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ORGANIZATIONAL CHANGE AND DEVELOPMENT

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ABSTRACT

Recent analyses of organizational change suggest a growing concern with the tempo of change, understood as the characteristic rate, rhythm, or pattern of work or activity. Episodic change is contrasted with continuous change on the basis of implied metaphors of organizing, analytic frameworks, ideal organizations, intervention theories, and roles for change agents. Episodic change follows the sequence unfreeze-transition-refreeze, whereas continuous change follows the sequence freeze-rebalance-unfreeze. Conceptualizations of inertia are seen to underlie the choice to view change as episodic or continuous.

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INTRODUCTION

Analyses of organizational change written since the review by Porras & Silvers (1991) suggest that an important emerging contrast in change research is the distinction between change that is episodic, discontinuous, and intermittent and change that is continuous, evolving, and incremental. This contrast is sufficiently pervasive in recent work and sufficiently central in the conceptualization of change that we use it as the framework that organizes this review.

The contrast between episodic and continuous change reflects differences in the perspective of the observer. From a distance (the macro level of analysis), when observers examine the flow of events that constitute organizing, they see what looks like repetitive action, routine, and inertia dotted with occasional episodes of revolutionary change. But a view from closer in (the micro level of analysis) suggests ongoing adaptation and adjustment. Although these adjustments may be small, they also tend to be frequent and continuous across units, which means they are capable of altering structure and strategy. Some observers (e.g. Orlikowski 1996) treat these ongoing adjustments as the essence of organizational change. Others (e.g. Nadler et al 1995) describe these ongoing adjustments as mere incremental variations on the same theme and lump them together into an epoch of convergence during which interdependencies deepen. Convergence is interrupted sporadically by epochs of divergence described by words like revolution, deep change, and transformation.

We pursue this contrast, first by a brief overview of change as a genre of analysis and then by a more detailed comparison of episodic and continuous change using a framework proposed by Dunphy (1996).

CHANGE AS A GENRE OF ORGANIZATIONAL ANALYSIS

The basic tension that underlies many discussions of organizational change is that it would not be necessary if people had done their jobs right in the first place. Planned change is usually triggered by the failure of people to create continuously adaptive organizations (Dunphy 1996). Thus, organizational change routinely occurs in the context of failure of some sort. A typical storyline is "First there were losses, then there was a plan of change, and then there was an implementation, which led to unexpected results" (Czarniawska & Joerges 1996:20).

Representative descriptions of change vary with the level of analysis. At the most general level, "change is a phenomenon of time. It is the way people talk about the event in which something appears to become, or turn into, something else, where the 'something else' is seen as a result or outcome" (Ford & Ford 1994:759). In reference to organizations, change involves difference "in how an organization functions, who its members and leaders are, what form it takes,

or how it allocates its resources" (Huber et al 1993:216). From the perspective of organizational development, change is "a set of behavioral science-based theories, values, strategies, and techniques aimed at the planned change of the organizational work setting for the purpose of enhancing individual development and improving organizational performance, through the alteration of organizational members' on-the-job behaviors" (Porras & Robertson 1992:723).

The concepts used to flesh out these definitions have been surprisingly durable over the years. Lewin's (1951) three stages of change—unfreeze, change, and refreeze—continue to be a generic recipe for organizational development. As Hendry (1996) notes, "Scratch any account of creating and managing change and the idea that change is a three-stage process which necessarily begins with a process of unfreezing will not be far below the surface. Indeed it has been said that the whole theory of change is reducible to this one idea of Kurt Lewin's" (p. 624). Lewin's assertion that "you cannot understand a system until you try to change it" (Schein 1996:34) survives in Colville et al's (1993) irony of change: "one rarely fully appreciates or understands a situation until after it has changed" (p. 550). Lewin's concept of resistance to change survives in O'Toole's (1995:159–66) list of 30 causes of resistance to change and in renewed efforts to answer the question, "Just whose view is it that is resisting change?" (Nord & Jermier 1994). The distinction between incremental and radical change first articulated by Watzlawick et al (1974) and Bateson (1972) as the distinction between first- and second-order change continues to guide theory construction and data collection (Roach & Bednar 1997; Bartunek 1993). The rhythms of change (Greiner 1972) continue to be described as periods of convergence marked off from periods of divergence by external jolts (e.g. Bacharach et al 1996). The continuing centrality of these established ideas may suggest a certain torpor in the intellectual life of scholars of change. We think, instead, that this centrality attests to the difficulty of finding patterns when difference is the object of study.

While work within the past 10 years has become theoretically richer and more descriptive, there is a continuing debate about whether change research is developing as a cumulative and falsifiable body of knowledge. Kahn's (1974:487) assessment of organizational change research in the 1970s is cited by Macy & Izumi (1993:237) as a statement that remains relevant: "A few theoretical propositions are repeated without additional data or development; a few bits of homey advice are reiterated without proof or disproof; and a few sturdy empirical observations are quoted with reverence but without refinement or explication." Similar sentiments are found in Woodman (1989), in Golembiewski & Boss (1992), and in the withering popular books on "the change business" titled *The Witch Doctors* (Micklethwait & Wooldridge 1996) and *Dangerous Company* (O'Shea & Madigan 1997). The tone of these critiques is illustrated by the obvious pleasure the authors of *The Witch Doc-*

tors take in their observation that "the reason American businessmen talk about gurus is because they can't spell the word charlatan" (Micklethwait & Wooldridge 1996:11).

Remedies to the above problems are seen to lie in the direction of the following, all coupled with greater efforts to articulate the situated nature of organizational action (e.g. Laurila 1997): (*a*) cross-organizational meta-analysis (e.g. Macy & Izumi 1993), (*b*) cross-organizational interview-surveys (e.g. Huber & Glick 1993), (*c*) simulations that are cross-organizational by virtue of their generality (e.g. Sastry 1997), (*d*) ethnographies (e.g. Katz 1997) and case studies (e.g. Starbuck 1993) that are treated as prototypes, (*e*) reconceptualization of organizational change as institutional change (e.g. Greenwood & Hinings 1996), and (*f*) cross-disciplinary borrowing (e.g. Cheng & Van de Ven 1996). Coupled with efforts to improve the quality of evidence in change research have been parallel efforts to better understand the limitations of inquiry (e.g. Kilduff & Mehra 1997, McKelvey 1997). When these are combined, there appears to be simultaneous improvement of tools and scaling down of the tasks those tools must accomplish.

