Evolutionary change stimuli and moderators – evidence from New Zealand

Hafsa Ahmed
Strategy and Programmes Section, Environment Canterbury, Canterbury, New Zealand, and
Michaela Balzarova and David A. Cohen
Department of Commerce, Lincoln University, Lincoln, New Zealand

Abstract

Purpose – The review of contemporary organisational change theories identified one theory which seemed relevant to explaining the organisational change phenomenon in public enterprises – Van de Ven and Poole's (1995) Evolutionary Change Theory (ECT). However, further review of the management literature revealed its limitations in explaining change, particularly in public enterprises. The theory fails to identify the triggers of change and the roles of various stakeholders, and the purpose of this paper is to enhance model of the ECT and appraise it.

Design/methodology/approach – Researchers continue to highlight the need to examine context when examining a change process; therefore, the authors utilised a process research approach to examine changes in the New Zealand electricity industry over the past four decades. As the approach is a flexible one, it allowed exploration of the critical features of change.

Findings – Analysis revealed compelling evidence of two new proposed stages to the ECT which operated in conjunction with external environmental influences that acted as stimuli for change.

Research limitations/implications – The research provided insight into the various influences on organisational change, particularly public enterprises. It confirms the previously ignored power of the external environment and the role of stakeholders in influencing organisational change.

Originality/value – The research advances current understanding of organisational change as it offers an enhanced model of the ECT by identifying the trigger for organisational change in public enterprises. Furthermore, it finds different stakeholder groups with the ability to influence the organisational change process.

Keywords Evolution, Organizational change, New Zealand, Electricity, Stakeholders, Privatization

Paper type Research paper

Introduction

As described by Hood (1991) the new public management (NPM) concept presented a different approach to how publically owned organisations could be run. NPM's focus is to make public enterprises perform better and more efficiency by making them operate more like private businesses (Diefenbach, 2009; Fernandez and Rainey, 2006). With the advent of NPM, management became an important orientation for public enterprises, replacing simple administration. Change remains an unending process in the life of organisations and this underlies why scholars have emphasised the need to understand organisational change. Researchers often try to explain organisational change by borrowing concepts or theories from other fields (Poole *et al.*, 2000) and numerous theories have been proposed to explain the organisational change phenomenon. Pettigrew's (1985) critique of the organisational change literature initiated an era of transformation in change research. Previous organisational change theories focused on the dynamics and attributes of the change process, not recognising the importance of processes (Pettigrew *et al.*, 2001;

Journal of Organizational Change Management
Vol. 28 No. 4, 2015
pp. 546-564

0953-4814
DOI 10.1108/JOCM-11-2013-0226

Poole, 2004; Van de Ven, 1992). Such approaches had restricted change theory, as they ignored the influence of other influential factors affecting change (Poole, 2004). In respect to public enterprises, Kuipers *et al.* (2014), and previously Fernandez and Rainey (2006), have argued that organisational change theories relating to public enterprises still needed researcher attention. Kuipers *et al.* (2014) recognise the need for more detailed longitudinal studies to examine change processes in public contexts.

Our review of contemporary organisational change theories identified one which seems especially relevant to explaining the organisational change phenomenon in public enterprises – Van de Ven and Poole's (1995) Evolutionary Change Theory (ECT), which forms the central feature of this paper. The ECT offers a notable explanation of evolutionary phenomenon in organisational populations (Poole *et al.*, 2000). However, with regards to evolution organisational theorists are divided among two popular perspectives which currently dominate the field: selection and adaptation perspectives. These perspectives find their roots in biology through Darwin and Lamarck, respectively. Hodgson (2013) contends that the selection-adaptation debate is a confusion that leads to misleading terminology. Paulino (2009) has suggested otherwise, highlighting that they are in fact two different perspectives. Theorists who adopt the Darwinian view argue that change is driven by natural selection, with the environment selecting the best fit (Paulino, 2009). In contrast, the Lamarckian view argues that adaptation by organisations is necessary in order to achieve a better fit with the environment (Paulino, 2009). In response, many researchers have suggested it is important to amalgamate the two perspectives to better understand organisational change (Astley and Van de Ven, 1983; Paulino, 2009; Singh *et al.*, 1986). We agree with Hodgson (2010) who suggests that Darwinian principles that apply to organisms are unlikely to explain organisational phenomena. Recent scholars have suggested adopting variation, selection, and retention as an overarching framework (Aldrich and Ruef, 2006; Aldrich *et al.*, 2008; Hogdson, 2010, 2013).

Rather than discard the theory, we argue that the current representation of the ECT by Van de Ven and Poole (1995), whilst valuable, is oversimplified and hence incomplete. Thus we utilise the Darwinian concepts as a meta-theoretical framework and integrate ideas from other management theories to develop a more comprehensive ECT. It can be argued that ECT, although a process theory, fails to acknowledge the role of context (organisation's external and internal environments) and content (organisational structures and strategies) in the change process. Thus, we propose an enhanced ECT with two additional stages – dissatisfaction and adaptation. It also acknowledges two important aspects of organisational change – its stimuli (what influences) and moderators (who matters).

The New Zealand electricity industry (NZEI) serves as an ideal research setting for appraising this enhanced version of the ECT. This industry has evolved over the past four decades, with electricity reforms a significant component of the political agenda. Moreover, the industry provides two necessary dimensions for ECT analysis (Van de Ven and Poole, 1995) – having multiple entities and a prescribed mode of change.

