if these sequence themselves in a more orderly development over time, that of a life cycle. Change of a pendulum nature seems to be similar in entrepreneurial organizations (which tend to represent the first stage of development in the life cycle in any event), except that here change tends to be more proactive, often initiated by a leader who chooses to alter his or her vision.

Even more specifically pendulum in nature is the pattern of change that seems to be characteristic of the adhocracy (or project) type organization, at least if our study of the National Film Board (and, to some extent of the architectural firm Arcop [Mintzberg *et al.*, 1988]) is any indication. For here the swings are rather more regular, as noted above through waves of convergence and divergence (the implication perhaps being that the machine and entrepreneurial organizations may better be described as ratchets than pendulums). This pattern may reflect the more self-induced, grass roots nature of change in this type of organization, in quick response to environmental needs and fashions.

At the other extreme are the professional organizations (such as McGill University), which tend to experience more gyroscopic type change slow, steady, often damped, and isolated in pockets, amounting to almost perpetual revitalization. The organization seems like a vibrating transformer, never changing place but always moving inside.

Of course, other sequences are possible, and quite likely, our intention here having been to focus attention on long term overall patterns of change, perhaps the least developed of our cycles, rather than to establish any definitive typology of them.

MANAGING ORGANIZATIONAL CHANGE

So what does this discussion of the forms, process, stages and patterns of change have to say to the practising manager? If change is as complex and multifaceted as we have indicated here, how can an acting manager concerned with managing change for strategic purposes, maintain a healthy vitality which balances continuity and change, stability and learning?

In this final section, we will look at three models of managing change, or perhaps more precisely, maintaining a constant, healthy level of change. We draw these models from cases in world religion, those institutions such as Judaism, the Catholic Church, the Protestant church and Buddhism, which have survived as cultural and organizational forms over millennia.

All organizations eventually undergo conditions that threaten their very existence. Eventually, most of them succumb. What distinguishes the world religions is that they have found ways to sustain themselves through these changes. Moreover, they seem to avoid the costly swings between the chaos of change and the rigidity of stability by achieving some kind of synthesis between these opposing tendencies. While all organizations which have existed as long as these religious institutions have employed a variety of strategies, certain themes have characterized each of these traditions-albeit more pronounced at certain points in history than others. In particular, we have selected three models as ideal-typical which we call enclaving, characteristic of the Catholic church in the 13th century in Italy, cloning, characteristic of 18th century Protestantism in North America, and uprooting, characteristic of early Buddhism in India. As we shall see, each is mirrored in the successful behavior of certain business enterprises.

Enclaving

The Catholic Church is often cited as the world's oldest, most enduring organization. Throughout its history, it has been through many changes in organization and culture, but it has survived to represent a significant presence in the modern world. At several important junctures, most notably in the early 13th century and in the 20th century, the church was headed by Popes who were notable bureaucrats and planners yet handled challenges from grass roots movements by a process of negotiation and resource allocation that might be termed *enclaving*. This involved the carefully controlled integration of learning within the existing structure, its 'capture,' if you will, from a particular enclave.

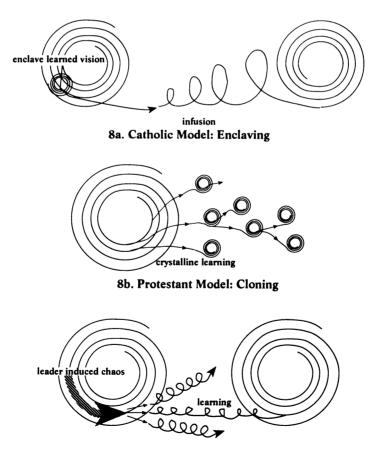
The case of the Humiliati is instructive. These were a group of laypeople who began organizing as early as 1170, with the desire to live a common life in a religious manner. The tenets on which the movement was based included a commitment to shared property, humility, and simplicity, that was entirely consistent with church doctrines. They also, more problematically, held secret meetings, refrained from taking oaths (including swearing loyalty to the Lord), and insisted on their right to 'engage in the apostolic act of preaching the Christian faith publicly' (a right which in the Catholic Church was until that time retained only for ordained priests [Little, 1978: Chapter 8]). For these heretical practices, two Popes placed the Humiliati under 'perpetual anathema' as dangerous and schismatic influences. For 15 years the Humiliati went underground, where, by all accounts they flourished.