The sheer sprawl of the change literature is a continuing challenge to investigators who thrive on frameworks (e.g. Mintzberg & Westley 1992). An important recent attempt to impose order on the topic of organizational change is the typology crafted by Van de Ven & Poole (1995). They induced four basic process theories of change, each characterized by a different event sequence and generative mechanism:

1. Life cycle theories have an event sequence of start-up, grow, harvest, terminate, and start-up. They have a generative mechanism of an immanent program or regulation.
2. Teleological theories have an event sequence of envision/set goals, implement goals, dissatisfaction, search/interact, and envision/set goals. They have a generative mechanism of purposeful enactment and social construction.
3. Dialectical theory has an event sequence of thesis/antithesis, conflict, synthesis, and thesis/antithesis. It has a generative mechanism of pluralism, confrontation, and conflict.
4. Evolutionary theory has an event sequence of variation, selection, retention, and variation. It has a generative mechanism of competitive selection and resource scarcity.

These four motors are classified along two dimensions: (*a*) the unit of change, which depicts whether the process focuses on the development of a single organizational entity (life cycle, teleological) or on interactions between two or more entities (evolution, dialectic) and (*b*) the mode of change, which depicts whether the sequence of change events is prescribed by deterministic

laws and produces first-order change (life cycle, evolution) or whether the sequence is constructed, emerges as the process unfolds, and generates novel second-order change (dialectic, teleology).

The language of motors is useful because it alerts investigators to missing motors in change theories that aspire to comprehensiveness, it draws attention to mechanisms of interplay among motors and the necessity for balance (Van de Ven & Poole (1995:534), it tempts people to look for a "fifth motor" and other hybrids, and (because the language of motors is a language of process rather than of outcome) it enables investigators to identify what is happening before it has concluded (p. 524). Because the authors propose a detailed list of conditions that must be met if a motor is to operate (Van de Ven & Poole 1995:525, Figure 2), they imply that when change interventions fail, there is a mismatch between the prevailing conditions and the kind of motor activated by the change intervention.

Van de Ven & Poole's review (1995) suggested that mode of change and unit of change were important partitions of the change literature. Our review suggests that tempo of change, defined as "characteristic rate, rhythm, or pattern of work or activity" (Random House 1987:1954), is also a meaningful partition. We explore the contrast between episodic and continuous change by comparing the two forms on five properties that Dunphy (1996:543) suggests are found in any comprehensive theory of change (Table 1). These properties are (*a*) a basic metaphor of the nature of organization; (*b*) an analytical framework to understand the organizational change process; (*c*) an ideal model of an effectively functioning organization that specifies both a direction for change and values to be used in assessing the success of the change intervention (e.g. survival, growth, integrity); (*d*) an intervention theory that specifies when, where, and how to move the organization closer to the ideal; and (*e*) a definition of the role of change agent. Because we are building a composite picture using portions of work that may have been designed to answer other questions, readers should treat our placement of specific studies as evocative rather than definitive.

EPISODIC CHANGE

The phrase "episodic change" is used to group together organizational changes that tend to be infrequent, discontinuous, and intentional. The presumption is that episodic change occurs during periods of divergence when organizations are moving away from their equilibrium conditions. Divergence is the result of a growing misalignment between an inertial deep structure and perceived environmental demands. This form of change is labeled "episodic" because it tends to occur in distinct periods during which shifts are precipitated by external events such as technology change or internal events such as change in key personnel.

Table 1 Comparison of episodic and continuous change

	Episodic change	Continuous change
Metaphor of organization	Organizations are inertial and change is infrequent, discontinuous, intentional.	Organizations are emergent and self-organizing, and change is constant, evolving, cumulative.
Analytic framework	Change is an occasional interruption or divergence from equilibrium. It tends to be dramatic and it is driven externally. It is seen as a failure of the organization to adapt its deep structure to a changing environment.	Change is a pattern of endless modifications in work processes and social practice. It is driven by organizational instability and alert reactions to daily contingencies. Numerous small accommodations cumulate and amplify.
	Perspective: macro, distant, global.	Perspective: micro, close, local.
	Emphasis: short-run adaptation.	Emphasis: long-run adaptability.
	Key concepts: inertia, deep structure of interrelated parts, triggering, replacement and substitution, discontinuity, revolution.	Key concepts: recurrent interactions, shifting task authority, response repertoires, emergent patterns, improvisation, translation, learning.
Ideal organization	The ideal organization is capable of continuous adaptation.	The ideal organization is capable of continuous adaptation.
Intervention theory	The necessary change is created by intention. Change is Lewinian: inertial, linear, progressive, goal seeking, motivated by disequilibrium, and requires outsider intervention.	The change is a redirection of what is already under way. Change is Confucian: cyclical, processional, without an end state, equilibrium seeking, eternal.
	1. Unfreeze: disconfirmation of expectations, learning anxiety, provision of psychological safety.	1. Freeze: make sequences visible and show patterns through maps, schemas, and stories.
	2. Transition: cognitive restructuring, semantic redefinition, conceptual enlargement, new standards of judgment.	2. Rebalance: reinterpret, relabel, resequence the patterns to reduce blocks. Use logic of attraction.
	3. Refreeze: create supportive social norms, make change congruent with personality.	3. Unfreeze: resume improvisation, translation, and learning in ways that are more mindful.
Role of change agent	Role: prime mover who creates change.	Role: Sense maker who redirects change.
	Process: focuses on inertia and seeks points of central leverage.	Process: recognizes, makes salient, and reframes current patterns. Shows how intentional change can be made at the margins. Alters meaning by new language, enriched dialogue, and new identity. Unblocks improvisation, translation, and learning.
	Changes meaning systems: speaks differently, communicates alternative schema, reinterprets revolutionary triggers, influences punctuation, builds coordination and commitment.	

