2.16   Radical Organizational Change

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Introduction

Understanding organization change is, today, a central question within organization theory. It was not always so. Prior to the 1970s, change was rarely an explicit concern. Instead, most perspectives on organizations assumed change *per se* to be of modest importance and not particularly difficult to accomplish. Partly, lack of concern with change was because organizational contexts and strategies were relatively stable, making change unnecessary.

Today, it is commonplace to note that the volatility of changes confronting organizations has dramatically increased. Consequently, greater attention is given to understanding two kinds of change. First, there is the traditional concern with how organizations can remain flexible and adaptive, constantly adjusting to shifts in market opportunities. The second concern is variously labelled 'radical', 'archetypal', 'divergent' or 'quantum' change and focuses upon whether, and how, an organization can move from one organizational form to another. This chapter is concerned with radical change.

Prior to the mid-1980s, theories of radical organizational change were rare, if non-existent, with the exception of the organization life-cycle model (Greiner 1972; Kimberly and Miles 1980; Quinn and Cameron 1983). Most theories of change were about organizational development or organizational adaptation. Organizational development is about improving an existing organizational form and focuses upon processes inside the organization, emphasizing team building, inter-personal communication and facilitative management (cf, Burke 2002). It fits more comfortably with change portrayed as flexibility.

Despite the absence of formal theories, we still learned about change, but from within the basic perspectives of organization theory. Structural-contingency theory, resource-dependence theory, institutional theory, population ecology theory and so forth each said something about change. Section II reviews these theories and their contribution to our understanding of change. The intention is to outline the theory, not provide a detailed and comprehensive review. One organization theory – network theory – does not neatly fit this historical ordering because it did not really develop until *after* our pivotal date of the mid-1980s even though its origins were earlier. Nevertheless, we include it in Section II because it more closely resembles the stance of the basic theoretical perspectives in that it is not *per se* a theory of change.

We note two shifts in emphasis from the 1960s through the 1970s. The 1960s imagined change as non-problematical. Structural-contingency theory and strategic choice theory, the early dominant approaches, hardly discussed change and assumed it would happen when necessary. The behavioural theory of the firm took a less sanguine stance, but still emphasized organizational adaptation. Towards the late 1970s, change became seen as problematical. Resource-dependency theory, configuration theory, institutional theory and ecological theory, each highlighted obstacles hindering change. There was also a shift in focus from the organization to populations or networks of organizations. These later theories outlined how the embeddedness of organizations in their contexts ('fields') seriously impeded organizational change. From about 1977 onwards, then, organizational theories portrayed change as problematical and adopted an inter-organizational level of analysis. In an important way, however, the theories differed. Structural-contingency theory, institutional theory and ecological theory saw organizations responding to contextual dynamics. Organizations were reactive, environments determinant. Resource-dependence and strategic choice theories emphasized how organizations could shape, even dominate, their environments.

The shift in level of analysis from the organization to the field raised a very different question about change. Most studies of change frame the question as whether and why *an* organization can change organizational forms. However, there is another question: what determines the choice-set of organizational forms?

From the mid-1980s, freestanding theories of organizational change appeared. Some, such as punctuated-equilibrium theory, began with an overall framework, albeit in skeletal form. Later work then filled in the framework, elaborating its component stages and dynamics. Other theories, such as neo-institutional theory, were constructed retrospectively from studies that aggregate into a theory of change. Section III looks at three theories of change, roughly in the order in which they appeared: punctuated-equilibrium theory, continuity and change theory and neo-institutional theory. All three show debts to the theories reviewed in Section II.

Theories of Organizations: 1960–1985

Structural-Contingency Theory

Structural-contingency theory (S/C theory) evolved from two sets of studies, each a response to Weber's analysis of bureaucracy. One set explored whether bureaucracy was the universal, rationally efficient model. These studies showed the bureaucracy to be 'contingent' upon task uncertainty and organizational size (e.g. Burns and Stalker 1961; Woodward 1965). The second set (e.g. Pugh et al. 1969) questioned whether the component dimensions of bureaucracy are characteristic of all formal organizations, or whether multiple configurations exist. Both sets of studies concluded that there are multiple organizational forms and that their effectiveness depends upon their 'fit' with their context (see Drazin and Van de Ven 1985; Doty et al. 1993; Gresov and Drazin 1997).

The 'contingencies' that determine the appropriateness of organizational form include the extent of environmental uncertainty, organizational size, extent of diversification and the routineness of the tasks performed. The importance of 'fit' between an organization and its market context was the dominant perspective from the 1960s until the mid-1970s (Pennings 1992) and still engages research into organizations (e.g. Gooderham et al. 1999; Donaldson 2001; Siggelkow 2002).

S/C Theory and Change

Structural contingency theory has an implicit theory of change. Organizations out of alignment with their context will move to gain to a better fit. Otherwise, the organization will perform poorly. In this sense:

> Contingencies determine structure. Organizations change their structures to fit the existing level of their contingency factors, such as size or diversification, in order to avoid performance loss from misfit (Donaldson 2001: 136).

Note that, according to this approach, change can be triggered by exogenous (environmental uncertainty) or endogenous (size: task uncertainty) factors. However, organizations do respond. As an organization increases in size it will 'become' more formalized. If the environment becomes more uncertain, an organization will 'become' more flexible. As such, S/C theory assumes decisive action by leaders, but the CEO has minimal discretion over choice of organizational form. CEOs are switching agents, aligning organizations to their contexts.

Further, change is non-problematical:

> Because the fit of organizational characteristics to contingencies leads to high performance, organizations seek to obtain fit. For this reason, organizations are motivated to avoid the misfit that results after contingencies change, and do so by adopting new organizational characteristics that fit the new levels of the contingencies (Donaldson 2001: 2).

The assumption that change is non-problematical is inconsistent with several works that Donaldson uses as theoretical building blocks. Burns and Stalker (1961), for example, describe 'pathological systems' which prevent realignment because of the political activities of groups within an organization and because managerial understanding is constrained by their cognitive belief systems.

Strategic Choice

S/C theory developed in two directions. First, Child (1972) developed strategic choice theory, challenging the idea that organizations are determined by their contingencies and that executives have minimal

.... designing their organizations. Child drove home the point that organizations could choose not to adapt. Donaldson (2001: 135; see also 1997) disagrees: 'the best evidence to date disconfirms strategic choice and argues that it is mostly false, so that the extent of choice over structure is, at most, limited'. The logic of Donaldson's critique is consistent with influential studies by Chandler (1962) who traced the evolution of the M-form structure (see also Whittington et al. 1999).

Configuration Theory

The second development of S/C theory was 'configuration theory' (see Miller and Friesen 1980; 1982; 1984; Miller 1981; 1982). This theory builds upon the taxonomic approaches of Pugh et al. (1969) and was a response to the simplicity of S/C theory (e.g. its inability to explain how organizations might respond to inconsistent contingencies or the possibility of 'equifinality' (Drazin and Van de Ven 1985). The central idea is that strategies, structures and processes should be considered holistically, rather than variable-by-variable. Strategies and structures are underpinned by 'orchestrating themes' that provide 'the driving character of an enterprise' (Miller 1996: 506–7). Organizations with closely aligned structures and processes gain advantages that are difficult to imitate (Miller 1996: 510). Examples of configuration theory include Mintzberg (1979; 1983) and Miles and Snow (1978).

Configuration Theory and Change

Miller's later work identifies 'momentum' and 'simplicity' as dynamics that work against change. 'Momentum', the tendency of organizations to sustain prevailing arrangements, is based upon two ideas: that configurations are held in place by their interdependent 'mutually supportive' parts (Miller and Friesen 1984: 204); and that change is very disruptive and costly. 'Simplicity' is the process by which organizations develop an 'overwhelming preoccupation with a single goal, strategic activity, department, or world view' (Miller 1993: 117). We interpret this to mean that the 'orchestrating theme' of a configuration becomes amplified to the point where the organization becomes imbalanced and unable to function effectively.

Simplicity and momentum converge upon the same point. Configurations are dynamic, constantly amplifying their orchestrating theme. Siggelkow

(2001; 2002) provides case studies of these processes, tracing how organizations *reinforce* core elements by adding new 'core' and 'elaborating' elements. There is, thus, an active reproduction of an organization's current trajectory: 'configurations seem to act as *vortex-like force fields* that progressively specialize and align values and behaviour' (Miller 1993: 130, emphasis added). Although these are general processes, the intensity of momentum and simplicity varies. Highly successful organizations are prone to their effect. The 'march towards simplicity' is 'especially prevalent' in stable settings (Miller et al. 1996). For us, the key point is that simplicity and momentum are theoretical *dynamics* militating against radical change.

Configuration theory 'remains undeveloped' (Miller 1996: 506). Nevertheless, it contributed three important insights. First, organizational forms are not assemblages of structures and processes that can be easily discarded or rearranged. On the contrary, changes constitute 'reversals in *the thrust* of organizational evolution' (Miller and Chen 1994: 1, emphasis added). This depiction contrasts with the static imagery of S/C theory. Secondly, multiple 'factors' contribute to the dynamics of momentum and simplicity and collectively work against change. These factors operate at the levels of the individual, organization and industry. In this sense, configuration theory cautions against seeing the difficulties of change as simply the need to overcome disaffected individuals or the cognitive blindness of executives. Thirdly, Miller and Friesen provide an early expression of the *periodicity* of the change process, foreshadowing the punctuated-equilibrium model. Organizational histories 'demonstrate two extremes: periods of momentum in which no, or almost no trend is reversed; and dramatic periods of reversal, in which very many trends are reversed' (Miller and Friesen 1984: 206). As becomes evident later, configuration theory was also adopted by neo-institutional approaches to change.

The Behavioural Theory of the Firm

Unlike structural-contingency theorists, who sought to understand which organizational forms matched which contingent situations, Cyert and March (1963) were concerned with *how* organizations adapt to their environments. They explored the behavioural routines by which alignment is achieved. They

conceptualized organizations as information processing systems and identified the routines that decision-makers use to cope with ambiguous streams of information. One routine is that decisions are activated by performance problems ('problemistic search'). Executives act only when performance falls below historical or socially defined aspirations. Solutions to performance shortfalls are generated through other routines. For example, complex problems are split into sub-problems and assigned to sub-units, such as marketing or production departments, which apply their understanding ('local rationality') to the sub-problem. Consequently, solutions may be sub-optimal from the perspective of the organization as a whole. Further, solutions are sought 'in the neighbourhood of the current alternatives' (Cyert and March 1963: 121), implying that current approaches are usually retained. These decision rules highlight how decisions are dependent on organizational histories.

Cyert and March also emphasize that attention to problems is *sequential*, focusing upon one issue at a time, depending upon the current urgency of any given problem. The direction of change, moreover, is driven by the 'dominant coalition's' *interpretation* of goals and performance. Consequently, 'bias' arises from the 'special training or experience' and the 'hopes and expectations' of influential executives (Cyert and March 1963: 122).

The Behavioural Theory and Change

As initially expressed, the behavioural theory of the firm shared features with structural-contingency theory and strategic-choice theory. The focus was upon the organization's alignment with its context and performance depended upon achieving that alignment. CEOs and senior management are pivotal in shaping an organizational response. And, whilst recognizing the politics of decision-making and thus the likelihood of resistance, adaptation to shifting circumstances is normal:

> Organizations change. Although they often appear resistant to change, they are *frequently* transformed into forms remarkably different from the original (March 1981: 563, emphasis added).

Moreover, the process of change is evolutionary rather than dramatic:

> Most change in organizations results neither from extraordinary processes nor forces, nor from

uncommon imagination, persistence or skill, but from relatively stable, routine processes that relate organizations to their environments (March 1991: 78).

The theory, in other words, emphasizes experiential learning and much subsequent work confirmed these learning processes (e.g. Lant and Mezias 1990; Lant 1992). Nevertheless, much of March's work emphasizes the *difficulties* of organizational learning (e.g. Levinthal and March 1993). As Denrell and March (2001: 527) observe, 'a behavioural model of organizational learning produces a bias against risky and new alternatives'. Lant et al. (1992) and Gordon et al. (2000) found radical change is much rarer than convergent adaptation.

Greve (1995; 1996; 1998) examined whether change is driven by performance feedback. He proposes that change is a function of three factors: *motivation* (driven by performance feedback); *capability* (i.e. whether the organization has experience of changing); and *opportunity* (i.e. whether decision-makers can find attractive alternatives to current arrangements). Later, Greve (2003) added the interesting idea that managers avoid organizationally risky solutions, such as mergers that involve organizational restructuring, in favour of strategies that involve financial risk without organizational upheaval.

A different set of recent studies is revisiting the role of organizational routines (e.g. Pentland and Rueter 1994; Pentland 1995; Feldman and Rafaeli 2002; Feldman 2003). These studies are notable because they portray routines not as mechanisms of constraint and thus inertia, but of experimentation that enable learning and adaptation. Feldman and Pentland (2003), in a formal expression of this theory, distinguish 'ostensive' (the abstract idea) and performative aspects (implementation) of routines. Ostensive structures shape how a routine is to be implemented, but actors necessarily 'fill-in' its details. Routines thus constrain actions, but actions may modify the routine. Whether such 'improvisations' (Weick 1995; Moorman and Miner 1998) can add up to radical change is not yet clear. Indeed, Feldman (2003) elaborates the stabilizing effect of routines, showing how they enable 'understandings' of existing organizational purposes. Nevertheless, the focus upon how day-to-day human actions invoke reflexity and change is an important correction to the dominant imagery in organization theory of change as extraordinary. As Tsoukas and Chia (2002: 576) put it, 'Change is all there is'.

Behavioural/learning theory provides several insights. First, it emphasizes that the firm's history, encoded in its routines, shapes and reproduce its responses. As such, it connects to Pettigrew's theory of continuity and change. Secondly, it elaborates the routines used by organizations as they seek alignment with their context and explains why radical change occurs less frequently than convergent change. Thirdly, it gives greater precision to *why* change happens, identifying the importance of aspiration defined performance feedback. Finally, the theory underlines that organizational adaptation is *dynamic*, an ongoing consequence of organizational learning.

Resource Dependency Theory

Resource dependence (R/D) theory (Pfeffer and Salancik 1978; Aldrich 1979) emphasizes three features of organizational life. Firstly, a focus upon *resources*: raw materials, capital, information, authority or other inputs needed for organizational operations. Secondly, an emphasis upon context as *a network of other organizations*:

> The major factors that organizations must take account of in their environments are other organizations. Organizations control the flow of capital, personnel, information, and other essential resources through a social system and they represent concentrations of resources that administrators cannot ignore (Aldrich 1979: 265).