When Pope Innocent III, a noted jurist, came to power in 1198, a major redirection of policy occurred. The Humiliati approached the new pope with renewed appeals for recognition and Innocent appointed a subcommittee composed of a bishop and two abbots to study the question. Two years after the appointment of the subcommittee, Innocent formally recognized the Humiliati organization, granting them order status. He allowed lay preaching, as long as a line was clearly drawn between 'preaching doctrine and giving witness to faith and morals' (Little, 1978: 117). On the other hand, Innocent required the order to relinquish its opposition to oaths, but to swear only to 'those things that were true.' Secret meetings were no longer necessary. Hence, an enlightened compromise was reached. The church broadened its definition of who could preach and provided new structure for the participation of lay members in the life of the church (Little, 1978: 119). In exchange, the Humiliati agreed to swear allegiance and to meet publicly under the auspices of the church. Similar compromises marked Innocent's negotiations with the Franciscans and the Dominicans.

We call this model 'enclaving' because the change is conceived in an enclave of the organization. Rather than destroying the effort, the organization tolerates it (however minimally), isolating it to avoid challenge to, or contamination of, the rest of its activities. At some point, however, whether because the movement has moderated its radicalism or the larger organization finds itself in crisis and so has need of the change (or, perhaps more commonly, both together), the change is accepted, legitimized, and then allowed to infuse the rest of the organization and so effect a broader shift. This is depicted in Figure 8a.

In terms of our dimensions, the contents of the changes are typically rather high-level conceptual, in the case of religion, of course, concerning culture and vision especially, but also strategic positions and systems, etc. The process begins with learning, in an enclave, that leads to a new vision of some sort. But important to the acceptance and diffusion of that new vision may be some sort of procedural planning, to ensure systematic acceptance of the change. Overall, the change may constitute a stage of adaptation, or even revolution, specifically turnaround initiated from an enclave quite independent of the formal leadership, itself born out of a stage of isolated struggle. Political challenge is followed by constructive cooperation. Over the history of an organization, the enclaving model of change would seem to create a pattern of periodic bumps.

The best known examples of similar enclaving processes are in IBM's management of its Independent Business Units (see Peters and Waterman, 1982; Kuhn, 1989; Humphrey, 1987 for a description of these management processes). As of 1986, IBM had 16 IBUs organized around new or emerging products such as the PC software group and various customer service functions. Each was essentially a 'company within a company.' Decentralization created greater autonomy and responsibility at the local level, at times with the emergence of a useful sense of local culture. This entire idea, while encouraging



8c. Buddist Model: Uprooting

innovation, remained firmly in the hands of the people with a planning orientation.

The genius of IBM top management in the case of PCs was not the conception of the IBU, it was the more basic conclusions that PCs were not simply a product line extension but the harbingers of a different way of doing business in computers. That kind of conviction came from first-hand knowledge that nothing less than a radical departure from their tried and true success formula in mainframes would get them where they wanted to go (Kuhn, 1989: 23).

The limitations of such enclaving strategies for managing or maintaining change is that they require constant vigilance and receptivity on the part of top management. If vigilance and receptivity fails, those who are in positions of power feel they no longer need to learn. Such was the case of the corrupt popes of the early sixteenth century, who, distracted as Innocent was attentive, embroiled the church hierarchy in politics, corruption, and fiscal difficulties, resulting in the most significant schism in the church's history: the protestant reformation (Tuchman, 1978).

Cloning

Unlike the Catholic Church in the 13th century, the Protestant Church since its inception has been characterized by religious pluralism. Held together by a similar set of beliefs and practices (such as acceptance of the authority of the scriptures), the Protestant faith has allowed for national churches, as well as a vast number of smaller sects and denominations which essentially compete with each other for members. While baptism into one protestant denomination assured 'membership' in others, no formal mechanisms connected one protestant group to another except for points of doctrine (Troeltsch, 1960).