Basic Metaphors: Organizing for Episodic Change

The metaphor of organization implied by conceptualizations of episodic change is of a social entity that combines the following characteristics: dense, tightly coupled interdependencies among subunits; efficiency as a core value; a preoccupation with short-run adaptation rather than long-run adaptability; constraints on action in the form of the invisible hand of institutionalization; powerful norms embedded in strong subcultures; and imitation as a major motivation for change. The importance of interdependencies as a precondition for episodic change is found in discussions of alignment (e.g. Pfeffer 1998:Ch. 4), configurations (e.g. Miller 1990), and cultural inertia (e.g. Tushman & O'Reilly 1996). The importance of imitation is reflected in Sevon's (1996) statement that "every theory of organizational change must take into account the fact that leaders of organizations watch one another and adopt what they perceive as successful strategies for growth and organizational structure" (pp. 60–61).

Images of organization that are compatible with episodic change include those built around the ideas of punctuated equilibria, the edge of chaos, and second-order change. The image of an organization built around the idea of a punctuated equilibrium (Tushman & Romanelli 1985) depicts organizations as sets of interdependencies that converge and tighten during a period of relative equilibrium, often at the expense of continued adaptation to environmental changes. As adaptation lags, effectiveness decreases, pressures for change increase, and a revolutionary period is entered. As these pressures continue to increase, they may result in an episode of fundamental change in activity patterns and personnel, which then becomes the basis for a new equilibrium period. Apple Computer illustrated a series of discontinuous changes in strategy, structure, and culture as it moved from the leadership of Steve Jobs through that of John Sculley, Michael Sprindler, Gil Amelio, and back to Jobs (Tushman & O'Reilly 1996). Romanelli & Tushman (1994) found this pattern of discontinuous episodic change when they examined changes in the activity domains of strategy, structure, and power distribution for 25 minicomputer producers founded between 1967 and 1969. Changes in these three domains were clustered, as would be predicted from a punctuated change model, rather than dispersed, as would be predicted from a model of incremental changes that accumulate.

The image of an organization built around the idea of operating at "the edge of chaos" (McDaniel 1997, Stacey 1995) depicts the organization as a set of simple elements tied together by complex relationships involving nonlinear feedback (Arthur 1995). An important property of nonlinear systems is bounded instability or what is referred to as the edge of chaos. Here a system has developed both negative and positive feedback loops and is hence simulta-

neously capable of stability and instability. Behavior at the edge of chaos is paradoxical because the system moves autonomously back and forth between stability and instability. Applied to organizations, Cheng & Van de Ven (1996), for example, show that biomedical innovation processes are nonlinear systems that move episodically from stages of chaos to greater order within a larger context containing random processes. Browning et al (1995) show how the unprecedented successful alliance called Sematech emerged from a set of small, discrete events that occurred at a point of irreversible disequilibrium when the entire US semiconductor industry was about to collapse.

The image of an organization built around the idea of second-order change in frames of reference depicts the organization as a site where shared beliefs operate in the service of coordinated action (Langfield-Smith 1992, Bougon 1992). These shared frames of reference may be "bent" when first-order changes produce minor alterations in current beliefs or "broken" when second-order changes replace one belief system with another (Dunbar et al 1996). First-order change is illustrated by a shift of culture at British Rail from a production-led bureaucracy to a market-led bureaucracy (the firm remained a top-down bureaucracy). Second-order change is illustrated by the later culture shift at British Rail from a market-led bureaucracy to a network-partnership culture in which power was distributed rather than concentrated (Bate 1990). Second-order change is episodic change and "refers to changes in cognitive frameworks underlying the organization's activities, changes in the deep structure or shared schemata that generate and give meaning to these activities" (Bartunek & Moch 1994:24). Recently, it has been proposed that there exists a third order of change that basically questions the adequacy of schemas themselves and argues for direct exposure to the "ground for conceptual understanding" in the form of music, painting, dance, poetry, or mystical experience. Organizational change thus gains intellectual power through alignment with aesthetics (e.g. Sandelands 1998). Examples of third-order change are found in the work of Torbert (1994), Nielsen & Bartunek (1996), Mirvis (1997), Olson (1990), and Austin (1997).

In each of these three images, organizational action builds toward an episode of change when preexisting interdependencies, patterns of feedback, or mindsets produce inertia.

Analytic Framework: The Episodic Change Process

Episodic change tends to be infrequent, slower because of its wide scope, less complete because it is seldom fully implemented, more strategic in its content, more deliberate and formal than emergent change, more disruptive because programs are replaced rather than altered, and initiated at higher levels in the organization (Mintzberg & Westley 1992). The time interval between epi-

sodes of discontinuous change is determined by the amount of time organizations expend in other stages of organizational development. If, for example, the stages of organizational change are labeled development, stability, adaptation, struggle, and revolution (Mintzberg & Westley 1992), then episodic change is contemplated when adaptation begins to lag. It takes provisional form as organizations struggle to confront problems and experiment with solutions, and it produces actual shifts in systems during the stage of revolution. The frequency of revolutions and episodic change depends on the time spent in the four prior stages, which varies enormously. This temporal variation in processes building up to revolution is the reason why this form of change is best described as episodic, aperiodic, infrequent.