Thirdly, organizations seek to *avoid* becoming over-dependent on other organizations whilst *exploiting* situations where other organizations are dependent upon them. Organizations seek to influence and *dominate* their resource environment, not simply *adapt* to it. Thus, the composition of boards of directors, the choice of alliance partners or acquisition targets are responses to resource dependencies. Noticeably, these decisions are about connections with other organizations. As Pfeffer (2003: xii) later pointed out: 'the (1978) book is filled with network and relationship imagery', which, at the time of the initial theoretical statement, was much less prevalent than it is today.

Despite outlining the possibility of adaptation, the R/D model directs attention to how organizations influence their context, partly in response to the (then) prevailing S/C theory, which emphasized adaptation. However, Aldrich pointed out that large corporations can engage in environmental domination but most organizations are too small to do so (Aldrich 1979: 112). Managers make choices within constraints and may seek to 'manage' those constraints, but for the most part, says Aldrich, they adapt to them. Pfeffer (2003: xii), in contrast, is clear that a central assumption of the R/D model, as initially formulated, was that:

> Organizations possessed both the desire and, occasionally, the ability to negotiate their positions within those constraints using a variety of tactics. In other words, Salancik and I argued that strategic choice was both possible (Child 1972) and sometimes, although not inevitably, efficacious …".

Resource Dependence and Change

The R/D theory of change is that misalignment between an organization and its environment produces performance decline. Misalignment is usually the result of an exogenous shift. As a consequence, there is pressure to replace incumbent CEOs, whose functional backgrounds ill-equip them to handle the new dependencies, and the board of directors. That is, performance failure allows the ascendance of executives better able to cope with changed circumstances. Pfeffer and Salancik's theory thus builds upon the 'strategic contingencies' theory of power (Hickson et al. 1971), which asserts that power within an organization will be held by the group best able to manage the critical external challenge ('dependency') confronting the organization. The logic is that as the critical dependency changes, so, too, will the distribution of *intra*-organizational power. These changes, if made, trigger change in organizational form.

There are three insights provided by the R/D model. Firstly, it recognizes that organizations attempt to control their contexts. This is perhaps the central contribution of the theory. It is surprising, therefore, that 'much of the empirical work has focused on the relationship between resource dependence and organizational decisions that might be construed as being made in response to dependence, such as efforts to absorb or co-opt constraint' (Pfeffer 2003: xvi–xvii). Particular empirical attention has been given to board interlocks, exploring how far organizations co-opt representatives from organizations on which they are dependent (e.g. Boeker and Goodstein 1991; Hillman et al. 2000). Other studies show how changes in personnel lead to shifts in organizational form (e.g. Kraatz and Moore 2002; Rao and Drazin 2002). Ocasio and Kim (1999) found support for this circulation of power thesis, suggesting that performance failures *do* lead to executive succession. However, they also show that replacing the CEO may *not* lead to change in organizational form.

Although R/D theory explicitly acknowledges that organizations can act individually or collectively, studies of organizations acting *collectively* are rare (e.g. Baum and Ingram 1998). Pfeffer (2003) is especially disappointed that attempts to intervene in the public policy process have not been studied. Notable exceptions include Dobbin and Dowd (1997; 2000) and Perrow (2002).

Secondly, the R/D model connects exogenous shifts to two intra-organizational dynamics: the cognitive frames of senior executives; and the distribution of power between functional groups. The importance of cognitive frames as constraints on sensemaking and issue diagnosis is only hinted at in the R/D model but later became a central theme within organization theory. Pfeffer and Salancik thus anticipated the importance of cognitive frames both in deterring change and in shaping the direction that change might take. The distribution of power explains why only *some* organizations respond to exogenous shifts and why organizations might shift in one direction rather than another.

Thirdly, although R/D theory focuses upon the economic context, it introduces the importance of regulatory structures. It is important not to overly credit R/D as fully recognizing the institutional context, and it is probably fair to conclude that Pfeffer and Salancik were particularly cognizant of *formal* rules and regulations, much as specified by North (1990). Nevertheless, and unlike S/C theory, which assumes the market context as 'out there', R/D theory acknowledges the interaction of market and regulatory structures.

Neoinstitutional Theory

1977 was a good year for organization theory. It heralded two new perspectives, neoinstitutional theory and population ecology, that opened novel ways of understanding organizations. Both perspectives made important and explicit statements about organizational change. Both, moreover, operate at the field or industry level of analysis, which has remained the dominant approach in organization theory.

Neoinstitutional theory (see Lawrence and Suddaby, this volume) began with Meyer and Rowan's (1977) observation that, within any given sector or industry, organizations use similar organizational forms. Meyer and Rowan explain this observation by pointing to the influence of the social context within which organizations are embedded. That context contains 'powerful institutional rules' that define appropriate and acceptable forms of organizing.

> That is, organizations are driven to incorporate the practices and procedures defined by prevailing rationalized concepts of organizational work and institutionalized in society. Organizations that do so increase their legitimacy and their survival prospects, independent of the immediate efficacy of the acquired practices and procedures (Meyer and Rowan 1977: 41).

In effect, Meyer and Rowan alerted theorists to the fact that organizations are not simply production systems, functioning in an environment comprised of suppliers, consumers and competitors, but social and cultural systems embedded within an 'institutional' context, comprising the state, professions, interest groups and public opinion.

Typically, institutional accounts describe *field-level* processes. Fields are 'a community of organizations that partakes of a common meaning system and whose participants interact more frequently and fatefully with one another than with actors outside the field' (Scott 1995: 56). Organizational fields are ordered through 'institutional logics' (Friedland and Alford 1991), i.e. socially constructed rules, norms and beliefs constituting field membership, role identities and patterns of appropriate conduct. Logics, conveyed through regulatory, normative and cognitive processes, shape how actors interpret reality and define the scope of socially legitimate conduct.

Thus, organizations are embedded within an institutional context that defines a choice-set of appropriate organizational forms (Granovetter 1985). Adoption of these organizational forms reinforces a hegemony of ideas that connect to distributions of power and privilege within society.

Neoinstitutional Theory and Change

Contained within institutional theory is a process model of change, first explicated by Tolbert and Zucker (1983; for a later articulation, see Tolbert

and Zucker 1996). Tolbert and Zucker examined the diffusion of personnel reforms across municipalities in the US and suggested that institutionalization follows three stages: pre-institutionalization (habitualization), semi-institutionalization (objectification) and institutionalization (sedimentation). Habitualization is the emergence of behaviours specific to a problem. Although some imitation between organizations may occur, there is no sense of obligation to do so; on the contrary, behaviours are appraised for their pragmatic functionality (i.e. whether they work). Knowledge of a new organizational form, moreover, is restricted to small numbers of neighbouring organizations. Eventually, a social consensus emerges (objectification) over the value of a particular form, followed by increasing rates of adoption. In this semi-institutionalization stage, diffusion occurs because organizations mimic those perceived to be successful, but eventually the motivation to adopt shifts to a 'more normative base' (Tolbert and Zucker 1996: 183). That is, the more that a new form is adopted, the more it becomes regarded as an appropriate response and acquires cognitive legitimacy. Full institutionalization occurs when diffusion is almost universal and an organizational form has become taken-for-granted. Change may still occur, but would 'likely … require a major shift in the environment (e.g. long-lasting alterations in markets, radical change in technologies) which may then allow a set of social actors whose interests are in opposition to the structure to self-consciously oppose it or to exploit its liabilities' (Tolbert and Zucker 1996: 184). Hence, the model primarily explains convergent change, but hints at the possibility of radical change.

The advantage of focusing upon the organizational field, rather than the individual organization, which is the emphasis of S/C and R/D, is that doing so draws attention to the influence of social *and* technical influences upon communities of organizations. Another advantage is that institutional accounts of field-level processes encourage us to pay attention to the role of structuration. That is, organizations within a field are not only constrained by institutional structures, but, in their behaviours, act out and thus reproduce those structures, albeit sometimes imperfectly. The imagery then is of organizations dynamically responding to institutionalized expectations and, in so doing, amplifying and elaborating them. As fields mature, therefore, organizations get progressively locked into prevailing

practices. In some ways, these structuration processes mirror, at the field level, the intra-organizational dynamics of momentum and simplicity of configuration theory.

There are four insights from neo-institutionalized theory that we highlight. First, organizations are embedded in webs of social and cultural relationships that prescribe and proscribe appropriate organizational forms. Organizations are not free-floating islands of rationality nor units of political expediency; instead, they are seriously constrained by social expectations and the properties of legitimacy. Attempts to understand the emergence and adoption of organizational forms and/or the ability of organizations to move between forms has to take account of how institutionalized norms and values affect the choice-set available *and* choice processes. Secondly, neoinstitutional theory turns attention to the organizational field because it is at that level that institutional mechanisms are salient. In examining how or why individual organizations adapt to changing circumstances, it is necessary to understand how organizations are connected to and influenced by higher-level social structures. Thirdly, as already noted, neoinstitutional theory contains a process model of convergent change, which, as we show later, can become part of a broader model of radical *and* convergent change. Finally, there is recognition that institutionalized structures embody patterns of power and privilege. Underlying an apparently stable set of social relations are subjugated interests that can surface under appropriate circumstances. Neoinstitutional theory, in other words, has a paradoxical blend of processes converging towards equilibrium and internal contradictions that hint at radical possibilities.

Ecological Theories

Population ecology appeared at the same time as neoinstitutional theory and rapidly developed into one of the most rigorous approaches within organization theory (Baum and Shipolov, this volume). As initially developed (Hannan and Freeman 1977; Aldrich 1979) it was in the lineage of S/C theory. Thus, it was concerned with the multiplicity of organizational forms and regarded organizational survival as the product of fit between form and, primarily, market forces. However, the theory is distinctive in two ways: it focuses upon populations of organizations; and it challenges the view that

organizations can adapt by changing from one organizational form to another.

The basic idea of ecological theory runs as follows. There are many populations of organizations, each distinguished by a particular organizational form. In early formulations of population ecology, organizational form was defined *theoretically* as:

> … A blueprint for organizational action, for transforming input. The blueprint can usually be inferred … by examining any of the following: (1) the structure of the organization in the narrow sense – tables of organization, written rules of operation, etc.; (2) the patterns of activity within the organization – what actually gets done by whom; or (3) the normative order – the ways of organizing that are defined as right and proper by both members and relative sectors of the environment (Hannan and Freeman 1977: 935).

This definition is not dissimilar to the definition of an organizational configuration. Later, a more elaborate definition distinguished *core* and *peripheral* elements of form. Core elements are:

> (1) its stated goals – the basis on which legitimacy and other resources are mobilized; (2) *forms of authority* within the organization and the basis of exchange between members and the organization; (3) *core technology,* especially as encoded in capital investment, infrastructure, and the skills of members; and (4) marketing strategy in a broad sense – the kind of clients (or customers) to which the organization orients its production and the way it attracts resources from the environment (Hannan and Freeman 1984: 156).

Research into ecological processes has taken two directions (Baum and Shipolov, this volume). One examines *demographic* factors, especially organizational age and size and their association with survival chances. For example, older, larger organizations are hypothesized to have better survival prospects because size often acts as a signal to stakeholders, including resource suppliers, of reliability and accountability. Larger organizations may also have greater resources with which to weather short-term market fluctuations. The second direction examines *ecological* factors, such as niche width and density dependency effects, emphasizing again how contextual factors determine the appropriateness or otherwise of alternative organizational forms.

Ecology and Change

A key theme within ecological approaches is *structural inertia theory,* which holds that timely organizational adaptation is extremely difficult to achieve. Organizations succeed to the extent that they develop reliability of performance and can 'account rationally for their actions' (Hannan and Freeman 1984: 153). Reliability and accountability are achieved through use of formal structures and standardized routines. These routines, however, make organizations 'highly resistant to structural change' (Hannan and Freeman 1984: 155), for many of the reasons observed by configuration theory. Changes in an organization's context thus pose survival challenges because managers are unable to change strategies, structures and processes *quickly enough*. That is, attempted movement between organizational forms is problematical and is unlikely to succeed. Instead, organizations survive or cease to exist as a consequence of environmental shifts that render their organizational form more or less appropriate:

> Most writing and research on organizations emphasize transformation and imitation as the motors of change in the world of organizations. That is, such analysis assumes, usually tacitly, that the most prevalent and most important fraction of the mix involves adaptive actions by existing organizations. Organizational ecology argues the opposite case: that few organizations succeed at transformation and imitation and that selection serves as the driving force of long-term change. This position is only tenable if organizations exhibit great inertia in their structures over time (Hannan and Carroll 1995: 23).

In this sense, ecologists highlight the *difficulties* of achieving change and are at the opposite extreme to structural-contingency theory and strategic choice theory and distant from resource-dependence. However, in a way, ecological theories echo S/Cs basic assumption that forms that survive are those that match the economic context.

Ecological theory offers several key insights. First, it reminds us that macro-contextual factors interact with organizational actions to constantly produce novel organizational forms. The theory does not, however, readily explain why or how *particular* forms emerge (but see Ruef 2000). Secondly, it specifies the exogenous variables that affect organizational alignment and which shape organizational

performance. As Baum and Shipolov (this volume) state: 'Ecological approaches to organizational founding and failure ... emphasize contextual or environmental causes – social, economic and political – that produce variations in organizational founding and failure rates over time'. Thirdly, the theory emphasizes that the ability of organizations to achieve adaptive change is not evenly distributed. Although ecologists believe radical change is *not* the norm, they acknowledge that some organizations exhibit adaptive behaviour and, to a limited extent, the theory suggests *which* organizations will do so (e.g. large or small).

Network Theories

Almost a decade ago, Salancik (1995) surveyed research on organizational networks and remarked upon the absence of a theory of networks as a form of organizing. Borgatti and Foster (2003: 1005) countered that, even if Salancik's comment was appropriate at the time, 'it certainly is not today'. We suggest that research and theorizing about networks may be arranged into three distinct streams.

Networks as Structures of Opportunities

One approach to networks focuses upon the structure or topography of links ('ties') connecting organizations (e.g. Christensen and Bower 1996; Burt 2000; Stuart 2000). In this approach the network is portrayed as a structure of resource flows which organizations differentially access through their connections and positions within the network. According to Burt, a critical feature of an organization's network position is its relationship to *structural holes*. Clusters consist of organizations densely tied to each other but only loosely connected to organizations in other clusters. Clusters are sometimes portrayed as competing sub-groups (e.g. Gulati and Gargiulo 1999; Baum and Ingram 2002). Gaps between the clusters constitute structural holes bridged by *few* organizations, to whom advantages flow because they can broker connections between otherwise disconnected groups.