The pattern of proliferation is an interesting one, with lessons for many contemporary organizations. We call it *cloning*, as it involves the splitting off of groups into separate organizations. This pattern was much in evidence in North America with the spread of Methodism in the late Nineteenth century. Settled communities, with established church groups, would become too 'staid' for the more adventuresome, who moved west in search of land or gold. Travelling Methodist ministers would follow, offering the promise of greater community and stability in the chaos of the frontier. New congregations would thus form, and in turn become established. The restless adventurers who had fled the established communities in the east would become the elders of the new congregations. But once again, the restless adventurers, with ideas but little power, would escape, the pattern repeating itself with a continuous cloning of congregations, and eventually even new denominations (Clark, 1962; Westley, 1990).

Cloning is distinct from enclaving in that the critical competence does not reside with administrators. It is based primarily on exploitation of new learning, if not of a new vision than of a new way (or place) in which to execute the old vision. The breakaway group, dissatisfied with the status quo, may be headed by a visionary, but the structure of Protestant denominations, even after the stage of visionary leadership, has tended to remain flat, with the lay members retaining most of the power. Overall, the strategy of allowing groups to 'break away' and clone their own congregations has kept friction from destroying the Protestant movement as a whole, while allowing the expression of a variety of interpretations and a range of innovation.

A similar pattern may be observed in business organizations that tend to grow through diversification by internal developments. Magna, a Canadian autoparts company encourages any production facility which grows to over 100 employees to clone another. The idea is to keep each unit small, to ensure its responsiveness to customer needs and employee concerns. The production facilities are operated as separate companies and encouraged to compete against each other. They are held together by an employee charter of rights that specifies the share each employee group, as well as the corporation, has in the profits of the enterprise:

We call [our system] a 'fair enterprise' system rather than a free enterprise system. We give each manager within Magna the blue print to include and create another Magna. It's a cloning process. It's an organic process. It is not centrally controlled. The only thing central is that we're custodians of the culture. And it is an economic culture (Frank Stronach, founder and CEO of Magna, Inc.). Hewlett Packard is another organization which has developed a system of small, semiautonomous units, and encourages entrepreneurs to pursue their ideas in separate divisions, the newest divisions representing innovation, the older, more established divisions providing a continuity in culture and perspective (Peters and Waterman, 1982; *Business Week*, 1989), producing the pattern illustrated in Figure 8b.

In terms of our dimensions, cloning tends not so much to act at the highest levels of abstractionculture and vision-much of which remains fixed in a broad, 'umbrella' way. Rather, cloning tends to proliferate positions, thereby affecting programs and systems, etc., and so acting primarily as piecemeal change-in some sort of portfolio. This is above all a learning process, whose new resulting positions may be operationalized through procedural planning. But visionary leadership does not figure prominently here, at least not on an organization-wide basis even if expressed within some of the new subunits. Overall, the organization appears to be in a perpetual stage of adaptation, never really one of struggle or revolution, or even stability for that matter so long as new units are being regularly spun off the older ones. Thus the longterm pattern is best described as regular progress, characterized by ongoing revitalization.

Cloning works over the long term because it allows considerable expression of individual creativity subjected to few controls. Unlike enclaving, it minimizes the demands of orthodoxy, instead encouraging a pluralism of viewpoints. The problem, of course, is to allow for the very loose coupling of the subunits without rupturing the connections between them. Mechanisms for the sharing of ideas and the reiteration of commitment to fundamental principles are necessary, as in the ecumenical movement of the Protestant church and the cross-division retreats of the corporations.

Uprooting

The last of our three models looks at the way in which visionary change can be managed so as to maintain, over time, the charismatic intensity of the early stages of the organization, avoiding the routinization of the later stages. History would seem to indicate that this is very difficult to achieve, but visionaries and their followers have attempted some techniques to this end. We have labeled these *uprooting*.

A good example of uprooting strategies is found in early Buddhism in India. According to the beliefs inspired by the Buddha, salvation was possible only through renouncing the will and the thirst for life through which the will attached itself to the world. The ideal was one of total renunciation of all formal ties to the world:

Wandering homelessly, without possessions and work, absolutely abstemious as regards sex, song, and dance, practising vegetarianism, shunning spices, salt, and honey, living from door to door by silent mendicancy, for the rest given to contemplation, the Buddhist sought salvation from the thirst for existence. (Weber, 1958: 114)