Three important processes in this depiction of episodes are inertia, the triggering of change, and replacement. Inertia, defined as an "inability for organizations to change as rapidly as the environment" (Pfeffer 1997:163), takes a variety of forms. Whether the inability is attributed to deep structure (Gersick 1991), first-order change (Bartunek 1993), routines (Gioia 1992), success-induced blind spots (Miller 1993), top management tenure (Virany et al 1992), identity maintenance (Sevon 1996), culture (Harrison & Carroll 1991), complacency (Kotter 1996), or technology (Tushman & Rosenkopf 1992), inertia is a central feature of the analytic framework associated with episodic change. Romanelli & Tushman (1994) are representative when they argue that it takes a revolution to alter "a system of interrelated organizational parts that is maintained by mutual dependencies among the parts and with competitive, regulatory, and technological systems outside the organization that reinforce the legitimacy of managerial choices that produced the parts" (p. 1144). Because interrelations are dense and tight, it takes larger interventions to realign them. An example of processes of inertia is Miller's research (1993, 1994) demonstrating that inertia is often the unintended consequence of successful performance. Successful organizations discard practices, people, and structures regarded as peripheral to success and grow more inattentive to signals that suggest the need for change, more insular and sluggish in adaptation, and more immoderate in their processes, tending toward extremes of risk-taking or conservatism. These changes simplify the organization, sacrifice adaptability, and increase inertia.

Although inertia creates the tension that precedes episodic change, the actual triggers of change come from at least five sources: the environment, performance, characteristics of top managers, structure, and strategy (Huber et al 1993). Huber et al found that all five were associated with internal and external changes, but in ways specific to the kind of change being examined (ten specific changes were measured; see Huber et al 1993:223). For example, consistent with Romanelli & Tushman's data, Huber et al found that downturns in growth (a potential revolutionary period) were positively related to externally

focused changes and to changes in organizational form. Interestingly, upturns in growth were also positively related to externally focused changes, a finding interpreted to suggest that "desirable but risky changes might be held in abeyance until performance improves" (Huber et al 1993:230).

A final property of the analytic framework associated with episodic change is that it often assumes that change occurs through replacement (Ford & Backoff 1988, Ford & Ford 1994). The idea of replacement is that "one entity sequentially takes the place of or substitutes for a second. The first identity does not *become* the second but is substituted for it. . . . [T]he change process becomes a sequence of events in which a person (a) determines or defines what currently exists (what is A), (b) determines or defines its replacement (Not-A), (c) engages in action to remove what is currently there, and (d) implants its replacement" (Ford & Ford 1994:773, 775). Beer et al (1990) demonstrate that replacement of one program with another seldom works. The problem with such a logic is that it restricts change to either-or thinking. The only way to prevent A is to apply its reciprocal or a counterbalance or its opposite, which precludes the possible diagnosis that both A and not-A may be the problem. For example, authoritarian decision making may be counterbalanced by mandating that decisions be made at lower levels (Roach & Bednar 1997). However, this change is simply authoritarian decision-abdication, which means that authoritarian control from the top persists. As lower-level managers try harder to guess what the right decisions are (i.e. those decisions top management would have made) and err in doing so, the mandate is reaffirmed more forcefully, which worsens performance even more and creates a vicious circle. What was really intended was the creation of expectations of individual autonomy that allowed decisions to be made at the level where the expertise and information are lodged.

In conclusion, the basic analytical framework involving episodic change assumes in part that inertia is a force to contend with. When inertia builds, some trigger usually precipitates an episode of replacement. To understand episodic change is to think carefully about inertia, triggers, and replacements.

Ideal Episodic Organizations

There is no one "ideal model of an effectively functioning organization" that suggests directions for episodic change and values to be used in judging the success of an episodic change intervention (e.g. survival, growth). This is so for the simple reason that episodic change is a generic description applicable across diverse organizational forms and values. There is no direct parallel in the case of episodic change for Dunphy's (1996) assertion that the ideal model of an effectively functioning sociotechnical system is "a representative democratic community composed of semi-autonomous work groups with the ability to learn continuously through participative action research" (p. 543). If organ-

izational change generally occurs in the context of failures to adapt, then the ideal organization is one that continuously adapts. And this holds true whether the focus is episodic or continuous change. The ideal in both cases would resemble the successful self-organizing firms that Brown & Eisenhardt (1997) found in the computer industry. Successful firms did not rely on either a purely mechanistic or purely organic process and structure. Instead, successful firms had well-defined managerial responsibilities and clear project priorities while also allowing the design processes to be highly flexible, improvisational, and continuously changing. Successful firms also had richly connected communication systems, including informal and electronic grapevines, and a very high value on cross-project communication. Two important features that encouraged both episodic and continuous change were (*a*) semistructures poised between order and disorder with only some features being prescribed and (*b*) intentional links in time between present projects and future probes to reduce discontinuity and preserve direction. The authors interpret this pattern as an instance of bounded instability and argue that it may be more motivating, more attuned to sense-making in a fast-changing environment, and more flexible (as a result of capabilities for improvisation) than patterns that are pure instances of either mechanistic or organic systems.

A more generic ideal, suited for both episodic and continuous-change interventions, is found in Burgelman's (1991) attempt to show how organizations adapt by a mixture of continuous strategic initiatives that are within the scope of the current strategy (induced processes) and additional episodic initiatives that are outside the current strategy (autonomous processes). An ideal model framed more in terms of management practices is Pfeffer's (1998) description of seven "high performance management practices" that produce innovation and productivity, are difficult to copy, and lead to sustained profitability. These practices are employment security, selective hiring, self-managed teams and decentralization, extensive training, reduction of status differences, sharing of information, and high and contingent compensation.

Intervention Theory in Episodic Change

Episodic change tends to be dramatic change, as Lewin made clear: "To break open the shell of complacency and self-righteousness it is sometimes necessary to bring about deliberately an emotional stir-up" (Lewin 1951, quoted in Marshak 1993:400). While strong emotions may provide "major sources of energy for revolutionary change" (Gersick 1991), they may also constrain cognition and performance in ways analogous to those of stress (Barr & Huff 1997, Driskell & Salas 1996).

Because episodic change requires both equilibrium breaking and transitioning to a newly created equilibrium, it is most closely associated with planned, intentional change. Intentional change occurs when "a change agent deliber-

ately and consciously sets out to establish conditions and circumstances that are different from what they are now and then accomplishes that through some set or series of actions and interventions either singularly or in collaboration with other people" (Ford & Ford 1995:543). And this is where Lewin comes into his own.