An organization with an advantageous brokerage position is said to have *social capital*:

Social capital is the contextual complement to human capital. The social capital metaphor is that the people who do better are somehow better connected. Certain people or certain groups are connected to certain others, trusting certain others, obligated to support certain others, dependent on exchange with certain others. Holding a certain position in the structure of these exchanges can be an asset in its own right. That asset is social capital, in essence, a concept of location effects in differentiated markets (Burt 2000: 347).

We find this use of social capital very consistent with the resource-dependence approach, except that it makes explicit that dependencies have a social as well as an economic character. Social capital arises from '... the accumulation of "chits" based on previous good deeds to others, backed by the norm of reciprocity' (Portes and Sensenbrenner 1993: 1324). A defining feature of Burt's approach, however, is the imagery of an actor (organization) *using* the network. Madhaven et al. (1998: 440) elaborate this theme, emphasizing not only that organizations draw resources from their network but 'can potentially shape networks so as to provide a favourable context for future action'.

Hargadon (2002) has extended this approach to networks as structures of opportunities, by elaborating a model of the knowledge-brokering process. 'Knowledge-brokering' organizations straddle multiple domains and thus have access to disparate bases of knowledge. These organizations have the capability to learn and recombine knowledge bases, 'moving ideas from where they are known to where they are not' (Hargadon 2002: 44).

Networks as Structures of Constraints

A second approach to networks is closer to the logic of neoinstitutional theory. This approach sees organizations not as taking advantage of a network, but as being shaped by it. Researchers in this tradition are especially interested in how ideas and practices disseminate through networks (e.g. Fligstein 1985; Davis 1991; Burns and Wholey 1993; Haveman 1993; Palmer et al. 1993; Haunschild and Miner 1997). Much attention has been given to the role of direct ties between organizations (e.g. director interlocks).

A sub-theme within this approach refers to the difference between a network's 'centre' and 'periphery'. The idea of centrality has two connotations. The first, explicit within network theory, is defined by the density of ties between organizations and the 'distance' of an organization from others in the network. Centrality, in this sense, is a function of the density of ties. Another connotation of centrality distinguishes between elites and non-elites. Networks become characterized by increasing hierarchical stratification, in which, typically, a small sub-community of elite firms is distinguished by reputation (e.g. Stuart 1988; Podolny 1993; Phillips and Zuckerman 2001) and economic scale (e.g. Malerba and Orsenigo 1996).

Networks as Embedded Relationships

Conceptualizing ties between organizations as embedded relationships directs attention to the relational nature of ties. For example, Uzzi (1997) highlights the ethnic embeddedness of women's apparel firms in New York. He shows how networks help actors co-ordinate interdependencies and overcome challenges of co-operation and collective effort in a way superior to integrated, hierarchical organizations. Similar examples are provided in studies of regional clusters, e.g. Silicon Valley (Saxenian 1994).

Studies of the relational nature of organizational ties are interested in the consequences of networks (e.g. Uzzi shows how embeddedness affects the ability of a network as a whole to innovate and of individual firms to survive), but also in their antecedents, i.e. in how networks are constructed. Key explanations appear to be history, status and technological proximity. Podolny (1993), for example, shows that under conditions of uncertainty organizations favour links to organizations with whom they have previously partnered and/or that have appropriate status. In effect, the network *structure* is a function of social stratification and status (see also, Stuart 2000; Phillips and Zuckerman 2001).

The difference between networks as relationships and networks as opportunities is significant. The former sees the benefits of networks arising from social norms that enable co-ordination and co-operation by removing the fear of opportunism and malfeasance. An actor's social capital is a function of the normative strength of the network, i.e. its 'social closure' (Coleman 1988). On the other hand, those who see networks as structures of opportunities, see the benefits of networks arising from the social capital provided by diversity of ties. The underlying imagery is a combination of economics and political skill, reflecting R/D theory. The relational approach, in contrast, emphasizes how networks arise from concerns to identify trustworthy partners. Here, the underlying imagery is sociological, reflecting institutional theory. The relational approach to networks is thus very different to R/D theory because it treats the topology of the network as a function of social factors, such as status and history, and not simply as the consequence of resource dependencies (Pfeffer 2003: xxiii). Resource dependencies are a motivation for seeking interactions with others, but status determines choice of partners.

Networks and Change

The link between networks and organizational change depends upon whether the network is regarded as a constraint or an opportunity structure. Portes and Sensenbrenner's (1993) show how entrepreneurs can become caught by the web of obligations and expectations of their networks. Gargiulo and Benassi (2000: 195–6) refer to 'amplified reciprocity' and 'cognitive lock-in' as underlying mechanisms in this 'dark side' of networks. On the other hand, the network can facilitate change. Burt (2000), for example, emphasizes that 'brokerage' promotes change. Networks describe 'a world of change – a world of discovering and developing opportunities to add value by changing social structure with bridges across holes in the structure. The argument ... is a story about the social order of disequilibrium' (Burt 2000: 357).

Some studies explore networks as constraint *and* opportunity. Uzzi (1997), for example, finds a *curvilinear* relationship between embeddedness and survival, suggesting that change and sustainable success requires a balance between network closure and openness. The need to secure such a balance is the 'paradox of embeddedness' (Uzzi 1997: 35). Gargiulo and Benassi (2000) also suggest that ties that are too cohesive result in *network closure*, making change difficult.

There are two points that we would emphasize. Firstly, network analysis reinforces that organizational change cannot be understood without giving proper attention to the interorganizational network level of analysis. The ability of organizations to change is affected by their embeddedness within a network of organizations and the nature of that network will affect the speed and content of change. Secondly, network analysis provides a strong clue as to *where* new organizational forms are more likely to arise, namely from the periphery but not the centre of a field, because central organizations are more fully caught within the reproductive network of exchanges.
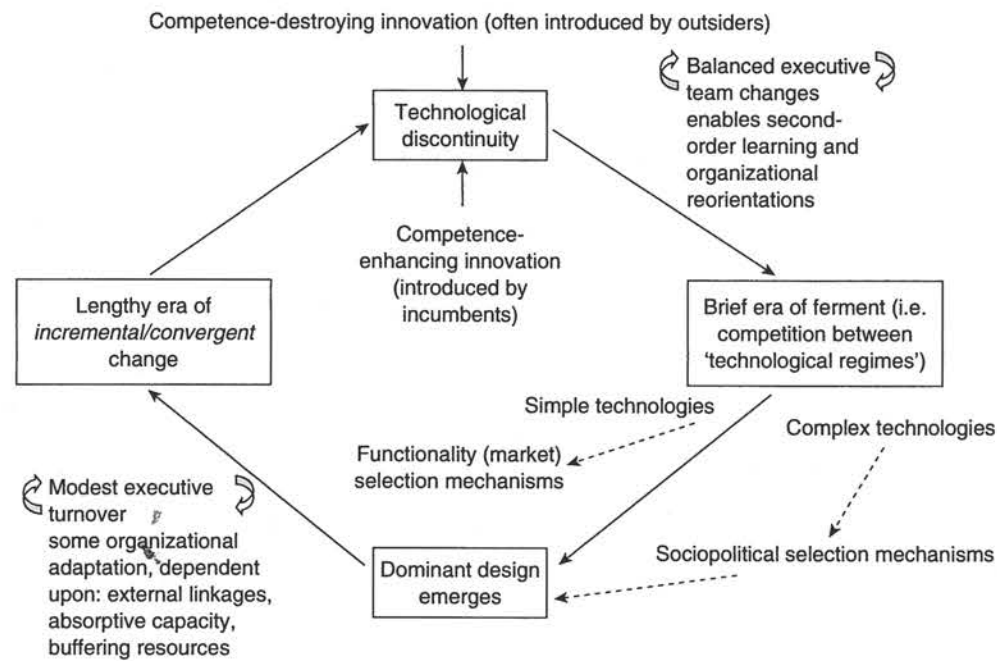
Figure 2.16.1 The punctuated-equilibrium model of change (based upon Tushman and Rosenkopf 1992)

Three Theories of Change

By the mid 1980s, organization theory was acknowledging the significance and difficulty of change (e.g. Goodman 1982; Astley and Van de Ven 1983; Kimberly 1984; Kimberly and Quinn 1984; Pennings 1985). Detailed case studies of change appeared (e.g. Kanter 1983; Pettigrew 1985; Johnson 1987; Hinings and Greenwood 1988) along with several explicit theories of change. We review three of these theories. The first looks at the determinants and locus of change and how, if at all, organizations manage change. The second looks at how changes occur in the choice-set of available forms. The third looks explicitly at change at the organizational level.

Punctuated Equilibrium

Tushman, in collaboration with several colleagues (Tushman and Romanelli 1985; Tushman and Anderson 1986; Tushman and Rosenkopf 1992; Tushman and Murmann 1998) has contributed a 'punctuated equilibrium' theory of change.

Although the focus shifts according to the question posed in different papers, there is constant emphasis on technology as an industry level variable that demands an organizational response. Tushman's work may be considered a sophisticated form of structural-contingency theory but it also embraces themes from resource-dependence and network theories. The theory addresses three important issues: the periodicity of change, the dynamics of change (*why* does change occur and *where*) and whether organizations can adapt (and, if so, the enabling factors).

The Periodicity of Change

The basic model consists of four stages (see Figure 2.16.1). For convenience, we treat the first stage as occurring when *technological discontinuities* punctuate and destabilize prevailing market practices, precipi- tating an *era of ferment* (stage two) where competing expressions of the new technology struggle for adoption. In the third stage, a *dominant design* emerges, heralding the fourth stage of relative

equilibrium during which *incremental changes* improve the dominant design.

The model is a rare attempt to identify the temporal sequence of change. It suggests that eras of ferment are relatively brief. Comprehensive changes to strategies and structures happen quickly rather than incrementally. Convergent change, in contrast, following the emergence of a technological standard, is slower in pace and longer in duration. Romanelli and Tushman (1994) confirm that most organizational transformations are accomplished through rapid and discontinuous change to structures and strategies. They also found that incremental changes do not accumulate to produce organizational transformations. As previously noted, Miller and Friesen (1980) found similar results, as does much institutional work, suggesting that the periodicity of the punctuated-equilibrium theory is a reasonably robust observation.

However, there are important dissenting voices. Eisenhardt and Tabrizi (1995) and Brown and Eisenhardt (1997) directly challenge the model. They assert that 'while the punctuated equilibrium model is in the foreground of academic interest, it is in the background of the experience of many firms' (Brown and Eisenhardt 1997: 1). Brown and Eisenhardt looked at six high technology firms operating in fast changing, 'high velocity', environments and concluded that 'change is not the rare, episodic phenomenon described by the punctuated equilibrium model but, rather, it is endemic to the way these organizations compete' (Brown and Eisenhardt 1997: 1). They insist that the scope of change examined in their study is not restricted to product innovation but 'intimately related to broader organization change' (p. 2). However, as with Tushman's work, the description provided is of technological change; organizational changes, though assumed to happen, are less documented.

The other dissenting voice is Van de Ven and Garud (1994: 426), who sought to understand the 'origins of novelty itself to explain how a new organizational form or technological discontinuity emerges'. In their view, the punctuated equilibrium model has little to say about *how* punctuations arise other than appeals to random events or individual genius. Microanalysis of the cochlear implant technology led them to question 'the widely held assumption that novelty is produced by a discrete exogenous event of random chance or blind variation' (Van de Van and Garud 1994: 441). Instead, 'the generative process in which novelty emerges is

not instantaneous; instead it entails numerous events involving many public and private sector actors over a long duration of time' (p. 441).

Dynamics of Change

Tushman and Anderson (1986) examined in detail the initial stage of technological discontinuity; and the process through which a dominant design is selected. Technological discontinuities are classified by whether they 'destroy or enhance the competence of existing firms' (Tushman and Anderson 1986: 442). Anderson and Tushman proposed that competence-enhancing technologies are more likely to originate from incumbents, whereas competence-destroying technologies are promoted by new start-ups. Incumbents, 'burdened by the consequences of prior success' (Tushman and Anderson 1986: 461) are less able or unwilling to destroy established investments. As predicted, Anderson and Tushman (1990) found competence-enhancing technologies typically come from incumbents (by a 3-to-1 ratio) but did not confirm that competence-destroying technologies arise mainly from newcomers. These technologies 'are initiated by a mixture of newcomers and incumbents' (Anderson and Tushman 1990: 625). Later studies suggest that competence-destroying technologies emerge from non-incumbents (e.g. Sorensen and Stuart 2000).

Mechanisms by which dominant designs are selected depend upon the complexity of the technology (Tushman and Rosenkopf 1992). Simple technologies are adopted because of superior performance; i.e. the selection mechanism is the market. Complex technologies, in contrast, rarely yield a clearly superior design. Technological options offer alternative combinations of performance attributes and selection arises from sociopolitical processes: 'enlivened by actors with interests in competing technical regimes ... dominant designs are driven by the visible hand of organizations interacting with other organizations and practitioner communities to shape dimensions of merit and industry standards to maximize local needs' (Tushman and Rosenkopf 1992: 322). Here, Tushman is focusing on the process whereby new technologies prevail, not from where they arise. The imagery echoes that of resource-dependency theory.

By emphasizing how communities of organizations develop around particular technologies, Tushman and Rosenkopf (1992) explicate why incumbent firms are

often resistant to new technologies. It is not simply because of cognitive shortfalls: incumbents are embedded in networks of suppliers and vendors, (e.g. Teece and Pisano 1994; Christensen and Bower 1996; Malerba and Orsenigo 1996; 1997). Contractual commitments and mutual obligations within a network of firms make it difficult for a firm to reorient itself, whilst, at the same time, reinforcing cognitive logics. Christensen and Bower (1996: 198), for example, found that firms in the disc drive industry 'listen(ed) too carefully to their customers – and customers place stringent limits on the strategies firms can and cannot pursue'. Technological communities also act politically to resist new technologies (e.g. Frost and Egri 1990). Van de Ven and Garud's (1989; 1994) account of the emergence of the cochlear implant device is a superb illustration of these community level processes and shows that change involves the co-evolution of institutional, market and technological forces.

Can Organizations Adapt?