It was through such discipline that the individual could escape the endless karmic round and achieve nirvana. For example, the monasteries were created as centers for Buddhist monks, and were ruled, with absolute authority by spiritual fathers. The monks were not to become attached to either a particular teacher or a particular community, as these might divert the monk from his spirtual task. Hence 'the organization of this social community and the ties of the individual to it were minimized with great consistency and studiousness' (Weber, 1958: 114). Monks were required to relinquish all possessions, to wander constantly. While a monk, a novitiate was accepted into a particular order or cloister upon recommendation by the teacher, the acceptance implied no lasting bond. In fact, on the contrary, the monk who tarried too long in any given spot was urged, in the words of the Buddha himself, to 'wander lonely as a rhinoceros' (ibid: 208). At times, whole cloisters were disbanded at the order of the teacher.

It was presumably not coincidental that Mao-Tse Tung used the term 'cultural revolution.' He kept his changes alive and immediate by the uprooting of millions of Chinese from their villages, families, and occupations.

The success of such uprooting strategies over time is dependent on the quality of the commitment of adherents. Continual uprooting of the kind described above prevent hierarchies or rules from developing and leaves members with considerable day to day autonomy. It demands however, that the commitment of members be absolute, they are able to tolerate high levels of ambiguity and that they accept the dictates of their leader as to the overall pattern of their lives.

The difficulties of such an approach are many however. On the whole, it inhibits organizational learning, even if it encourages individual learning. Adherents may also simply become burned out, due to the constant disruptions and demands on them for flexibility and tolerance of ambiguity. In sum, the passion and change may be too intense—members may defect in search of stability and rationality.

Examples of such vision-led change, sustained over long periods is not common in business organizations. Much more common is vision as a stage in organizational life. Visionaries 'have their day' and then withdraw either literally or figuratively from the organization they have created (Mintzberg and Westley, 1989; Westley, 1990). However, there exist some examples of visionaries who, like the leaders described above, pursue uprooting strategies over long periods of time.

One is Anita Roddick, founder of the Body Shop. Roddick has made it one of the tenets of her leadership that bureaucracy in her organization will be kept at a minimum. At one point she felt that too many meetings were being held, so she sent out an edict that meetings could only be held after eight o'clock at night, that no one was allowed to sit down for the duration of the meeting, and that anyone who hadn't spoken at the last meeting couldn't speak at the current one. This drastically reduced the number of meetings in the organization.² Similarly, Ray Affleck, one of the cofounders of ARCOP, a highly successful architectural firm, deliberately slashed his organization from over 100 employees to less than 50, not for financial reasons, but because he felt that the original, missionary zeal of the organization was being diluted (Mintzberg et al., 1988).

As suggested in Figure 8c, uprooting begins with the stage of struggle, followed perhaps by isolated adaptation, which eventually brings a new stability through a kind of limited revolution. It thus appears as a curious mixture of turnaround and revitalization, the latter driving the former, with the leader provoking change for its own sake which in turn can revitalize the organization through its constrained revolution. This would seem to create an overall long-term pattern of periodic bumps.

Uprooting is probably the trickiest model of all for conventional organizations, because it requires a very powerful leadership coupled with awfully committed followers. Yet it would seem superior to enclaving or cloning for true revitalization of highly integrated organizations.

To conclude as we have done in each of the sections of this paper, as already suggested these models need not occur independently of one another. In fact, one could argue that some of the change processes currently underway in eastern Europe may well see these three models pursued in sequence: an initial uprooting, as in the cultural revolution initiated by Gorbachev in the Soviet Union, then considerable enclaving as different groups promote their own learning until some of it is captured and systematically passed on, and finally, perhaps, cloning, as new behaviors spin off the established units over time. In addition, most organizations which endure employ all three strategies at some point in their life history. The Catholic Church, for example, throughout the centuries has experienced both vision-led revolution and uprooting (the eleventh century papal revolution, led by Hildebrand), and enclaving. At various points, and at times simultaneously, organizations will contain cloning, enclaving, and uprooting tendencies. The important thing is the maintenance of a creative tension: vision must be harnessed, learning must be directed, and planning must be empowered.

IMPLICATIONS FOR RESEARCH

It seems to us this framework implies *three* conclusions for research on change in organizations. First, where studies are focused on particular contents or episodes, etc., there is the need to make organizational context very clear (Pettigrew, 1988). Change within organizations occurs between levels as well as within levels. Conceptual clarity concerning the level where the change originates or is focused is essential if the process of change as well as its comprehensiveness and the triggers that evoke it are to be understood. Our framework should help directly in this regard.