Lewin's ideas remain central to episodic change because they assume that inertia in the form of a quasi-stationary equilibrium is the main impediment to change (Schein 1996). Lewin's insight was that an equilibrium would change more easily if restraining forces such as personal defenses, group norms, or organizational culture were unfrozen. Schein's (1996) work suggests that unfreezing basically involves three processes: (*a*) disconfirmation of expectations, (*b*) induction of learning anxiety if the disconfirming data are accepted as valid and relevant (we fear that "if we admit to ourselves and others that something is wrong or imperfect, we will lose our effectiveness, our self-esteem, and maybe even our identity," p. 29), and (*c*) provision of psychological safety that converts anxiety into motivation to change.

Schein's (1996) work also suggests an updated understanding of what happens after unfreezing. Change occurs through cognitive restructuring in which words are redefined to mean something other than had been assumed, concepts are interpreted more broadly, or new standards of judgment and evaluation are learned. Thus, when Lewin persuaded housewives during World War II to serve kidneys and liver, he cognitively redefined their standards of what was acceptable meat by means of a process that mixed together identification with positive role models, insight, and trial-and-error learning. When unfreezing occurs and people are motivated to learn something, they tend to be especially attentive to ideas that are in circulation, a mechanism discussed later as "translation." Refreezing that embeds the new behavior and forestalls relapse is most likely to occur when the behavior fits both the personality of the target and the relational expectations of the target's social network.

Lewin also remains relevant to episodic change because his other five assumptions about change are compatible with its analytical framework. These five assumptions (Marshak 1993) are (*a*) linear assumption (movement is from one state to another in a forward direction through time); (*b*) progressive assumption (movement is from a lesser state to a better state); (*c*) goal assumption (movement is toward a specific end state); (*d*) disequilibrium assumption (movement requires disequilibrium); and (*e*) separateness assumption (movement is planned and managed by people apart from the system). Summarized in this form, Lewin's change model resembles "Newtonian physics where movement results from the application of a set of forces on an object" (Marshak 1993:412). Complexity theory is the least "Newtonian" of the several formulations associated with episodic change, and its continued development may broaden our understanding of episodic interventions. For example, com-

plexity theory implies that improved performance may at times be linked to the surrender of control, which is a very different image from one of attacking inertia through coercive means (e.g. Dunphy & Stace 1988).

Newer analyses relevant to episodic change suggest how difficult it is to unfreeze patterns but also that attempts at unfreezing start earlier than was previously thought. Both conclusions are the result of microlevel research on smoking cessation and weight loss by Prochaska and his colleagues (Grimley et al 1994, Prochaska et al 1992). They propose that when people are exposed to change interventions, they are at one of four stages: precontemplation, contemplation, action, and maintenance. Precontemplators are unaware of any need to change, whereas contemplators are aware that there is a problem and they are thinking about change but have not yet made a commitment. People can remain in the contemplation stage for long periods, up to two years in the case of smokers. Action, the stage most change agents equate with change, is the stage in which people actually alter their behaviors. In any change intervention, few people are in the action stage. In smoking cessation programs, for example, empirical findings suggest that only 15% of the smokers in any given worksite are ready for action.

The important result, in the context of episodic change, is the finding that most people who reach the action stage relapse and change back to previous habits three or four times before they maintain the newer sequence. Beer et al (1990:50) found several false starts in renewal efforts at General Products. This suggests that change is not a linear movement through the four stages but a spiral pattern of contemplation, action, and relapse and then successive returns to contemplation, action, and relapse before entering the maintenance and then termination stages. Relapse should be more common in discrete episodic change than in cumulative continuous change because larger changes are involved. What is interesting is that 85% of the relapsers return to the stage of contemplation, not to the stage of precontemplation. This means that they are closer to taking action again following relapse than change agents suspected. The fact that change passes through a contemplation stage also means that people are changing before we can observe any alterations in their behavior. This suggests that interventions may have value even when no action is observed.

Role of Change Agent in Episodic Change

The role of the change agent in episodic change is that of prime mover who creates change. Macy & Izumi (1993:245–50) list 60 work design changes made by prime movers in North American interventions. The steps by which people enact the role of prime mover (e.g. Kotter 1996, Nadler 1998) look pretty much the same. What is different in newer work is the demonstration that one can be a prime mover on a larger scale than in the past (Weisbord 1987). Many practitioners are focusing on larger gatherings (Axelrod 1992,

Dannemiller & Jacobs 1992) with more issues on the table for immediate action (e.g. Ashkenas & Jick 1992), concentrated in shorter periods of time (Torbert 1994). Large-scale change in very large groups is counterintuitive, since size and participation tend to be negatively related (e.g. Pasmore & Fagans 1992, Gilmore & Barnett 1992). Normally, large group settings induce stereotyping, decreased ownership of ideas, increased abstraction, and less willingness to express unique thoughts. The challenge for prime movers is to neutralize these tendencies. To do so requires that they abandon several traditional organizational development (OD) assumptions. Large-scale interventions rely less on action theory and discrepancy theory and more on systems theory; less on closely held, internal data generation and more on gathering data from the environment and sharing it widely; less on slow downward cascades and more on real-time analysis and decision making; less on individual unit learning and more on learning about the whole organization; less on being senior management driven and more on a mixed model of being driven by both senior management and the organization; less consultant centered and more participant centered; less incremental and more fundamental in terms of the depth of change (Bunker & Alban 1992).

There has also been an increasingly refined understanding of specific ways in which change agents can be effective prime movers. As Rorty (1989) observed, "a talent for speaking differently rather than for arguing well, is the chief instrument of cultural change" (p. 7). Language interventions are becoming a crucial means for agents to create change (e.g. Bate 1990, O'Connor 1995). Bartunek (1993) argues that to produce second-order change in a preexisting shared schema requires a strong alternative schema, presented clearly and persistently. Barrett et al (1995) demonstrate that changes symbolizing a successful revolution are basically interpretations that point to a new alignment of the triggers that initiated the revolutionary period.