The evidence, as summarized by Tushman and Murmann (1998), is that competence-destroying innovation is more likely to arise from new entrants to an industry and that incumbents find it difficult to adapt them. Cooper and Smith (1992) found 21 of 27 incumbents recognized the need for change, belying the view that managers fail to *see* the need for change, but that only seven successfully did so (underlining the critical difficulty of *implementation*).

However, some firms do adapt. Competence-*enhancing* innovations are *still* revolutionary; therefore, incumbents deploying these breakthrough technologies *are* adapting. Further, there are documented instances of incumbents successfully developing competence-destroying technologies (e.g. Methé et al. 1996; Sull et al. 1997), even though the process might sometimes be tortuous and drawn over several decades. The question, therefore, is not *whether* organizations can adapt, but the circumstances that enable or constrain them from doing so. As Tripsas (1997: 344) bluntly puts it, the interesting question is: 'Although incumbents on average may fail relative to new entrants, what explains the differential success of incumbents?'

Early work addressing this question focused upon *the role of senior management* and assumed that the key barrier was weak organizational learning

(a form of cognitive lock-in) combined with intra-organizational resistance. The basic thesis is that dramatic change is beyond the capability of existing executives because they are constrained by their cognitive frames *and* their sunk political investments in the prevailing order (see Anderson and Tushman 1990; Virany et al. 1992; Tushman and Rosenkopf 1996). Therefore, changes in senior personnel are required to enable the organization to learn of the need for change; however, retention of some existing senior managers provides understanding of how to implement change (O'Reilly and Tushman 2004). That is, it helps to open the organization to new ideas and competencies whilst building upon incumbent political skills and experiences, especially when the crisis originates from outside the organization: 'the success of an organization, as defined by its longevity, occurs when firms ... combine the benefits of newness in heterogeneous teams with the benefits of longevity embodied in seasoned teams' (Keck and Tushman 1993: 1338).

However, executive leadership is not a sufficient explanation. Some organizational forms better enable adaptation. O'Reilly and Tushman (2004) refer to these forms as the 'ambidextrous organization', which concurrently use separate structures for exploiting current technologies and for facilitating breakthrough technologies. Each set of structures has 'its own processes, structures, and cultures ... integrated into the existing senior management hierarchy' (O'Reilly and Tushman 2004: 74). The idea is that successful organizations are comprised of multiple organizational forms and that, as a technology matures, one part of the parent organization shifts to exploit that technology whilst another part assumes the entrepreneurial role.

A rather different, though complementary, account of how change is accomplished by incumbent firms is offered by Tripsas (1997; Tripsas and Gavetti 2000). Tripsas analysed the typesetter industry in which an incumbent leader, Mergenthaler Linotype, survived three eras of ferment. Mergenthaler's success is attributed an external integrative capability, combined with geographically distributed research sites. External integrative capability is the ability to identify and synthesize knowledge from outside the firm, an ability nurtured by investing in R&D and by developing a strong set of external links, both formal and informal. Geographically distributed research spurs competition between research teams

and allows different generations of technology to be developed at separate locations.

The importance of external networks is also recognized by Rosenbloom and Christensen (1994) and Christensen and Rosenbloom (1995). These authors refer to the 'value network', i.e. the dense network of commercial exchanges within which firms are embedded. Firms develop new technologies if they solve needs within *their* network. Otherwise, the network obstructs change:

> As they become increasingly well-adapted to a given environment, and it to them, incumbents may therefore become progressively less well suited to compete in other networks. Their abilities and incentives to create new markets for their technology ... may atrophy (Rosenbloom and Christensen 1994: 655).

Two attributes of an external network appear important: being *connected* to sources of emerging ideas (as emphasized by Tripsas); and *political skill* at exploiting emerging opportunities. McGrath et al. (1992), for example, describe how executive teams can promote adoption of new technologies *and* secure that their firm's technology becomes the new dominant design (see also, Cusumano et al. 1992).

A third explanation for the adaptability of an incumbent organization are its 'complementary assets', such as marketing and distribution systems, or service networks (Teece 1986). Where complementary assets retain value during an era of ferment, incumbents are able to 'buy time' for adaptation. The ongoing value of specialized assets 'buffer' firms that might otherwise fail (Tripsas 1997). Kraatz and Zajac (2001) are unsupportive of this view.

Conclusion

The punctuated equilibrium model is an elaborate and well-researched account of organizational change under circumstances of technological disruption. We emphasize five points. Firstly, the periodicity of change involves lengthy periods of convergent change punctuated by rapid and extensive eras of discontinuity. Secondly, only some organizations are able to adapt to technological disruptions. Thirdly, turnover of personnel provides for organizational learning and sensitivity to the need for change. Retention of personnel provides

the political skills and organizational capability necessary for change implementation. Fourthly, adaptation is more likely to occur in organizations with distinctive structural features and where they have complementary assets that shield them through eras of ferment. Finally, the theory points to the *co-evolution* of institutions, organizational forms and technologies. An unresolved question is whether the punctuated model applies to settings *not* characterized by technological discontinuities, such as low capital-intensive industries (e.g. professional services).

A Neo-Institutional Approach to Change

There is no neoinstitutional theory of change in the way that there is *a* punctuated equilibrium theory (Dacin et al. 2002). Instead, we describe a composite constructed from work conducted at the University of Alberta (Hinings and Greenwood 1988; Greenwood and Hinings 1993; 1996; Greenwood et al. 2002; Reay and Hinings 2005; Suddaby and Greenwood 2005; Greenwood and Suddaby 2006; Reay et al. 2006), elaborated by complementary research. The model, summarized in Figure 2.16.2, contains similar stages to the punctuated-equilibrium model but the language and focus are different.

Earlier, we noted that institutional accounts emphasize the influence of social expectations. Applied to institutional change, such accounts focus upon organizational fields and the institutional logics that prescribe appropriate behaviour, including 'templates for organizing' (Powell and DiMaggio 1991) or 'archetypes' (Greenwood and Hinings 1993). Archetypes are similar to configurations except that they emphasize the importance of achieving institutional legitimacy. The starting question, therefore, for this model, is not whether organizations can or cannot move between archetypal forms, but with the social processes that construct the *choice-set* of acceptable templates. That is, radical change means, first, change to the choice-set of organizational forms. Exploring the processes by which this occurs gives attention to values, meanings and language and to the role of the professions, regulators and the state. A second and consequential question is how and why organizations in the same organizational field respond differently to institutional processes.
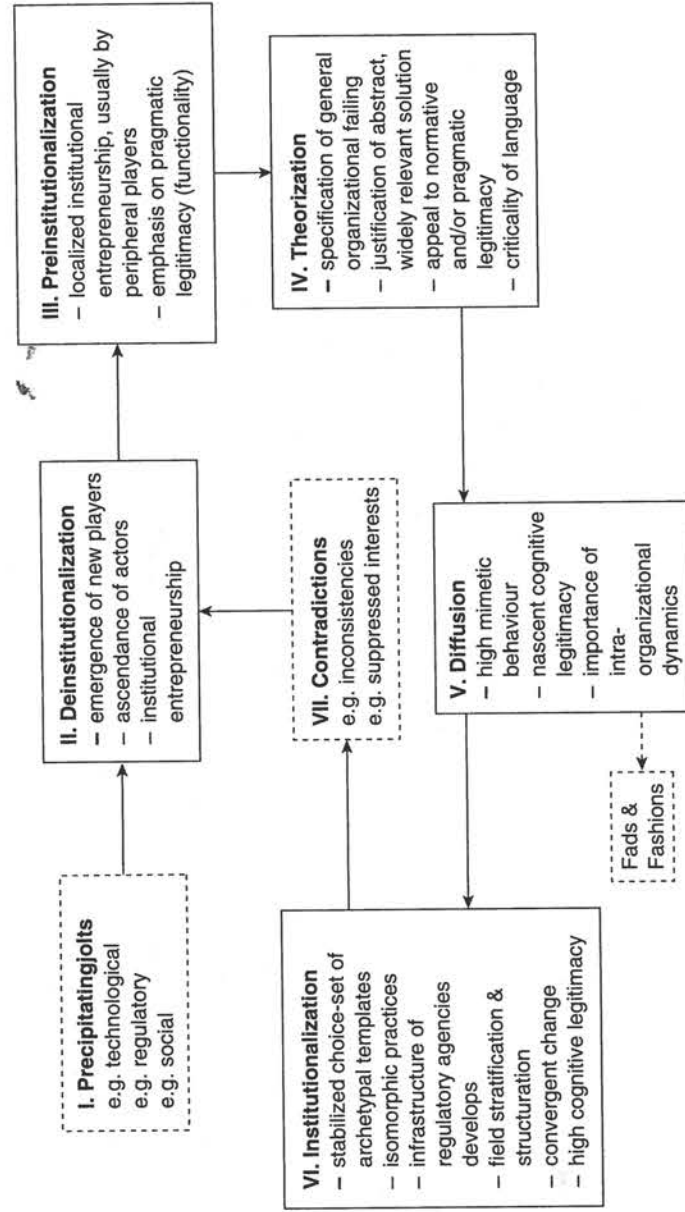
Figure 2.16.2 A neo-institutional model of change (based upon Tolbert and Zucker 1996; Greenwood et al. 2002)

Content of diagram boxes:

III. Preinstitutionalization
- localized institutional entrepreneurship, usually by peripheral players
- emphasis on pragmatic legitimacy (functionality)

IV. Theorization
- specification of general organizational failing
- justification of abstract, widely relevant solution
- appeal to normative and/or pragmatic legitimacy
- criticality of language

II. Deinstitutionalization
- emergence of new players
- ascendance of actors
- institutional entrepreneurship

VII. Contradictions
e.g. inconsistencies
e.g. suppressed interests

V. Diffusion
- high mimetic behaviour
- nascent cognitive legitimacy
- importance of intra-organizational dynamics

I. Precipitating jolts
e.g. technological
e.g. regulatory
e.g. social

VI. Institutionalization
- stabilized choice-set of archetypal templates
- isomorphic practices
- infrastructure of regulatory agencies develops
- field stratification & structuration
- convergent change
- high cognitive legitimacy

Fads & Fashions

Stages of Change

Institutionalization. Figure 2.16.2 builds upon Tolbert and Zucker's (1996) three-stage model of institutionalization. Progress through these three stages is marked by a narrowing of the choice-set of socially approved organizational forms and increasing convergence around them. A mature, institutionalized field (stage VI in Figure 2.16.2) has stable, routinized interactions between its participants and increasing stratification as elite firms are differentiated by reputation and influence. Critically, mature settings are characterized by an infrastructure of regulatory agencies that disseminate and monitor compliance with approved practices and of supporting firms such as professional advisors (Saxenian 1994). Universities and professional training institutions generate and disseminate knowledge relevant to the field (Li and Greenwood 2004: 1138). Representative associations develop. Consequently, the field exhibits a sustaining momentum as its internal dynamics both constrain its members and is reproduced by their actions.

The imagery of dynamic stability raises a central question: How and where does change occur where there are elaborate reproductive dynamics at work and where organizational forms are taken-for-granted? In other words, how does *de*-institutionalization occur?

Deinstitutionalization. The dynamics that precipitate change may arise from outside the field, as destabilizing 'jolts' (Meyer 1982; Meyer et al. 1990). These can take the form of social upheaval, technological disruptions, competitive discontinuities or regulatory change (Fox-Wolfgramm et al. 1998; Lounsbury 1999). These events precipitate the entry of new players (Thornton 1995; Thornton and Ocasio 1999; Kraatz and Moore 2002), enable the ascendance of existing actors (Scott et al. 2000), encourage local entrepreneurship (DiMaggio 1988; Leblebici et al. 1991; Lawrence 1999; Suddaby and Greenwood 1999) and change the intellectual climate of ideas (e.g. Davis et al. 1994). Their effect is to disturb the socially constructed field-level consensus by introducing new ideas.

Change can also arise from *endogenous* sources. Seo and Creed (2002) point to 'contradictions' within organizational fields, such as mutually inconsistent values (e.g. equality versus affirmative action). Where contradictions become amplified by shifting circumstances they set the stage for 'praxis', i.e. reflection by actors who, 'on the basis of reasoned analysis', reconstruct institutional arrangements. Seo and Creed's model is consistent with Hoffman's (1999) description of fields as populations of organizations that, though connected and influenced by overarching logics, nevertheless subscribe to different values and beliefs. Consequently, at any moment, fields contain tensions between dominant and latent logics 'that may lie within the individual populations (or constituencies) that inhabit the field' (Hoffman 1999: 365; see also Reay and Hinings 2005). Change, thus, occurs 'in the wake of triggering events that cause a reconfiguration of field membership and/or interaction patterns' (Hoffman 1999: 351). A key point is that as fields mature, internal contradictions become amplified and thus more potent precipitators of change.

Pre-institutionalization. So which organizations are more likely to innovate and why? Initially, most researchers focused upon exogenous sources of disruption because of the imagery of institutions as enduring and hegemonic. Hence, change was expected to arise from entrants 'transposing' ideas from one field to another (Sewell 1992). A later explanation portrays logics not as hegemonic, but as imperfectly diffused. Drawing upon network theory's distinction between central and peripheral players, this explanation suggests peripheral organizations are more likely to innovate because they are less embedded and less privileged. Organizations at the field's centre, on the other hand, are more socialized, better advantaged and, thus, more resistant to change. Several studies support this basic proposition (e.g. Hirsch 1986; Galaskiewicz and Wasserman 1989; Davis 1991; Leblebici et al. 1991; Kraatz and Zajac 1996; Haveman and Rao 1997; Westphal et al. 1997; Kraatz 1998; D'Aunno et al. 2000; Palmer and Barber 2001). However, the proposition that change originates from the periphery of a field is not absolute (e.g. Podolny 1993; Greenwood et al. 2002; Sherer and Lee 2002; Rao et al. 2003). Greenwood and Suddaby (2006) examined the introduction of a new organizational form by the Big 5 accounting firms in the 1990s and concluded that markets and institutional forces unfold at different rates enabling larger, central organizations to outgrow their 'institutional moorings', allowing strategic choice.

A key point is that fields are never static. They are vulnerable to ideas entering from neighbouring fields and to the entrepreneurial motivations of

imperfectly embedded organizations (Lawrence et al. 2002). Even mature fields contain tensions that can trigger change. Nevertheless, the likelihood of change will vary across fields. Not all fields are equally open to new ideas. Instead, they vary in the extent to which their boundaries are 'permeable' (Greenwood and Hinings 1996). Fields also vary in the degree to which they have clearly legitimated organizational templates combined with 'highly articulated mechanisms (the state, professional associations, regulatory agencies …) for transmitting those templates to organizations …' (Greenwood and Hinings 1996: 1029). The more elaborated these templates and the stronger the mechanisms for their deployment, the more resistant the field will be to change.