² Personal interview with Anita Roddick.

Second, and perhaps more important, the implication is that research should, in general, be far richer than it has sometimes been, involving more comprehensive description over significant periods of time. Among those organizations which would appear to be of particular interest are those, like the Catholic Church which have survived and prospered over extensive periods of time. Such cases seem to defy the literature on organizational life cycles, and present the strongest case that change within organizations can be managed, rather than simply being an inevitable cycle of birth, maturity, and death. If learning can be said to occur when the same stimulus is met with a different response (Weick, 1991), then one of the indications that change has been managed is that it defies the life cycle pattern. Researchers could well identify organizations with very long-term histories of success (or just survival), and study how this has been sustained. From the overall patterns, researchers can work back to key stages and critical episodes, and then into the more detailed dimensions, all the while looking for combinations of factors (such as how cloning, enclaving, and uprooting combine over, or at, points in time).

Thirdly, there is much work to be done in attempting to understand the relationships between the actor in a change situation and the patterns of activity which at the macro level inform the researcher that change has occurred. In this sense, research on change faces the micro/macro problem with which sociology has been struggling most centrally in recent decades (Wiley, 1988). What are the mechanisms of emergence and feedback that connect the experience of change at the individual level to the manifestations of change at the structural and cultural level? Our paper does not resolve this question but it does suggest its critical importance, and that the answer may well be in those longitudinal, historical cases (such as the world religions) where both the history of the actions of individuals and the historical patterns of change on both strategy and structural dimensions can be clearly documented. Change in organizations is a complex and multifaced affair whose elements must be clearly delineated if it is to be understood in context and so managed effectively.

Lastly our paper suggests that change in organizations may be triggered by a number of processes and procedures. As ideal types, our notions of informal, implicit, imported, and 'mindless' change imply different roles for managers interested in guiding and encouraging or inhibiting change. Each ideal type needs further development through case research and documentation. Similarly, we have suggested three 'models' of organizational change: enclaving, cloning, and uprooting. We have also suggested, however, that over time organizations may adopt all three models sequentially or perhaps even simultaneously. While the cases we have touched on in the paper are suggestive, further research is required to flesh out fully these models and the dynamics which drive them.

In conclusion, depending on an organization's history, its inner and outer context, the level of change required, and the balance of visionaries, planners, and learners in the organization, the practitioner is faced with different challenges. It is important that we move from theoretical perspectives which delineate the complexity of change to practical models which can facilitate the management of this complexity. As researchers and readers of organizational change, we should be spending less of our time trying to interpret its vague traces and more of our time trying to understand its rich practice.

REFERENCES

- Allaire, Y. and M. Firsirotu (Spring 1985). 'How to implement radical strategies in large organizations' *Sloan Management Review*, pp. 19–34.
- Bower, J. L. (1970). Managing the Resource Allocation Process. Harvard Business School Press, Cambridge, MA.
- Burgelman, R. A. (1983). Corporate entrepreneurship and strategic management: Insights from a process study, *Management Science*, XXIX, **12**, pp. 1349–1364.
- Burgelman, R. A. (1983b). A process model of internal corporate venturing in the diversified major firm, Administrative Science Quarterly, XXVIII, pp. 223-244.
- Business Week (April 18, 1989). 'Masters of innovation', pp. 58-65.
- Chandler, A. D., Jr. (1962). Strategy and Structure: Chapter in the History of the Industrial Enterprise. MIT Press, Cambridge, MA.
- Clark, S. (1962). The Developing Canadian Community. University of Toronto Press, Toronto.
- Conger, J., R. N. Kanungo and Associates (1988). Charismatic Leadership: The Elusive Factor in Organizational Effectiveness. Jossey-Bass, San Francisco, CA.