Wilkof et al (1995) report on their attempt to intervene in the relationships between two companies in a difficult partnership. Their initial attempts to improve cooperation focused on feeding back problems from a traditional data collection. This failed and led to the discovery that although there were technical or structural solutions available, the actors could not agree because of a vast difference in cultural lenses and diametrically opposed interpretations of meaning. The consultant, therefore, changed her strategy. She began meeting independently with the actors from each organization. In the meetings she would meet each condemnation not with data or argument but with an alternative interpretation from the cultural lens of the other company. She calls the process "cultural consciousness raising." The authors underscore the importance of working with actors to interpret the actions of others not as technical incompetence but as behaviors that are consistent with a particular cultural purpose, meaning, and history.

CONTINUOUS CHANGE

The phrase "continuous change" is used to group together organizational changes that tend to be ongoing, evolving, and cumulative. A common presumption is that change is emergent, meaning that it is "the realization of a new pattern of organizing in the absence of explicit a priori intentions" (Orlikowski 1996:65). Change is described as situated and grounded in continuing updates of work processes (Brown & Duguid 1991) and social practices (Tsoukas 1996). Researchers focus on "accommodations to and experiments with the everyday contingencies, breakdowns, exceptions, opportunities, and unintended consequences" (Orlikowski 1996:65). As these accommodations "are repeated, shared, amplified, and sustained, they can, over time, produce perceptible and striking organizational changes" (p. 89). The distinctive quality of continuous change is the idea that small continuous adjustments, created simultaneously across units, can cumulate and create substantial change. That scenario presumes tightly coupled interdependencies. When interdependencies loosen, these same continuous adjustments, now confined to smaller units, remain important as pockets of innovation that may prove appropriate in future environments.

Basic Metaphors: Organizing for Continuous Change

The metaphor of organization that is implicit in conceptualizations of continuous change is not the reciprocal of metaphors associated with episodic change. The dynamics are different, as would be expected from a shift to a more micro perspective and to the assumption that everything changes all the time (Ford & Ford 1994). From closer in, the view of organization associated with continuous change is built around recurrent interactions as the feedstock of organizing, authority tied to tasks rather than positions, shifts in authority as tasks shift, continuing development of response repertoires, systems that are self-organizing rather than fixed, ongoing redefinition of job descriptions, mindful construction of responses in the moment rather than mindless application of past responses embedded in routines (Wheatley 1992:90), and acceptance of change as a constant. Although these properties may seem prescriptive rather than descriptive and better suited to describe the "ideal organization" than the "basic metaphor," they are straightforward outcomes when people act as if change is continuous, organizing constitutes organization, and stability is an accomplishment.

Images of organization that are compatible with continuous change include those built around the ideas of improvisation, translation, and learning. The image of organization built around improvisation is one in which variable inputs to self-organizing groups of actors induce continuing modification of work practices and ways of relating. This image is represented by the state-

ment that change "is often realized through the ongoing variations which emerge frequently, even imperceptibly, in the slippages and improvisations of everyday activity" (Orlikowski 1996:88–89). Improvisation is said to occur when "the time gap between these events [of planning and implementation] narrows so that in the limit, composition converges with execution. The more improvisational an act, the narrower the time gap between composing and performing, designing and producing, or planning and implementing" (Moorman & Miner 1998a). Empirically, Moorman & Miner (1998b) found that improvisation often replaced the use of standard procedures in new product development and, in the presence of developed organizational memory, had positive effects on design effectiveness and on cost savings. Orlikowski (1996), in her study of changes in an incident tracking system, found repeated improvisation in work practices that then led to restructuring. Similar descriptions are found in Crossan et al (1996), Brown & Eisenhardt (1997), and Weick (1993).

The image of organization built around the idea of translation is one of a setting where there is continuous adoption and editing (Sahlin-Andersson 1996) of ideas that bypass the apparatus of planned change and have their impact through a combination of fit with purposes at hand, institutional salience, and chance. The idea that change is a continuous process of translation derives from an extended gloss (Czarniawska & Sevon 1996) of Latour's observation that "the spread in time and place of anything—claims, orders, artefacts, goods—is in the hands of people; each of these people may act in many different ways, letting the token drop, or modifying it, or deflecting it, or betraying it or adding to it, or appropriating it" (Latour 1986:267). The controlling image is the travel of ideas and what happens when ideas are turned into new actions in new localities (Czarniawska & Joerges 1996). Translation is not a synonym for diffusion. The differences are crucial. The impetus for the spread of ideas does not lie with the persuasiveness of the originator of the idea. Instead, the impetus comes from imitators and from their conception of the situation, their self-identity and others' identity, and their analogical reasoning (Sevon 1996). The first actor in the chain is no more important than the last; ideas do not move from more saturated to less saturated environments; it is impossible to know when the process concludes, since all ideas are in the air all the time and are implemented depending on the purpose at hand (Czarniawska & Joerges 1996). A match between a purpose and an idea does not depend on inherent properties of the idea. Instead, it is assumed that "most ideas can be proven to fit most problems, assuming good will, creativity, and a tendency to consensus" (p. 25). Thus, the act of translation creates the match.

The image of organization built around the idea of learning is one of a setting where work and activity are defined by repertoires of actions and knowledge and where learning itself is defined as "a change in an organization's response repertoire" (Sitkin et al 1998). What this adds to the understanding of

continuous change is the idea that it is a range of skills and knowledge that is altered rather than a specific action, as well as the idea that a change is not just substitution but could also include strengthening existing skills. A change in repertoire is also a change in the potential for action, which means action may not be manifest at the time of learning (Pye 1994). To specify learning in terms of a response repertoire is also to specify a mechanism by which change is retained (Moorman & Miner 1997). Other retention-learning mechanisms discussed in the literature include organizational routines (March 1994), know-how embedded in communities of practice (Brown & Duguid 1991), distributed memory (Wegner 1987), distributed information processing systems (Tsoukas 1996), structures of collective mind (Weick & Roberts 1993), and organizational memory (Walsh & Ungson 1991). Summaries of recent work on organizational learning can be found in Huber (1991), Miller (1996), Easterby-Smith (1997), Mirvis (1996), and Lundberg (1989).