Theorization. Theorization is the rendering of ideas into compelling formats (Strang and Meyer 1993) and is critical for the ascription of legitimacy. Theorization is the process whereby new organizational forms gain legitimacy and how 'renegotiations of meaning take place' (Aldrich and Fiol 1994: 649). Tolbert and Zucker (1996) propose that theorization involves two major tasks: specification of a general organizational failing, in order to challenge the adequacy of existing arrangements; and justification of the new organizational form as a widely appropriate solution.

Research into theorization is taking several complementary directions. One stream of research examines the roles of theorizing agents, such as management consultants (e.g. Abrahamson 1991; Sahlin-Anderson and Engwall 2002), the media (Davis et al. 1994; Rao et al. 2003) and professional associations (Greenwood et al. 2002). A second focuses upon the use of cultural symbols and (especially) language as proponents and opponents contest the appropriateness of existing and nascent templates (Greenwood et al. 2002; Covaleski et al. 2003; MacGuire et al. 2004; Suddaby and Greenwood 2005). Several theorists draw on social movement theory (Rao 1998; Hoffman and Ventresca 1999; Ruef 2000; Lounsbury 2001; Rao et al. 2003), which has long recognized 'framing' as critical for mobilizing change. Other researchers have examined 'transorganizational structures' that increase mutual awareness and contribute towards legitimation, such as 'rituals' (Anand and Watson 2004), certification contests (Rao 1994) and the activities of professional associations (Greenwood et al. 2002).

Theorization resembles the era of ferment of the punctuated-equilibrium model. It is the stage where competing versions struggle for superiority. However, the contribution of institutional theory is the attention it gives to socio-cultural processes and, increasingly, the rhetoric of language as means by which novelty is rendered acceptable and preferable. These processes attach social approval to novelty. Importantly, there are differences across fields. In commercial settings, the rhetoric of theorization is grounded in appeals to efficiency. For example, Japanese management practices were urged upon US corporations for their superior efficiency and quality. In professional settings, theorization has to incorporate a normative justification. Thus, the Big Five accounting firms sought to legitimate the multi-disciplinary practice (which deviated from the then archetypal model) by appealing to norms of progress and service. The rhetoric of these claims sought moral acceptability for the new form, irrespective of other benefits (Suddaby and Greenwood 2005).

Diffusion. Diffusion follows successful theorization. Meyer and Rowan's (1977) pioneering work and the conceptual framework of DiMaggio and Powell (1983) generated a flurry of papers demonstrating the role of mimetic, coercive and normative mechanisms, and the occurrence of isomorphism. Nevertheless, as Oliver (1991) pointed out, organizations do not blindly follow institutional prescriptions, raising an interesting question: Why do organizations make different selections from the available choice-set of archetypal forms?

Various explanations have been offered. Lounsbury (2001) suggests organizations of similar status respond in similar fashion. Kraatz and Zajac (1996) and D'Aunno et al. (2000) point to the influence of local market forces. Others emphasize the sense-making processes of senior managers (Dutton and Duncan 1987; Gioia and Thomas 1996; Fox-Wolfgramm et al. 1998; Johnson et al. 2000). Hinings and Greenwood (1988; see also Greenwood and Hinings 1996) point to the internal complexity of organizations. Building upon resource-dependence theory, they see organizations as coalitions of structurally differentiated groups. Inevitably, groups dissatisfied with how their interests are accommodated will favour change. Organizations also experience contested values. For example, Greenwood and Hinings (1996) found that, as accounting firms grew they hired marketing and human resource

professionals who favoured more corporate organizational forms. This led to contested values because accountants traditionally favoured the professional partnership form (Greenwood and Hinings 1990). The inference here is that institutional values 'enter' organizations filtered through the value-sets of occupational groups. Thornton (2004) provides a very similar analysis of the same tension in the publishing industry.

Interests and values are pressures for change, to manage the change process *and* the new organizational form.

The distribution of power within an organization is not fixed, but, as presented in resource-dependence theory can shift with external conditions. However, the institutional model emphasizes the role of the institutional context, which also confers power and status upon groups and not necessarily in a manner consistent with market forces. For example, market conditions promoted the revenue-generating contribution of consultants within accounting firms but power remained with accountants because of regulations prohibiting non-accountants from controlling accounting firms (Greenwood et al. 2002). The resolution of contested values depends upon how well groups can successfully appeal to, and draw upon, wider institutional and market forces.

The paradox of the institutional model of change is that institutional theory began as an explanation of the similarity and stability of organizational forms in a given population of organizations. Yet, implicit in the theory was that organizations *can* and *will* change, if institutional forces shift the choice-set of templates. Diffusion studies repeatedly show organizations adopting new organizational strategies and structures. Studies of attempted shifts between archetypes, however, indicate that less than one in four are successful (Hinings and Greenwood 1988; Kikulis et al. 1995a, b; Morris and Pinnington 1999; Amis et al. 2004).

Conclusion

For us, neoinstitutional theory provides four key insights. First, it stresses the social processes whereby the choice-set of archetypal forms is constructed and sustained. That is, the theory approaches radical change, first, as change in the range of socially legitimated forms. Secondly, the theory notes the differential embeddedness of

organizations within fields, which provides clues to the likely locus of institutional entrepreneurship. Thirdly, the theory articulates the role of theorization in the legitimation of new forms, giving explicit attention to how language is used 'to persuade constituencies of the desirability and appropriateness of institutional deviance' (Suddaby and Greenwood 2005: 37). Fourthly, it addresses why some organizations change whereas others do not, pointing to intraorganizational dynamics that link organizations to their context and direct their responses to it.

Continuity and Change

Pettigrew and colleagues have developed a perspective on change that emphasizes continuity as well as change, a focus on the processual approach to the study of change, and the interaction of organizational and contextual elements to produce change. This approach emphasizes that organizations find it difficult to change because they are embedded in their history and their context. The central concern for this theory, unlike the previous two, is its concern with how organizations manage the change from one form to another. A recurrent theme explores 'the potency of leaders in changing circumstances' (Pettigrew et al. 1992: 649).

Key components

For Pettigrew, a central problem with the literature on change is the consideration of events disconnected from the wider context that produces and supports them, and a lack of consistent attention to the processes and mechanisms through which changes are created. A further problem is that changes are treated as though they have discrete beginnings and endings. For these authors, emphasis should be less on *a change* and more on *changing*. Therefore, they suggest that change be understood through the unfolding interaction of three constructs: content, context and process. The theoretical challenge is to establish the relationships between these constructs.

The *content of change* speaks to the 'what' of change. Content could be examined concretely, as in the introduction of a divisional structure, a major technological innovation, or a new strategic positioning. However, the content of change can also be classified more abstractly as radical or incremental, technological or organizational. The point is that

the organizational response to a change will be shaped by the characteristics of the change.

A distinction is drawn between the *'outer' and 'inner' context*, which constitute the 'why' of change. Outer context refers to the economic, political and social environment, together with their histories, in which an organization operates. To a certain extent, this way of thinking draws on contingency theory (Donaldson 2001) in that notions of environment are important in explanations of organizational form. However, this formulation goes much further with an emphasis on the evolution of environments. Outer context has to be perceived and interpreted by organizations which themselves are evolving, historical entities. This leads to the notion of inner context. Inner context refers to the ongoing strategy and structure, management and intraorganizational political arrangements within which a change is introduced. Inner context essentially points to the capacity of an organization to recognize the need for change, and to formulate and then implement that response. The way an organization is structured, the values and beliefs under which it operates, and the distribution of power between organizational groups influence how the outer context will be interpreted and delimit the nature and scale of change that those dominant in the organization will be able to formulate and implement.

Process 'refers to the actions, reactions and interactions of the various interested parties as they negotiate around proposals for change' (Pettigrew et al. 1992: 7). It is the 'how' of change. Emphasis here is on organizations as political and cultural systems. Organizational processes are shaped by dominating beliefs that direct and give coherence to internal activities, but which also provide schemas for understanding organizational environments. Cultural beliefs and processes produce power relationships and ground rules that structure political processes. They provide assumptions used by powerful groups working either for or against change. Cultural and political processes are intimately related to the management of meaning: 'a process of symbol construction and value use designed to create legitimacy for one's ideas, actions, and demands, and to delegitimate the demands of one's opponents' (Pettigrew 1987: 659).

The Developing Framework

The basic conceptual framework and several core themes were established early in a meticulous study of ICI (Pettigrew 1985; 1987). Subsequently, the framework and themes were elaborated in a sustained programme of ambitious research investigations of a variety of settings.

The study of ICI examined five change initiatives. The genesis for change is 'in the advocacy by a small group of people of a performance gap arising from some perception of an incipient or actual environmental change and the internal structure and organizational culture of the firm' (Pettigrew 1985: 439). The challenge is to persuade the rest of the organization that change is needed (the 'why' of change) and to provide a compelling solution (i.e. the 'what' of change). Overcoming the challenge is difficult because complex organizations (*all* of Pettigrew's studies are of large, complex, mature organizations) have core rationalities (cultures) that are entrenched both in the cognitive frames of organizational members and in the organization's routines and processes that serve their interests. Consequently, the 'forces of bureaucratic momentum' are for continuity not change (Pettigrew 1987: 659). Notably, of the five change initiatives, only two resulted in stabilized change, two achieved radical change but then regressed and one failed to change.

Breaking down existing inertia in an organization is a long-term 'conditioning' process 'through which strategies and changes are legitimated and delegitimated' (Pettigrew 1985: 443). This process requires generation of a perceived crisis, because without it executives 'do not have sufficient leverage to break through the pattern of inertia' (Pettigrew 1987: 665). Substantial changes in ICI were only possible in the face of severe economic difficulties and relative decline. However, Pettigrew emphasizes that change is not simply a matter of adaptation and subsequent alignment. At ICI, managers actively built a climate receptive to change and *used* contextual (both inner and outer) events. Critical in ICI was the ability of those promoting change to take advantage of 'the massive enabling opportunity created by changes in outer context' (Pettigrew 1987: 661) by demonstrating that proposed changes represented continuity with past values, strategies and practices.

How was this achieved? Pettigrew (1987: 66) describes the important role of the CEO, not as taking 'apocalyptic' actions, but in 'articulation of an imprecise vision of a better future ... clarified through additive implementation'. 'Additive implementation' refers to the seizing of small opportunities as they occur:

... activities were rarely part of some grand process design. Instead opportunities were taken as they presented themselves to break any emerging global vision of a better future into manageable bits; of finding small steps on the way to larger breaks; of using any political momentum created by a number of complementary moves to bind a critical mass of powerful people around a set of principles which eventually would allow a series of pieces in the jigsaw to be moved simultaneously (Pettigrew 1985: 458).

Additive implementation requires patience and perseverance, waiting for people to retire, advancing known sympathizers as replacements for known skeptics, using executive succession as opportunities to introduce structural change, and 'backing off' and moving the change effort to less contentious areas. Change, therefore, is not an easy linear progression. Instead, the ICI study showed the lengthy and uneven process of change. Change began in the 1960s and continued into the 1990s. Bursts of radical change, associated with changes in senior leadership and power, were 'interspersed with eras of learning and incremental adjustment' (Pettigrew 1983: 442). Pettigrew (1983: 447) sees this cycle as confirming the P/E model at the level of the organization: 'changes tend to occur in radical packages interspersed with longish periods of both absorbing the impact of revolutionary action, and then coming to terms with the fact that further changes are eventually necessary'. (This same pattern was observed by Amis et al. 2004.)

Pettigrew and Whipp's (1991) studies of the automobile, merchant banking, insurance and book publishing sectors built on these ideas by comparing superior performing firms with those that do less well in managing change for competitive success. Throughout, there is emphasis upon the importance of the assessment and interpretation of the outer context and its interaction with inner context and process. Environmental assessment in underperforming organizations was the preserve of a single functional unit and not built into the political and technical processes of the organization. Successful organizations, in comparison, enabled actors at various levels to acquire, interpret and process information about the environment and sense the need for change. In these organizations, moreover, the inner context enabled a variety of views to be in play in formulating the content and process of change. Similarly, leadership was not

located in particular, specified actors but was context-sensitive. Leadership involved activating people at all levels and across all functions, as part of building an appropriate climate for change. And, importantly, there was a coherence and alignment in managing the interpretation of context, the development of change content and the design of change processes. Given the wide scope of necessary actions, the ability to manage multiple, interrelated actions and, importantly, emergent changes proved critical. (For a recent extension of this theme, see Ethiraj and Levinthal 2004.)

Pettigrew et al. (1992) examined several change projects in the NHS in the UK. Again, there is an emphasis on how contexts and processes link together. Thus, the role of the outer context was elaborated by observing that excessive pressure 'can deflect or drain energy out of the system' (Pettigrew et al. 1992: 280). In terms of the inner context, the NHS study highlighted factors shaping the differential receptivity of organizations for change. One factor is the availability of key people: too much personnel rotation leads to loss of momentum and frustration. Another important aspect is a supportive organizational culture, such as use of flexible, cross-boundary working based on skill not status; an openness to innovation and evaluation; and a focus on achievement. Subsequently, Pettigrew described receptive organizational contexts using Kanter's (1983) distinction between 'segmentalist' and 'integrative' structures. Integrative structures are more receptive and contexts for change.

The content of change has two important analytical aspects. First, there has to be clear fit between the change agenda and local circumstances. Relevance has to be demonstrated. Secondly, the change proposal must, at the same time, provide a broad, imprecise vision of what the change is, but, paradoxically, substantiate the case for change. Further, the new direction has to be disaggregated so that the implementation path can be clearly seen.

What processes support successful change? In the NHS situation, one contributing process was the ability to generate effective managerial-clinical relations. This observation points to the importance of change processes linking those responsible for designing change with those at the 'sharp end' of changing behaviours and attitudes. Such a process goes hand-in-hand with building co-operative networks inside and outside the organization. Boundary spanners are also important. They are

directly involved in trust-building, bargaining and deal-making as emergent aspects of content and context develop. A further process supporting change in the NHS was *simplifying* and clarifying goals and priorities. Major change generates uncertainty and the success of a change effort is assisted if managers can focus the agenda of change upon key priorities, especially in the face of constantly shifting pressures, such as the 'culture of panics' characteristic of the NHS (Pettigrew et al. 1992: 288).