- Doz, Y. and C. K. Prahalad (1988). 'A process model of strategic redirection in large complex firms: The case of multinational corporations'. In A. Pettigrew (ed.), *The Management of Strategic Change*. Basil Blackwell, Oxford, pp. 63–83.
- Drucker, P. (1974). Management: Tasks, Responsibilities, Practices. Harper and Row, New York.
- Drucker, P. (September-October, 1992). The new society of organizations, *Harvard Business Review*, pp. 95–104.
- Firsirotu, M. (1985). 'Strategic turnaround as cultural revolution'. Unpublished doctoral dissertation, McGill University, Montreal.
- Galbraith, J. R. (1977). Organization Design. Addison-Wesley, Reading, MA.
- Ginsberg, A. and E. Abrahamson (1991). 'Champions of change and strategic shifts. The role of internal and external change advocates', *Journal of Management Studies*, 28(2), pp. 173–190.
- Goodstein, J. and W. Boeker (1991). Turbulence at the top: A new perspective on governance structure changes and strategic change, Academy of Management Journal, 34(2), pp. 306-330.
 Greenwood, R. and C. R. Hinings (1988). Organiz-
- Greenwood, R. and C. R. Hinings (1988). Organizational design types, tracks and the dynamics of strategic change', Organization Studies, 9(3), pp. 293–316.
- Henderson, B. (1979). Henderson on Corporate Strategy. Abt Books, Cambridge, MA.
- Hofer, C. W. (Summer 1980). 'Turnaround strategies', Journal of Business Strategy, 1(1), pp. 19-31.
- Huff, J. O., A. S. Huff and H. Thomas (Summer 1992). Strategic renewal and the interaction of cumulative stress and inertia', *Strategic Management Journal*, 13, pp. 55–75.
- Humphrey, W. (1987). Managing for Innovation: Leading Technical People. Prentice-Hall, Englewood Cliffs, NJ.
- Iacocca, L. and W. Novak (1984). Iacocca: An Autobiography. Bantam Books, New York.
- Kuhn, R. (1989). Creativity and Strategy in Mid-Sized Firms. Prentice-Hall, Englewood Cliffs, NJ.
- Lewin, K. (1951). Field Theory in Social Science, Harper and Row, New York.
- Little, L. K. (1978). Religious Poverty and the Profit Economy in Medieval Europe. Cornell University Press, Ithaca, NY, 1978.
- Meyer, A. D. (1982). 'Adapting to environmental jolts', Administration Science Quarterly, XXVII, pp. 515-537.
- Miller, D. and C. P. H. Friesen (1984). Organizations: A Quantum View. Prentice-Hall, Englewood Cliffs, NJ.
- Mintzberg, H. (Winter 1973). 'Strategy making in three modes', California Management Review XVI(2) pp. 44–53.
- Mintzberg, H. (1978). 'Patterns in strategy formation', Management Science XXIV(9), pp. 934–948.
- Mintzberg, H. (1979). The Structuring of Organizations. Prentice Hall, Englewood Cliffs, NJ.
- Mintzberg, H. (1989). Mintzberg on Management: Inside Our Strange World of Organizations. Free Press, New York.