In each of these three images, organizations produce continuous change by means of repeated acts of improvisation involving simultaneous composition and execution, repeated acts of translation that convert ideas into useful artifacts that fit purposes at hand, or repeated acts of learning that enlarge, strengthen, or shrink the repertoire of responses.

Analytic Framework: The Continuous Change Process

The following description summarizes the analytic framework of continuous change:

> Each variation of a given form is not an abrupt or discrete event, neither is it, by itself discontinuous. Rather, through a series of ongoing and situated accommodations, adaptations, and alterations (that draw on previous variations and mediate future ones), sufficient modifications may be enacted over time that fundamental changes are achieved. There is no deliberate orchestration of change here, no technological inevitability, no dramatic discontinuity, just recurrent and reciprocal variations in practice over time. Each shift in practice creates the conditions for further breakdowns, unanticipated outcomes, and innovations, which in turn are met with more variations. Such variations are ongoing; there is no beginning or end point in this change process. (Orlikowski 1996:66)

Implicit in that description are several important processes, including change through ongoing variations in practice, cumulation of variations, continuity in place of dramatic discontinuity, continuous disequilibrium as variations beget variations, and no beginning or end point. What is less prominent in this description are key properties of episodic change, such as inertia, triggers, and replacement. Continuous change could be viewed as a series of fast mini-episodes of change, in which case inertia might take the form of tendencies to normalization (Vaughan 1996) or competency traps (Levinthal & March

1993). Triggers to change might take the form of temporal milestones (Gersick 1989, 1994) or dissonance between beliefs and actions (Inkpen & Crossan 1995). Replacements might take the form of substituting expert practices for practices of novices (Klein 1998). But the more central issues in the case of continuous change are those of continuity and scale.

Issues of continuity are associated with the concept of organizational culture (Trice & Beyer 1993). Culture is important in continuous change because it holds the multiple changes together, gives legitimacy to nonconforming actions that improve adaptation and adaptability (Kotter & Heskett 1992), and embeds the know-how of adaptation into norms and values (O'Reilly & Chatman 1996). Culture as the vehicle that preserves the know-how of adaptation is implied in this description: "If we understand culture to be a stock of knowledge that has been codified into a pattern of recipes for handling situations, then very often with time and routine they become tacit and taken for granted and form the schemas which drive action" (Colville et al 1993:559). Culture, viewed as a stock of knowledge, serves as a scheme of expression that constrains what people do and a scheme of interpretation that constrains how the doing is evaluated. To change culture is to change climate (e.g. Schneider et al 1996), uncover the tacit stock of knowledge by means of experiments that surface the particulars (Colville et al 1993), or deconstruct organizational language paradigms (Bate 1990). Although culture has been a useful vocabulary to understand stability and change, there are growing suggestions that as one moves away from treating it as a social control system, the concept may become less meaningful (Jordan 1995).

The separate issue of scale arises because continuous changes in the form of "situated micro-level changes that actors enact over time as they make sense of and act in the world" (Orlikowski 1996:91) are often judged to be too small, too much a follower strategy (Huber & Glick 1993:385), and even too "unAmerican" (Hammond & Morrison 1996:Ch. 3) to be of much importance when hyperturbulence and quantum change confront organizations (Meyer et al 1993).

The analytical framework associated with continuous change interprets scale in a different way. The fact that the changes are micro does not mean that they are trivial (Staw & Sutton 1993, Staw 1991). Representative of this view is Ford & Ford's (1995) observation, "The macrocomplexity of organizations is generated, and changes emerge through the diversity and interconnectedness of many microconversations, each of which follows relatively simple rules" (p. 560). Small changes do not stay small, as complexity theory and the second cybernetics (Maruyama 1963) make clear. Small changes can be decisive if they occur at the edge of chaos. Furthermore, in interconnected systems, there is no such thing as a marginal change, as Colville et al (1993) demonstrated in their study of small experiments with culture change at British Customs. Microlevel changes also provide the platform for transformational

change and the means to institutionalize it. Depictions of successful revolutions, however, tend to downplay the degree to which earlier sequences of incremental changes made them possible. This oversight is serious because people tend to attribute the success of revolution to its break with the past and its vision of the future, whereas that success may actually lie in its connection with the past and its retrospective rewriting of what earlier micro-changes meant.

In conclusion, the basic analytical framework for continuous change assumes that revolutions are not necessary to shatter what basically does not exist. Episodic change is driven by inertia and the inability of organizations to keep up, while continuous change is driven by alertness and the inability of organizations to remain stable. The analytic framework for continuous change specifies that contingencies, breakdowns, opportunities, and contexts make a difference. Change is an ongoing mixture of reactive and proactive modifications, guided by purposes at hand, rather than an intermittent interruption of periods of convergence.

Ideal Continuous Organizations

The "ideal organizations" described above in the context of episodic change serve just as well as ideals for continuous change, since those ideals incorporate capabilities for both forms of change. Thus, that discussion is compatible with the metaphors and analytical framework for continuous change.

Intervention Theory in Continuous Change

Lewin's change model, with its assumptions of inertia, linearity, progressive development, goal seeking, disequilibrium as motivator, and outsider intervention, is relevant when it is necessary to create change. However, when change is continuous, the problem is not one of unfreezing. The problem is one of redirecting what is already under way. A different mindset is necessary, and Marshak (1993) has suggested that one possibility derives from Confucian thought. The relevant assumptions are (*a*) cyclical assumption (patterns of ebb and flow repeat themselves), (*b*) processional assumption (movement involves an orderly sequence through a cycle and departures cause disequilibrium), (*c*) journey assumption (there is no end state), (*d*) equilibrium assumption (interventions are to restore equilibrium and balance), (*e*) appropriateness assumption (correct action maintains harmony), and (*f*) change assumption (nothing remains the same forever).