The third project was the largest and most ambitious. The *Innovative Forms of Organizing* (INN-FORMS) project examined organizational innovation in almost 800 firms in Europe, Japan and the USA, at two time points, 1992 and 1996. It involved a large-scale survey and 18 detailed case studies. The survey showed variation between countries, indicating the influence of national institutions. The survey showed that less than 5% of firms were simultaneously changing their boundaries, structures and processes *despite* 'a performance premium of more than 60%' for those that did (Pettigrew and Fenton 2000: 281). This surprising observation led the authors to the role of 'complementarities' and the J-curve.

Complementarity theory has a clear affinity with configuration theory and the notion of archetypes. It shares with configuration theory a focus upon 'holism, the importance of mutual reinforcement and the problem of change' (Whittington and Pettigrew 2003: 127). The basic idea is that doing more of one thing increases returns from doing more of another by providing an internal synergy. This idea has several implications for change. It is only when initiatives 'are cumulated into complementary packages' (Whittington and Pettigrew 2003: 129) that they show performance benefits. Hence, complementarities require 'strong central leadership, capable of imposing and maintaining coherence between complementary elements' (Whittington and Pettigrew 2003: 129). However, change cannot be accomplished in an instant:

The challenge for managers, therefore, is to manage the steps between untangling one complementary system and bedding down the new complementary system. With no new system in place, and with some of its building blocks potentially dysfunctional as they await their complements, organizations in transition are likely to suffer severe performance penalties, possibly worse than the original status quo (Whittington and Pettigrew 2003: 129).

In short, things get worse before they get better. Therefore, 'leadership must be strong, not just to assemble comprehensive programmes, but to survive the long gap before the positive effects of completed systems kick in' (Whittington and Pettigrew 2003: 131). Strong leadership requires the ability to orchestrate the multiple, additive processes and the simplifying processes identified in earlier work. Simplifying processes included the provision of 'clear, simple and evocative messages', periodic pruning of 'burgeoning' network complexity and use of IT to facilitate intraorganizational communication.

Conclusion

A central purpose of this research programme is to show how a contextual, historical and processual approach to understanding change produces intimations, suggestions and understandings rather than definitive causes and irreversible relationships. Because organizations are different in their specific contexts and histories, Pettigrew is repeatedly cautious of offering a singular theory of change. Nevertheless, from the work conducted by Pettigrew and colleagues, several key insights about the *management* of change can be highlighted.

First, change is problematical because of cognitive frames that blind most organizational members to the need for change. These frames are embedded in organizational routines that privilege the interests of certain stakeholders. Change is also problematical because modern organizational forms are more complex than predecessor forms. Finally, change is problematical because of the holistic nature of organizational systems: multiple parts of the organization have to move before performance benefits begin to be realized. Politically, moving an organization though the J-curve requires considerable leadership skill and power, to move the organization beyond the bottom of the curve.

Secondly, change will not occur without sustained market or (as in the case of the NHS study) institutional pressures. These pressures have to be recognized by skillful leaders who prepare organizations for change by delegitimating existing frames and legitimating new ones. Using the language of neo-institutional theory, the need for change has to be *theorized* within the organization. There is a potential tension between the dynamics of change legitimation and of complementarities. On the one

hand, underlying legitimation is the need to persuade rather than coerce members into not only accepting that change is preferable, but that the proposed direction of change is worthy of commitment. Change will not occur until this lengthy, after incremental process is accomplished. Yet, the transitional performance decline implied by the J-curve points to the benefit of speed. Reconciling these two dynamics requires sustained and skillful leadership.

Thirdly, the processes of leadership occur not as dramatic interventions, but in the form of additive, often opportunistic, skillfully timed interventions that aggregate into a direction of change. The challenge of sustaining the momentum required for change is considerable. Some organizational contexts, however, are more receptive than others to change, i.e. those that are integrative in their structures and information processes. Finally, effective processes include simplifying mechanisms that guide and *stabilize* progress towards change. In the midst of the buzzing array of initiatives and performance uncertainties, leadership has to recurrently simplify the purpose of change (the 'why') and the processes of achieving it (the 'how').

Conclusions

Change is one of the grand themes in the social sciences and today is a central theme in organization theory. From the mid-1980s, change has been a point of intellectual debate and theoretical consideration. This chapter has traced the development of ideas about change, from early considerations within the major perspectives of organization theory, to more explicit theorizing about change from the mid-1980s onwards. We emphasized that this progression was associated with increasing recognition of the difficulty of change and of the importance of field-level processes. We used three theories to illustrate the range of questions currently being addressed: What are the dynamics that precipitate change? Where do new organizational forms arise and how is the choice-set of socially approved organizational templates extended or revised? What are the temporal and organizational processes by which change unfolds? *Can* change be successfully managed and, if so, how?

The literature on change cannot be summarized as a neat package of agreed-upon conclusions. There

is broad agreement on the difficulties of achieving organizational change and on some of the key processes that are involved in the emergence of new organizational forms and the complexities of adopting them. We certainly know more today than in the late 1960s. The theories summarized in this chapter testify to the progress made. Yet, there is clearly much that is not known.

We especially need to know more about the co-evolution of field level and organizational arrangements. In this sense, we concur with Pettigrew's call for more historical and multi-levelled analysis, in order to tease out the ways that institutional and market structures interact with each other, shaping organizational responses and, in turn, being shaped by them. There are clear exemplars of this approach, but too few.

However, perhaps the most glaring weakness in current studies is the absence of concern for the consequences of change. Studies of organizational change basically concerned how the choice-sets of organizational templates changes our time, and with the responses of organizations to them. Where and how do new organizational forms arise? And, to what extent and by which means can organizations exercise choice between that choice-set? Rarely do we ask about the effect of these macro and micro processes. Perrow (2002) has gone furthest in exploring the relationship between organizational form (especially the large corporation) and class interests within society. The focus links the choice-set of organizational forms to the material consequences for groups within society. We need to know about these sorts of consequences. We also need to know more about the consequences of organizations moving within that choice-set. Does the shift from a vertically integrated M-Form to a geographically dispersed organizational network affect the material and other interests of different stakeholders and in different locations? Our presumption is that it does, but theory is silent on this question. Does the empirically documented shift in the organizational forms of accounting firms, from the relatively modest-sized professional partnership to a more corporatist and managerial transnational form, have implications for the practice of professional work, relationships between professions and clients and the workings of financial and capital markets? Almost certainly: but we know little about such consequences.

We know much more today than in the 1960s. However, there are few absolutes. In reality, we

profess to know more than we do and there is a worrying disjunct between our research observations and our claims to practitioners (Miller et al. 1997). We suspect that, a decade from now, the study of radical organization change will still be a high priority within organization theory, both because of its relevance to the experiences of organizations and because of the multiplicity of important themes within it. We also suspect that we will especially know much more about how and why individual organizations can *manage* radical change. We are less optimistic that we will know much about its broader societal consequences.

References

Abrahamson, E. (1991) 'Managerial fads and fashions: the diffusion and rejection of innovations', *Academy of Management Review*, 16(3): 586–612.

Aldrich, H. (1979) *Organizations and Environments*. Englewood Cliffs, NJ: Prentice-Hall.

Aldrich, H.E. and Fiol, C.M. (1994) 'Fools rush in? The institutional context of industry creation', *Academy of Management Review*, 19: 645–70.

Amis, J., Slack, T. and Hinings, C.R. (2004) 'The pace, sequence and linearity of radical change', *Academy of Management Journal*, 47(1): 15–39.

Anand, N. and Watson, M.R. (2004) 'Tournament rituals in the evolution of fields: the case of the Grammy Awards', *Academy of Management Journal*, 47(1): 59–80.

Anderson, P. and Tushman, M. (1990) 'Technological discontinuities and dominant designs: a cyclical model of technological change', *Administrative Science Quarterly*, 35: 604–33.

Astley, W.G. and Van de Ven, A.H. (1983) 'Central perspectives and debates in organizational theory', *Administrative Science Quarterly*, 28: 245–73.

Baum, J.A.C. and Ingram, P. (1998) 'Survival enhancing learning in the Manhattan hotel industry, 1898–1980', *Management Science*, 44(7): 996–1017.

Baum, J.A.C. and Ingram, P. (2002) 'Interorganizational learning and network organizations: toward a behavioral theory of the 'interfirm'', in M. Augier and J.G. March (eds), *The Economics of Change, Choice, and Structure: Essays in the memory of Richard M. Cyert*. Cheltenham, UK: Edward Elgar. pp. 191–218.

Boeker, W. and Goodstein, J. (1991) 'Organizational performance and adaptation: effects of environment and performance on changes in board composition', *Academy of Management Journal*, 34(4): 805–26.

Borgatti, S.P. and Foster, P.C. (2003) 'The network paradigm in organizational research: a review of typology', *Journal of Management*, 29(6): 991.

Brown, S.L. and Eisenhardt, K.M. (1997) 'The art of continuous change: linking complexity theory and time-paced evolution in relentlessly shifting organizations', *Administrative Science Quarterly*, 42(1): 1–34.

Burke, W.W. (2002) *Organization Change: Theory and Practice*. Thousand Oaks, CA: Sage Publications.

Burns, L.R. and Wholey, D.R. (1993) 'Adoption and abandonment of matrix management programs: effects of organizational characteristics and interorganizational networks', *Academy of Management Journal*, 36(1): 106–38.

Burns, T. and Stalker, G.M. (1961) *The Management of Innovation*. London: Tavistock.

Burt, R.S. (2000) 'The network structure of social capital', *Research in Organizational Behaviour*, 22: 345–423.

Chandler, A.D. (1962) *Strategy & Structure*. Cambridge, MA: MIT Press

Child, A.J.E. (1972) 'Viewpoint: Social responsibility of the businessman: the success of his company and little else', *Business Quarterly*, 27(3): 15–20.

Christensen, C.M. and Bower, J.L. (1996) 'Customer power, strategic investment, and the failure of leading firms', *Strategic Management Journal*, 17(3): 197–219.

Christensen, C.M. and Rosenbloom, R.S. (1995) 'Explaining the attacker's advantage: technological paradigms, organizational dynamics, and the value network', *Research Policy*, 24(2): 233–58.

Coleman, J.S. (1988) 'Social capital in the creation of human capital', *American Journal of Sociology*, 94: S95–S120.

Cooper, A.C. and Smith, C.G. (1992) 'How established firms respond to threatening technologies', *The Executive*, 6(2): 55–71.

Covaleski, M., Dirsmith, M.W. and Rittenberg, L. (2003) 'Jurisdictional disputes over professional work: the institutionalization of the global knowledge expert', *Accounting Organizations and Society*, 28(4): 325–55.

Cusumano, M., Mylonadis, Y. and Rosenbloom, R. (1992) 'Strategic maneuvering and mass market dynamics: the triumph of VHS over Beta', *Business History Review*, 66(1): 51–93.

Cyert, R.M. and March, J.G. (1963) *The Behavioral Theory of the Firm*. Englewood Cliffs, NJ: Prentice-Hall.

D'Aunno, T., Succi, M. and Alexander, J.A. (2000) 'The role of institutional and market forces in divergent organizational change', *Administrative Science Quarterly*, 45(4): 679–703.

Dacin, M.T., Goodstein, J. and Scott, W.R. (2002) 'Institutional theory and institutional change: introduction to the special research forum', *Academy of Management Journal*, 45(1): 45–7.

Davis, G.F., Diekmann, K.A. and Tinsley, C.H. (1994) 'The decline and fall of the conglomerate firm in the 1980s: the deinstitutionalization of an organizational form', *American Sociological Review*, 59(4): 547–70.

Davis, G.R. (1991) 'Agents without principle? The spread of the poison pill through the intercorporate network', *Administrative Science Quarterly*, 36: 583–613.

Denrell, J. and March, J.G. (2001) 'Adaptation as information restriction: the hot stove effect', *Organization Science*, 12(5): 523–38.

DiMaggio, P.J. (1988) 'Interest and agency in institutional theory', in L.G. Zucker (ed.), *Institutional Patterns and Organizations: Culture and Environment*. Cambridge, MA: Ballinger. pp. 3–22.

DiMaggio, P.J. and Powell, W.W. (1983) 'The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields', *American Sociological Review*, 48: 147–60.

Dobbin, F. and Dowd, T.J. (1997) 'How policy shapes competition: early railroad foundings in Massachusetts', *Administrative Science Quarterly*, 42: 501–29.

Dobbin, F. and Dowd, T.J. (2000) 'The market that antitrust built: public policy, private coercion, and railroad acquisitions, 1825–1922', *American Sociological Review*, 65: 631–57.

Donaldson, L. (1997) 'A positive alternative to the structure-action approach', *Organization Studies*, 18(1): 77–92.

Donaldson, L. (2001) *The Contingency Theory of Organizations*. Thousand Oaks, CA: Sage Publications.

Doty, D.H., Glick, W.H. and Huber, G.P. (1993) 'Fit, equifinality, and organizational effectiveness: a test of two configurational theories', *Academy of Management Journal*, 36(6): 1196–250.

Drazin, R. and Van de Ven, A.H. (1985) 'Alternative forms of fit in contingency theory', *Administrative Science Quarterly*, 30(4): 514–40.

Dutton, J.E. and Duncan, R.B. (1987) 'The creation of momentum for change through the process of strategic issue diagnosis', *Strategic Management Journal*, 8(3): 279–95.

Eisenhardt, K. and Tabrizi, B. (1995) 'Acceleration adaptive processes', *Administrative Science Quarterly*, 40: 84–110.

Ethiraj, S.K. and Levinthal, D. (2004) 'Bounded rationality and the search for organizational architecture: an evolutionary perspective on the design of organizations and their evolvability', *Administrative Science Quarterly*, 49: 404–37.

Feldman, M.S. (2003) 'A performative perspective on stability and change in organizational routines', *Industrial and Corporate Change*, 12(4): 727.

Feldman, M.S. and Pentland, B.T. (2003) 'Reconceptualizing organizational routines as a source of flexibility and change', *Administrative Science Quarterly*, 48(1): 94.

Feldman, M.S. and Rafaeli, A. (2002) 'Organizational routines as sources of connections and understandings', *Journal of Management Studies*, 39(3): 309.

Fligstein, N. (1985) 'The spread of the multidivisional form among large firms, 1919–1979', *American Sociological Review*, 50: 377–91.

Fox-Wolfgramm, S.J., Boal, K. and Hunt, J.G. (1998) 'Organizational adaptation to institutional change: a comparative study of first-order change in prospector and defender banks', *Administrative Science Quarterly*, 43: 87–126.