- Mintzberg, H. (1990). 'Strategy formation: Schools of thought'. In J. Fredrickson (ed.), *Perspectives on Strategic Management*. Ballinger, Cambridge, MA, pp. 105-235.
- Mintzberg, H. (forthcoming). The Rise and Fall of Strategic Planning: Reconceiving the Roles for Planning, Plans, Planners. Free Press, New York, and Prentice-Hall, Englewood Cliffs, NJ.
- Mintzberg, H. and J. A. Waters (1982). Tracking strategy in an entrepreneurial firm, Academy of Management Journal, XXV(3), pp. 465-499.
- Mintzberg, H. and J. A. Waters (1984). 'Researching the formation of strategies: The history of Canadian Lady 1939–1976'. In R. B. Lamb (ed.), *Competitive Strategic Management*. Prentice-Hall, Englewood Cliffs, NJ, pp. 62–93.
- Mintzberg, H. and A. McHugh (June 1985). 'Strategy formation in adhocracy', Administrative Science Quarterly 30,(2), pp. 160–197.
- Mintzberg, H. and J. A. Waters (1985). 'Of strategies, deliberate and emergent, *Strategic Management Journal*, **6**,(3), pp. 257–272.
- Mintzberg, H., J. P. Brunet, and J. A. Waters (1986).
 'Does planning impede strategic thinking? Tracking the strategies of Air Canada from 1937 to 1976'. In Advances in Strategic Management. JAI Press, Greenwich, CT. vol. 4, pp. 3-41.
 Mintzberg, H., S. Otis, J. Shamsie and J. A. Waters
- Mintzberg, H., S. Otis, J. Shamsie and J. A. Waters (1988). Strategy of design—A study of 'Architects in Co-Partnership.' In J. Grant (ed.), Significant Developments in Strategic Management. JAI Press, Greenwich, CT, pp. 311–359.
- Mintzberg, H. and F. Westley (1989). 'Organizational regeneration', paper presented at Strategic Management Society meeting in San Francisco.
- Mintzberg, H. and J. Rose (in progress). Strategic Management Upside Down: A Study of McGill University from 1829 to 1980. McGill University, Montreal.
- Morris, D. (1967). The Naked Ape. McGraw-Hill, New York.
- Nonaka, I. (1988). 'Creating organizational order out of chaos: Self-renewal in Japanese firms' *California Management Review*, XXX(3), pp. 57-73.
- Palmer, R. R. (1950). The History of the Modern World. Alfred Knopf, New York.
- Pascale, R. (1984). 'Perspectives on strategy: The real story behind Honda's success', *California Management Review*, XXVI(3), pp. 47–72.
- Peters, T. and R. H. Waterman (1982). In Search of Excellence, Harper & Row, New York.
- Pettigrew A. M. (Summer 1977). 'Strategy formulation as a political process, *International Studies of Management and Organization*, pp. 78–87.
- Pettigrew, A. M. (1985). 'Examining change in the long-term context of culture and politics'. In J. M. Pennings and Associates, (eds), Organizational Strategy and Change. Jossey-Bass, San Francisco, CA, pp. 269–318.
- Pettigrew, A. M. (ed.) (1988). 'Introduction: Researching strategic change'. The Management of Strategic Change. Basil Blackwell, Oxford, pp. 1–13.
- Porter, M. E. (1980). Competitive Strategy: Techniques

for Analyzing Industries and Competitors. Free Press, New York.

- Porter, M. E. (1985). Competitive Advantage: Creating and Sustaining Superior Performance. Free Press, New York.
- Quinn, J. B. (1980). Strategies for Change: Logical Incrementalism. Irwin, Homewood, IL.
- Schein, E. (1985). Organizational Culture and Leadership. Jossey-Bass, San Francisco, CA.
- Starbuck, W. H., A. Greve, and B. L. T. Hedberg (Spring 1978). 'Responding to crisis', Journal of Business Administration, pp. 111-137.
- Troeltsch, E. (1960). The Social Teachings of the Christian Churches. Volumes I and II. Harper Torchbooks, New York.
- Tuchman, B. (1978). A Distant Mirror. Alfred Knopf, New York.
- Tushman, M. L., W. H. Newman and E. Romanelli (1987). 'Convergence and upheaval: Managing the unsteady pace of organizational evolution', *California Management Review*, 29(1), pp. 1–16.
- Tushman, M. and P. Anderson (1987). 'Technological discontinuities and organization environments', In A. Pettigrew (ed.), *The Management of Strategic Change*. Basil Blackwell, Oxford, pp. 89–122.

- Utterback, J. M. and W. J. Abernathy (1965). 'A dynamic model of process and product innovation' *Omega*, **III**(6), pp. 639–656.
- Wallace, A. F. (1961). Culture and Personality. Random House, New York.
- Weber, M. (1958). *Religion of India*. Free Press, New York.
- Weick, K. (1991). 'The nontraditional quality of organizational learning, Organization Science, 2(1), pp. 116–124.
- Weick, K. E. (1979). The Social Psychology of Organizing, (2nd ed). Addison-Wesley, New York.
- Westley, F. (1990). 'The eye of the needle: Cultural and personal transformation in a traditional organization, *Human Relations*, **43**(3), pp. 273–293.
- Westley, F. and H. Mintzberg (1989). 'Visionary leadership and strategic management', *Strategic Management Journal*, Special Issue, Summer, 10, pp. 17–32.
- Wiley, N. (1988). 'The micro-macro problem in social theory', Sociological Theory, 6, pp. 254–261.
- Withane, S. (1988). 'A cycle of organizational strategy: The adaptation process in U.S. regulatory agencies', Organization Studies, 9(4), pp. 573–597.