In the face of inertia, it makes sense to view a change intervention as a sequence of unfreeze, transition, refreeze. But in the face of continuous change, a more plausible change sequence would be freeze, rebalance, unfreeze. To freeze continuous change is to make a sequence visible and to show patterns in what is happening (e.g. Argyris 1990). To freeze is to capture sequences by means of cognitive maps (Fiol & Huff 1992, Eden et al 1992, Cossette &

Audet 1992), schemas (Bartunek 1993, Tenkasi & Boland 1993), or war stories (Boje 1991, O'Connor 1996). To rebalance is to reinterpret, relabel, and resequence the patterns so that they unfold with fewer blockages. To rebalance is to reframe issues as opportunities (Dutton 1993), reinterpret history using appreciative inquiry (e.g. Cooperrider & Srivasta 1987, Hammond 1996), to differentiate more boldly among "the external world, the social world, and the world of inner subjectivity" (Thachankary 1992:198), or to be responsive to concerns about justice (Novelli et al 1995). Thus, a story of intense but unproductive meetings is rewritten as a story affirming the value of "corporateness" in an international nonprofit organization (Thachankary 1992:221). Finally, to unfreeze after rebalancing is to resume improvisation, translation, and learning in ways that are now more mindful of sequences, more resilient to anomalies, and more flexible in their execution.

An important new means of rebalancing continuous change is the use of a logic of attraction, which is the counterpart of the logic of replacement in episodic change. As the name implies, people change to a new position because they are attracted to it, drawn to it, inspired by it. There is a focus on moral power, the attractiveness or being state of the change agent, the freedom of the change target, and the role of choice in the transformational process. Kotter (1996) asks the question, is change something one manages or something one leads? To manage change is to tell people what to do (a logic of replacement), but to lead change is to show people how to be (a logic of attraction). RE Quinn (1996) argues that most top managers assume that change is something that someone with authority does to someone who does not have authority (e.g. Boss & Golembiewski 1995). They overlook the logic of attraction and its power to pull change.

To engage this logic of attraction, leaders must first make deep changes in themselves, including self-empowerment (Spreitzer & Quinn 1996). When deep personal change occurs, leaders then behave differently toward their direct reports, and the new behaviors in the leader attract new behaviors from followers. When leaders model personal change, organizational change is more likely to take place. A similar logic is implicit in Cohen & Tichy's (1997) recent emphasis on top managers developing a teachable point of view. Leaders who first consolidate their stories and ideas about what matters undergo personal change before organizational change is attempted. Subsequent organizational change is often more effective because it is led by more attractive leaders. Beer et al (1990:194–95) raise the interesting subtlety, based on their data, that inconsistency between word and action at the corporate level does not affect change effectiveness, but it does have a negative effect for leaders at the unit level. Their explanation is that inconsistency at the top is seen as necessary to cope with diverse pressures from stockholders and the board but is seen as insincerity and hypocrisy at other levels.

Role of Change Agent in Continuous Change

If continuous change is altered by freezing and rebalancing, then the role of the change agent becomes one of managing language, dialogue, and identity, as we saw above. Change agents become important for their ability to make sense (Weick 1995) of change dynamics already under way. They recognize adaptive emergent changes, make them more salient, and reframe them (Bate 1990). They explain current upheavals, where they are heading, what they will have produced by way of a redesign, and how further intentional changes can be made at the margins.

To redirect continuous change is to be sensitive to discourse. Schein (1993) argues that dialogue, which he defines as interaction focused on thinking processes and how they are preformed by past experience, enables groups to create a shared set of meanings and a common thinking process. "The most basic mechanism of acquiring new information that leads to cognitive restructuring is to discover in a conversational process that the interpretation that someone else puts on a concept is different from one's own" (Schein 1996:31). Barrett et al (1995) and Dixon (1997) also argue that the most powerful change interventions occur at the level of everyday conversation. J Quinn (1996) demonstrates in the context of strategic change that good conversation is vocal, reciprocating, issues-oriented, rational, imaginative, and honest. And Ford & Ford (1995) argue that change agents produce change through various combinations of five kinds of speech acts: assertives or claims, directives or requests, commissives or promises, expressives that convey affective state, and declarations that announce a new operational reality. These speech acts occur in different combinations to constitute four different conversations: conversations of change, understanding, performance, and closure.

CONCLUSION

Our review suggests both that change starts with failures to adapt and that change never starts because it never stops. Reconciliation of these disparate themes is a source of ongoing tension and energy in recent change research. Classic machine bureaucracies, with their reporting structures too rigid to adapt to faster-paced change, have to be unfrozen to be improved. Yet with differentiation of bureaucratic tasks comes more internal variation, more diverse views of distinctive competence, and more diverse initiatives. Thus, while some things may appear not to change, other things do. Most organizations have pockets of people somewhere who are already adjusting to the new environment. The challenge is to gain acceptance of continuous change throughout the organization so that these isolated innovations will travel and be seen as relevant to a wider range of purposes at hand.

Recent work suggests, ironically, that to understand organizational change one must first understand organizational inertia, its content, its tenacity, its interdependencies. Recent work also suggests that change is not an on-off phenomenon nor is its effectiveness contingent on the degree to which it is planned. Furthermore, the trajectory of change is more often spiral or open-ended than linear. All of these insights are more likely to be kept in play if researchers focus on "changing" rather than "change." A shift in vocabulary from "change" to "changing" directs attention to actions of substituting one thing for another, of making one thing into another thing, or of attracting one thing to become other than it was. A concern with "changing" means greater appreciation that change is never off, that its chains of causality are longer and less determinate than we anticipated, and that whether one's viewpoint is global or local makes a difference in the rate of change that will be observed, the inertias that will be discovered, and the size of accomplishments that will have been celebrated.

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