Friedland, R. and Alford, R.R. (1991) 'Bringing society back in: symbols, practices and institutional contradictions', in W.W. Powell and P.J. DiMaggio (eds), *The New Institutionalism in Organizational Analysis*. Chicago, IL: University of Chicago Press. pp. 232–63.

Frost, P.J. and Egri, C.P. (1991) 'The political process of innovation', in L.L. Cummings and B.M. Staw (eds), *Research in Organizational Behavior*, Vol. 13. London: JAI Press. pp. 229–95.

Galaskiewicz, J. and Wasserman, S. (1989) 'Mimetic processes within an interorganizational field', *Administrative Science Quarterly*, 34(3): 454–80.

Gargiulo, M. and Benassi, M. (2000) 'Trapped in your own net? Network cohesion, structural holes, and the adaptation of social capital', *Organization Science*, 11(2): 183–96.

Gioia, D.A. and Thomas, J.B. (1996) 'Identity, image, and issue interpretation: sensemaking during strategic change in academia', *Administrative Science Quarterly*, 41(3): 370–404.

Gooderham, P.N., Nordhaug, O. and Ringdal, K. (1999) 'Institutional and rational determinants of organizational practices: Human resource management in European firms', *Administrative Science Quarterly*, 44(3): 507–32.

Goodman, P.S. (1982) *Change in Organizations*. San Francisco, CA: Jossey-Bass Inc.

Gordon, S.S., Stewart, W.H. Jr., Sweo, R. and Luker, W.A. (2000) 'Convergence versus strategic reorientation: the antecedents of fast-paced organizational change', *Journal of Management*, 26(5): 911–45.

Granovetter, M. (1985) 'Economic actions and social structure: the problem of embeddedness', *American Journal of Sociology*, 91: 481–510.

Greenwood, R. and Hinings, C.R. (1990) '"P2 Form" strategic management: corporate practices in professional partnerships', *Academy of Management Journal*, 33(4): 725–55.

Greenwood, R. and Hinings, C.R. (1993) 'Understanding strategic change: the contribution of archetypes', *Academy of Management Journal*, 36(5): 1052–82.

Greenwood, R. and Hinings, C.R. (1996) 'Understanding radical organizational change: bringing together the old and the new institutionalism', *Academy of Management Review*, 21(4): 1022–55.

Greenwood, R. and Suddaby, R. (2006) 'Institutional entrepreneurship in mature fields: the Big Five accounting firms', *Academy of Management Journal*, 49(1).

Greenwood, R., Suddaby, R., Hinings, C.R. (2002) 'Theorizing change: the role of professional associations in the transformation of institutional fields', *Academy of Management Journal*, 45(1): 58–80.

Greiner, L.E. (1972) 'Evolution and revolution as organizations grow', *Harvard Business Review*, 50(4): 37.

Gresov, C. and Drazin, R. (1997) 'Equifinality, functional equivalence in organization design', *Academy of Management Review*, 22: 403–28.

Greve, H.R. (1995) 'Jumping ship: The diffusion of strategy abandonment', *Administrative Science Quarterly*, 40(3): 444–73.

Greve, H.R. (1996) 'Patterns of competition: the diffusion of a market position in radio broadcasting', *Administrative Science Quarterly*, 41: 29–60.

Greve, H.R. (1998) 'Performance, aspirations and risky organizational change', *Administrative Science Quarterly*, 43: 58–86.

Greve, H.R. (2003) *Organizational Learning from Performance Feedback*. Cambridge: Cambridge University Press.

Gulati, R. and Gargiulo, M. (1999) 'Where do interorganizational networks come from?', *American Journal of Sociology*, 104: 1439–93.

Hannan, M.T. and Carroll, G. (eds) (1995) *Organizations in Industry*. Oxford, UK: Oxford University Press.

Hannan, M.T. and Freeman, J. (1977) 'The population ecology of organizations', *American Journal of Sociology*, 82(5): 929–64.

Hannan, M.T. and Freeman, J. (1984) 'Structural inertia and organizational change', *American Sociological Review*, 49: 149–64.

Hargadon, A.B. (2002) 'Brokering knowledge: linking learning and innovation', *Research in Organizational Behavior*, 24: 41–85.

Haunschild, P. and Miner, A.S. (1997) Models of interorganizational imitation. *Administrative Science Quarterly*, 42: 472-500.

Haveman, H.A. (1993) 'Follow the leader', *Administrative Science Quarterly*, 38: 564–92.

Haveman, H.A. and Rao, H. (1997) 'Structuring a theory of moral sentiments: institutional and organizational coevolution in the early thrift industry', *American Journal of Sociology*, 102: 1606–51.

Hickson, D.J., Hinings, C.R., Lee, C.A., Schneck, R.E. and Pennings, J.M. (1971) 'Strategic contingencies theory of intraorganizational power', *Administrative Science Quarterly*, 16(2): 216–29.

Hillman, A.J., Cannella, A.A. and Paetzold, R.L. (2000) 'The resource dependence role of corporate directors: strategic adaptation of board composition in response to environmental change', *Journal of Management Studies*, 37(2): 235–55.

Hinings, C.R. and Greenwood, R. (1988) *The Dynamics of Strategic Change*. Oxford, UK: Basil Blackwell.

Hirsch, P.M. (1986) 'From ambushes to golden parachutes: corporate takeovers as an instance of cultural framing and institutional integration', *American Journal of Sociology*, 91(4): 800–37.

Hoffman, A.J. (1999) 'Institutional evolution and change: environmentalism and the US chemical industry', *Academy of Management Journal*, 42(4): 351–71.

Hoffman, A.J. and Ventresca, M.J. (1999) 'The institutional framing of policy debates', *American Behavioral Scientist*, 42(8): 1368–92.

Johnson, G. (1987) *Strategic Change and the Management Process*. Oxford, UK: Basil Blackwell.

Johnson, G., Smith, S. and Codling, B. (2000) 'Micro-processes of institutional change in the context of privatization', *Academy of Management Review*, 25(3): 572–80.

Kanter, R.M. (1983) *The Change Masters*. New York: Simon and Schuster.

Keck, S.L. and Tushman, M.L. (1993) 'Environmental and organizational context and executive team structure', *Academy of Management Journal*, 36(6): 1314–44.

Kikulis, L., Slack, T. and Hinings, C.R. (1995a) 'Sector-specific patterns of organizational design change', *Journal of Management Studies*, 32: 67–100.

Kikulis, L., Slack, T. and Hinings, C.R. (1995b) 'Towards an understanding of the role of agency and choice in the changing structure of Canada's national sport organizations', *Journal of Sport Management*, 9: 135–52.

Kimberly, J.R. (1984) 'Anatomy of organizational design', *Journal of Management*, 10: 109–26.

Kimberly, J.R. and Miles, R.H. (1980) *The Organizational Life Cycle*. San Francisco, CA: Jossey-Bass Inc.

Kimberly, J.R. and Quinn, R.E. (1984) *New Futures: The Challenge of Managing Corporate Transitions*. Homewood, IL: Dow Jones-Irwin.

Kraatz, M.S. (1998) 'Learning by association? Interorganizational networks and adaptation to environmental change', *Academy of Management Journal*, 41(6): 621–43.

Kraatz, M.S. and Moore, J.H. (2002) 'Executive migration and institutional change', *Academy of Management Journal*, 45(1): 120–43.

Kraatz, M.S. and Zajac, E.J. (1996) 'Exploring the limits of the new institutionalism: the causes and consequences of illegitimate organizational change', *American Sociological Review*, 61(5): 812–36.

Kraatz, M.S. and Zajac, E.J. (2001) 'How organizational resources affect strategic change and performance in turbulent environments: theory and evidence', *Organization Science*, 12(5): 632–57.

Lant, T.K. (1992) 'Aspiration level adaptation: an empirical exploration', *Management Science*, 38(5): 623–44.

Lant, T.K. and Mezias, S.J. (1990) 'Managing discontinuous change: a simulation study of organizational learning and entrepreneurship', *Strategic Management Journal*, 11: 147–79.

Lant, T.K., Milliken, F.J. and Batra, B. (1992) 'The role of managerial learning and interpretation in strategic persistence and reorientation: an empirical exploration', *Strategic Management Journal*, 13(8): 585–608.

Lawrence, T. (1999) 'Institutional strategy', *Journal of Management*, 25(2): 161–88.

Lawrence, T., Hardy, C. and Phillips, N. (2002) 'Institutional effects of interorganizational collaboration: the emergence of proto-institutions', *Academy of Management Journal*, 45: 281–91.

Leblebici, H., Salancik, G., Copay, A. and King, T. (1991) 'Institutional change and the transformation of the US radio broadcasting industry', *Administrative Science Quarterly*, 36: 333–63.

Levinthal, D.A. and March, J.G. (1993) 'The myopia of learning', *Strategic Management Journal*, 14(Special Issue): 95–112.

Li, S.X. and Greenwood, R. (2004) 'The effect of within-industry diversification on firm performance: synergy creation, multi-market contact and market structuration', *Strategic Management Journal*, 25(12): 1131–53.

Lounsbury, M. (1999) 'From heresy to dogma: an institutional history of corporate environmentalism', *Administrative Science Quarterly*, 44(1): 193–6.

Lounsbury, M. (2001) 'Institutional sources of practice variation: staffing college and university recycling programs', *Administrative Science Quarterly*, 46(1): 29–56.

Madhavan, R., Koka, B.R. and Prescott, J.E. (1998) 'Networks in transition: how industry events (re)shape interfirm relationships', *Strategic Management Journal*, 19: 439–59.

Maguire, S., Hardy, C. and Lawrence, T.G. (2004) 'Institutional entrepreneurship in emerging fields: HIV/AIDS treatment advocacy in Canada', *Academy of Management Journal*, 47(5): 657–79.

Malerba, F. and Orsenigo, L. (1996) 'The dynamics and evolution of industries', *Industrial and Corporate Change*, 5(1): 51–88.

Malerba, F. and Orsenigo, L. (1997) 'Technological regimes and sectoral patterns of innovative activities', *Industrial and Corporate Change*, 6(1): 83–118.

March, J.G. (1981) 'Footnotes to organizational change', *Administrative Science Quarterly*, 26: 563–77.

March, J.G. (1991) 'Exploration and exploitation in organizational learning', *Organization Science*, 2: 71–87.

McGrath, R.M., MacMillan, I.C. and Tushman, M.L. (1992) 'The role of executive team actions in shaping dominant designs: towards the strategic shaping of technological progress', *Strategic Management Journal*, 13(Special Issue, Winter): 137–61.

Methé, D., Swaminathan, A. and Mitchell, W. (1996) 'The underemphasized role of established firms as the sources of major innovations', *Industrial and Corporate Change*, 5(4): 1181–204.

Meyer, A.D. (1982) 'Adapting to environmental jolts', *Administrative Science Quarterly*, 27(4): 515–37.

Meyer, A.D., Brooks, G.R. and Goes, J.B. (1990) 'Environmental jolts and industry revolutions: organizational responses to discontinuous change', *Strategic Management Journal*, 11(Special Issue): 93–110.

Meyer, J.W. and Rowan, B. (1977) 'Institutionalized organizations: formal structure as myth and ceremony', *American Journal of Sociology*, 83(2): 440–63.

Miles, R.E. and Snow, C.C. (1978) *Organizational Strategy, Structure, and Process*. McGraw-Hill Series in Management. New York: McGraw-Hill.

Miller, D. (1981) 'Toward a new contingency approach: the search for organizational gestalts', *Journal of Management Studies*, 18: 1–27.

Miller, D. (1982) 'Evolution and revolution: a quantum view of structural change in organizations', *Journal of Management Studies*, 9: 131–51.

Miller, D. (1993) 'The architecture of simplicity', *Academy of Management Review*, 18(1): 116–38.

Miller, D. (1996) 'Configurations revisited', *Strategic Management Journal*, 17: 505–12.

Miller, D. and Chen, M-J. (1994) 'Sources and consequences of competitive inertia: a study of the US airline industry', *Administrative Science Quarterly*, 39(1): 1–23.

Miller, D. and Friesen, P. (1980) 'Momentum and revolution in organization adaptation', *Academy of Management Journal*, 23(4): 591–614.

Miller, D. and Friesen, P. (1982) 'Structural change and performance: quantum vs piecemeal-incremental approaches', *Academy of Management Journal*, 25: 867–92.

Miller, D. and Friesen, P.H. (1984) *Organizations: A Quantum View*. Englewood Cliffs, NJ: Prentice Hall.

Miller, D., Greenwood, R. and Hinings, C.R. (1997) 'Creative chaos on munificent momentum: academic and practitioner view of organizational change', *Journal of Management Inquiry*, 6: 71–8.

Miller, D., Lant, T.K., Milliken, F.J. and Korn, H.J. (1996) 'The evolution of strategic simplicity: exploring two models of organizational adaptation', *Journal of Management*, 22(6): 863–87.

Mintzberg, H. (1979) *The Structuring of Organizations*. Englewood Cliffs, NJ: Prentice Hall.

Mintzberg, H. (1983) *Power in and Around Organizations*. Englewood Cliffs, NJ: Prentice Hall.

Moorman, C. and Miner, A.S. (1998) 'Organizational improvisation and organizational memory', *Academy of Management Review*, 23(4): 698–723.

Morris, T. and Pinnington, A. (1999) 'Continuity and change in professional organizations: the evidence from law firms', in D. Brock, M. Powell and C.R. Hinings (eds), *Restructuring the Professional Organization: Accounting, Health Care and Law*. London: Routledge. pp. 200–14.

North, D.C. (1990) *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.

O'Reilly III, C.A. and Tushman, M.L. (2004) 'The ambidextrous organization', *Harvard Business Review*, 82(4): 74.

Ocasio, W. and Kim, H. (1999) 'The circulation of corporate control: selection of functional backgrounds of new CEOs in large US manufacturing firms, 1981–1992', *Administrative Science Quarterly*, 44: 532–62.

Oliver, C. (1991) 'The antecedents of deinstitutionalization', *Organization Studies*, 13(4): 563–88.

Palmer, D. and Barber, M. (2001) 'Challengers, elites and owning families: a social class theory of corporate acquisitions in the 1960s', *Administrative Science Quarterly*, 46: 87–120.

Palmer, D., Jennings, P.D. and Zhou, X. (1993) 'Late adoption of the multidivisional form by large US corporations: institutional, political and economic accounts', *Administrative Science Quarterly*, 38(1): 100–32.

Pennings, J.M. (1985) *Organizational Strategy and Change*. San Francisco, CA: Jossey-Bass Inc.

Pennings, J.M. (1992) 'Structural contingency theory: a reappraisal', *Research in Organizational Behavior*, 14: 267–309.

Pentland, B.T. (1995) 'Grammatical models of organizational processes', *Organization Science*, 6(5): 541–57.

Pentland. B.T. and Rueter, H.H. (1994) 'Organizational routines as grammars of action. *Administrative Science Quarterly*, 39(3): 484–511.

Perrow, C. (2002) *Organizing America Wealth, Power and the Origins of Corporate Capitalism*. Princeton: Princeton University Press.

Pettigrew, A.M. (1983) 'Patterns of managerial response as organizations move from rich to poor environments', *Educational Management Administration*, 2: 104–14.

Pettigrew, A.M. (1985) *The Awakening Giant: Continuity and Change in Imperial Chemical Industries*. Oxford, UK: Blackwell.

Pettigrew, A.M. (1987) 'Context and action in the transformation of the firm', *Journal of Management Studies*, 24(6): 649–70.

Pettigrew, A.M. and Fenton, E.M. (2000) 'Complexities and dualities in innovative forms of organizing', in A.M. Pettigrew and E.M. Fenton (eds), *The Innovating Organization*. London, UK: Sage Publications. pp. 279–300.

Pettigrew, A.M. and Whipp, R. (1991) *Managing Change for Competitive Success*. Oxford: Blackwell.

Pettigrew, A., Ferlie, E. and McKee, L. (1992) *Shaping Strategic Change*. London: Sage.

Pfeffer, J. (2003) 'Preface', in J. Pfeffer and G.R. Salancik (eds), *The External Control of Organizations*, 2nd edn. Stanford, CA: Stanford Business Classics. pp. xxxi–iii.

Pfeffer, J. and Salancik, G.R. (1978) *The External Control of Organizations*. New York: Harper and Row.

Phillips, D.J. and Zuckerman, E.W. (2001) 'Middle-status conformity: theoretical restatement and empirical demonstration in two markets', *American Journal of Sociology*, 107(2): 379–429.

Podolny, J.M. (1993) 'A status-based model of market competition', *American Journal of Sociology*, 98: 829–72.

Portes, A. and Sensenbrenner, J. (1993) 'Embeddedness and immigration: notes on the social determinants of economic action', *American Journal of Sociology*, 98: 1320–50.

Powell, W.W. and DiMaggio, P.J. (1991) *The New Institutionalism in Organizational Analysis*. Chicago, IL: University of Chicago Press.

Pugh, D.S., Hickson, D.J. and Hinings, C.R. (1969) 'The context of organization structures', *Administrative Science Quarterly*, 14: 91–114.

Quinn, R.E. and Cameron, K.S. (1983) 'Organizational life cycles and shifting criteria of effectiveness: some preliminary evidence', *Management Science*, 29: 33–51.

Rao, H. (1994) 'The social construction of reputation: certification contests, legitimation and the survival of organizations in the American automobile company', *Strategic Management Journal*, 15(Special Issue): 29–44.

Rao, H. (1998) 'Caveat emptor: the construction of nonprofit consumer watchdog organizations', *American Journal of Sociology*, 103: 912–61.

Rao, H. and Drazin, R. (2002) 'Overcoming resource constraints on product innovation by recruiting talent from rivals: a study of the mutual fund industry, 1986–94', *Academy of Management Journal*, 45(3): 491–507.

Rao, H., Monin, P. and Durand, R. (2003) 'Institutional change in Toque Ville: nouvelle cuisine as an identity movement in French gastronomy', *American Journal of Sociology*, 108(4): 795–843.

Reay, T. and Hinings, C.R. (2005) 'The recomposition of an organizational field: health care in Alberta', *Organization Studies*, 26(3): 351–84.

Reay, T., Golden-Biddle, K. and GermAnn, K. (2006) 'Legitimizing a new role: small wins and microprocesses of change', *Academy of Management Journal*, in press.

Romanelli, E. and Tushman, M.L. (1994) 'Organizational transition as punctuated equilibrium: an empirical test', *Academy of Management Journal*, 37(5): 1141–66.

Rosenbloom, R.S. and Christensen, C.M. (1994) 'Technological discontinuities, organizational capabilities, and strategic commitments', *Industrial and Corporate Change*, 3(3): 655–85.

Ruef, M. (2000) 'The emergence of organizational forms: a community ecology approach', *American Journal of Sociology*, 106(3): 658–714.

Sahlin-Anderson, K. and Engwall, L. (eds) (2002) *The Expansion of Management Knowledge: Carriers, Flows, and Sources*. Stanford, CA: Stanford Business Books.

Salancik, G.R. (1995) 'Wanted: a good network theory of organization', *Administrative Science Quarterly*, 40: 345–9.

Saxenian, A. (1994) *Regional Advantage: Culture and Competition in Silicon Valley and Route 128*. Cambridge, MA: Harvard University Press.

Scott, W.R. (1995) *Institutions and Organizations*. Thousand Oaks, CA: Sage.

Scott, W.R., Ruef, M., Mendel, P.J. and Caronna, C.A. (2000) *Institutional Change and Healthcare Organizations: From Professional Dominance to Managed Care*. Chicago, IL: University of Chicago Press.

Seo, M-G. and Creed, W.E.D. (2002) 'Institutional contradictions, praxis, and institutional change: a dialectic perspective', *Academy of Management Review*, 27(2): 222–47.

Sewell, W.H. Jr. (1992) 'A theory of structure: duality, agency, and transformation', *American Journal of Sociology*, 98: 1–29.

Sherer, P.D. and Lee, K. (2002) 'Institutional change in large law firms: a resource dependency and institutional perspective', *Academy of Management Journal*, 45: 102–19.

Siggelkow, N. (2001) 'Change in the presence of fit: the rise, the fall and the renaissance of Liz Clairborne', *Academy of Management Journal*, 44(4): 838–57.

Siggelkow, N. (2002) 'Evolution toward fit', *Administrative Science Quarterly*, 47: 125–59.

Sorensen, J.B. and Stuart, T.E. (2000) 'Aging, obsolescence, and organizational innovation', *Administrative Science Quarterly*, 45: 81–112.

Strang, D. and Meyer, J.W. (1993) 'Institutional conditions for diffusion', *Theory and Society*, 22: 487–511.

Stuart, T.E. (1988) 'Network positions and propensities to collaborate: an investigation of strategic alliance formation in a high-technology industry', *Administrative Science Quarterly*, 43: 668–98.

Stuart, T.E. (2000) 'Interorganizational alliances and the performance of firms: a study of growth and innovation rates in a high-technology industry', *Strategic Management Journal*, 21(8): 791–811.

Suddaby, R. and Greenwood, R. (2005) 'Rhetorical strategies of legitimacy', *Administrative Science Quarterly*, 50: 35–67.

Sull, D.N., Tedlow, R.S. and Rosenbloom, R.S. (1997) 'Managerial commitments and technological change in the US tire industry', *Industrial and Corporate Change*, 6(2): 461–501.

Teece, D.J. (1986) 'Profiting from technological innovation: Implications for integration, collaboration, licensing and public policy', *Research Policy*, 15(6): 285–305.

Teece, D. and Pisano, G. (1994) 'The dynamic capabilities of firms: an introduction', *Industrial and Corporate Change*, 3(3): 537–56.

Thornton, P.H. (1995) 'Accounting for acquisition waves: evidence from the US college publishing industry', in W.R. Scott and S. Christensen (eds), *The Institutional Construction of Organizations: International and Longitudinal Studies*. Thousand Oaks, CA: Sage. pp. 199–225.

Thornton, P.H. (2004) *Markets from Culture*. Stanford, CA: Stanford University Press.

Thornton, P.H. and Ocasio, W. (1999) 'Institutional logics and the historical contingency of power in organizations: executive succession in the higher education publishing industry, 1958–1990', *American Journal of Sociology*, 105(3): 801–43.

Tolbert, P.S. and Zucker, L.G. (1983) 'Institutional sources of change in the formal structure of organizations: the diffusion of civil service reform, 1880–1935', *Administrative Science Quarterly*, 30: 22–39.

Tolbert, P.S. and Zucker, L.G. (1996) 'The institutionalization of institutional theory', in S.R. Clegg, C. Hardy and W.R. Nord (eds), *Handbook of Organizational Studies*. Thousand Oaks, CA: Sage. pp. 148–74.

Tripsas, M. (1997) 'Unraveling the process of creative destruction: complementary assets and incumbent survival in the typesetter industry', *Strategic Management Journal*, 18(Special Issue): 119–42.

Tripsas, M. and Gavetti, G. (2000) 'Capabilities, cognition, and inertia: evidence from digital imaging', *Strategic Management Journal*, 21: 1147–61.

Tsoukas, H. and Chia, R. (2002) 'On organizational becoming: rethinking organizational change', *Organization Science*, 13(5): 567–82.

Tushman, M. and Anderson, P. (1986) 'Technological discontinuities and organizational environments', *Administrative Science Quarterly*, 31: 439–65.

Tushman, M.L. and Murmann, J.P. (1998) 'Dominant designs, technology cycles, and organizational outcomes', *Research in Organizational Behavior*, 20: 231–66.

Tushman, M.L. and Romanelli, E. (1985) 'Organizational evolution: a metamorphosis model of convergence and reorientation', *Research in Organizational Behavior*, 7: 171–222.

Tushman, M.L. and Rosenkopf, L. (1992) 'Organizational determinants of technological change: toward a sociology of technological evolution', *Research in Organizational Behavior*, 14: 311–47.

Tushman, M.L. and Rosenkopf, L. (1996) 'Executive succession, strategic reorientation and performance growth: a longitudinal study in the US cement industry', *Management Science*, 42(7): 939–53.

Uzzi, B. (1997) 'Social structure and competition in interfirm networks: the paradox of embeddedness', *Administrative Science Quarterly*, 42(1): 35–67.

Van de Ven, A.H. and Garud, R. (1989) 'A framework for understanding the emergence of new industries', in R.S. Rosenbloom (ed.), *Research on Technological Innovation, Management, and Policy*. Greenwich, CT: JAI Press. pp. 295–325.

Van de Ven, A. and Garud, R. (1994) 'The co-evolution of technical and institutional events in the development of an innovation', in J. Baum and J. Singh (eds), *Evolutionary Dynamics of Organizations*. New York: Oxford University Press. pp. 425–43.

Virany, B., Tushman, M.L. and Romanelli, E. (1992) 'Executive succession and organization outcomes in turbulent environments: an organization learning approach', *Organization Science*, 3(1): 72–91.

Weick, K.E. (1995) *Sensemaking in Organizations*. Thousand Oaks, CA: Sage Publications.

Westphal, J.D., Gulati, R. and Shortell, S. (1997) 'Customization or conformity? An institutional and network perspective on the content and consequences of TQM adoption', *Administrative Science Quarterly*, 42: 366–94.

Whittington, R. and Pettigrew, A.M. (2003) 'Complementarities thinking', in A.M. Pettigrew, R. Whittington, L. Melin, C. Sánchez-Runde, F.A.J. Van den Bosch, W. Ruigrok and T. Numagami (eds), *Innovative Forms of Organizing*. London: Sage Publications. pp. 125–32.

Whittington, R., Mayer, M. and Curto, F. (1999) 'Chanderlism in post-war Europe: strategic and structural change in France, Germany and the UK, 1950–1993', *Industrial and Corporate Change*, 8(3): 519–51.

Woodward, J. (1965) *Industrial Organization, Theory and Practice*. London: Oxford University Press.

2.17 Seeing Organizations Differently: Three Lenses on Compassion

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One of the unspoken realities of life in organizations is that people suffer. Someone who has just been told that she has breast cancer confronts a jolt to her confidence and her sense of mortality that play out at work as well as in other spheres of her life. Someone who is dealing with dashed hopes of promotion or is feeling marginalized at work may experience sadness and deflation. Someone who is dealing with the breakdown of a personal relationship, or is struggling with difficult financial issues, or is working overtime to care for an ageing parent may feel a loss of control and a growing sense of hopelessness that affects his work, despite the expectation in many organizations that such emotions be checked at the door. People with these burdens carry them wherever they go, regardless of expectations that suffering should not affect work. While organizational rules and policies can sometimes lessen or alleviate pain, compassion can help to make a heavy burden of suffering more bearable. This chapter is founded on the assumption that compassion is a healing force that is indispensable in organizations.

The desire to see organizations as purely rational and calculated systems is not only a managerial one, but also one that has a long history in organizational studies (see Taylor 1911; Mastenbroek 2000). For this reason, a chapter on compassion in organizations may seem somehow out of place in a handbook for organizational scholars. Many theorists have challenged the desire to simplify workplaces, to dilute their emotional and relational qualities, and to quantify the terms of organizational life in tidy units (see for example, Salovey and Mayer 1990; Ashforth and Humphrey 1995; Fineman 1996, 2000; Fletcher 1999; Rafaeli and Worline 2001; Dutton 2003; Frost 2003). This chapter is a response to those challenges. The value of seeing compassion in organizations is that it brings the organic, the moving and heartfelt, the emotional, and the relational elements of life into sharp relief. A chapter on compassion shows us that we cannot fully see organizations until we allow people to speak the unspoken reality of suffering and reveal the human response to suffering that is compassion.

Feeding the Wolf of Compassion

> He said to them, 'A fight is going on inside me … it is a terrible fight and it is between two wolves. One wolf represents fear, anger, envy, sorrow, regret, greed, arrogance, self-pity, guilt, resentment, inferiority, lies, false pride, superiority and ego. The other wolf stands for joy, peace, love, hope, sharing, serenity, humility, kindness, benevolence, friendship, empathy, generosity, truth, compassion and faith. The same fight is going on inside you, and inside every other person, too.' They thought about it for a minute and then one child asked his grandfather, 'Which wolf will win?' The old Cherokee simply replied … 'The one you feed' (Cherokee Proverb [www.snowowl.com]).

The two wolves in this old Cherokee proverb can also be found fighting it out in organization studies. The first we regard as the wolf of ego, characterized by self-interest and negativity; the second as the wolf of compassion, characterized by humanity and virtue. While both wolves get fed in practice, organizational scholars spend a disproportionate amount of time attending to the wolf of ego in their theories and research. Historically, scholarship demonstrates a strong bias, apparent in psychological and organizational research, toward understanding negative or detrimental conditions rather than positive or virtuous ones (Seligman and Csikszentmihalyi 2000;