These arguments highlight this study's dual contribution to studying change in public enterprises. First, it provides a more comprehensive understanding of the dynamics of change as organisations progress through the ECT's stages. Second, it specifically identifies the different stimuli provoking change and the key moderators influencing change in the industry. This has implications for government, as the study can explain the behaviour of different moderators during the change process, identifying possible influences on policy making.

The remainder of this paper provides a brief overview of organisational change, followed by a discussion of the ECT's origins and limitations in its current form. An enhanced version

of the ECT is proposed after reviewing other organisational theories. With the NZEI as the research setting, we discuss how the enhanced ECT has contributed to a better understanding of the dynamics of organisational change, particularly in public enterprises.

The organisational change phenomenon

Scholarly research has focused on ascertaining "how and why organisations change" (Poole and Van de Ven, 2004a, b). Since the early 1950s, researchers have continued to investigate organisations, trying to explain the fundamentals of change. From these efforts, numerous theories have emerged. However, the multifaceted nature of organisational change has complicated attempts to comprehend it in its entirety (Weick and Quinn, 1999). It is beyond the scope of this paper to review the quite extensive body of literature; however, detailed summaries can be found in Armenakis and Bedeian (1999), Poole (2004), and By (2005).

Change is widely associated with the notion of evolution – following a path that achieves ever greater fitness with the environment (March, 1994). Thus, organisational change becomes an observable phenomenon captured by the process of evolution, as borrowed from biology. The evolutionary approach encompassing adaptation and selection, is generally used to explain the organisational change phenomenon (Paulino, 2009). These two well recognised processes offer a means for developing theories with different outlooks on change (Aldrich and Ruef, 2006). While the adaptation view implies that organisations are flexible and thus responsive to exogenous conditions, with change as a consequence (Levin, 2003; Nelson and Winter, 1982; Paulino, 2009), natural selection implies that organisations are relatively inflexible, resist change, and consider it difficult and hazardous (Amburgey *et al.*, 1993; Hannan and Freeman, 1977, 1984). The two perspectives offer independent assessments of the role of the organisation in its environment, differing on how they see the stimuli for change. However, it is important to acknowledge that organisations and their environments coexist and are involved in a pattern of co-creation (Morgan, 1996). Therefore, as stated by Paulino (2009), a combination of both processes is necessary to completely comprehend change dynamics.

The ECT

The ECT proposed by Van de Ven and Poole (1995) is depicted in Figure 1. Consisting of a repetitive sequence of variation, selection, and retention, the cycle is generated by competition for scarce resources between entities inhabiting a population. To thoroughly understand the three stages proposed in the ECT, we reviewed the literature examining the process of natural selection incorporating these stages, particularly the seminal work of Hannan and Freeman (1977) and Aldrich and Ruef (2006), in organisational theory.

The ECT in its current form represents a mechanism that appears to describe organisational change from an evolutionary perspective. However, the ECT is simply Darwin's natural selection process of variation, selection, and retention taken from biology and applied to organisations. As such, it has attracted criticism from organisational thinkers. March (1994) points out, the "evolution" is used in a relatively narrow sense in organisational

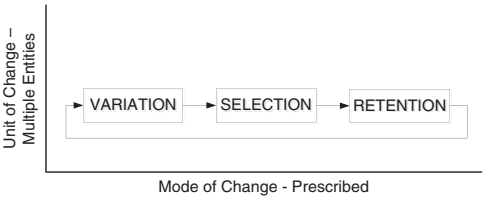

Figure 1.
The Evolutionary Change Theory proposed by Van de Ven and Poole (1995)

theories, suggesting that the traditional meaning of evolution emphasises ordered change in species, individuals, and social systems. Like biological organisms, organisations appear to evolve from relatively simple structures to more complex ones. We argue that the ECT pays little attention to the other complex aspects involved in organisational change. This clearly highlights the need for research to re-examine the ECT.

The enhanced ECT

By recognising variation, selection, and retention as essential components of an ECT, we then sought to integrate useful ideas from approaches (Aldrich and Ruef, 2006) to develop a more comprehensive ECT. The evolutionary perspective is appears to be dominated by the selection perspective (Paulino, 2009). Thus, to enhance the current ECT, we began by focusing on those which emphasise the adaptation perspective.

The adaptation perspective and its relevant theories

Responsiveness to the environment is important for organisations as otherwise they will appear dormant in organisation-environment interaction. Hence, it is essential that adaptation is taken into account when explaining organisational change. The concept of adaptation is often associated with organisations (Lewin *et al.*, 2004). Levinthal (1994) cites Thompson (1967) who argued that organisational changes are adaptive responses which result from environmental feedback as organisations change strategies and structures in response to threats and opportunities. Additionally, researchers have emphasised that organisations adapt to environmental changes by "replacing less favourable competencies with more favourable competencies" (McKelvey, 1998).

In their extensive review of the adaptation and selection debate, Lewin *et al.* (2004) identified six theories focusing on the organisation. From reviewing these, it was apparent that two ideas predominated – elements in the environment that act as stimuli for change, and actors (both internal and external) who act as moderators of change. Identifying the relevance of stimuli and moderators of organisational change is important for understanding change more comprehensively. To identify the stimuli and the moderators, we reviewed a range of management theories. A snapshot of these is presented in Figure 2.

Environmental influences – stimuli. As organisations integrated into society (Hannan and Freeman, 1989), they are affected by a variety of external influences – social, politio-legal, economic, technological, and others (Feldman, 2004; Harrison and John, 1996; Schaltegger *et al.*, 2003). We argue that these influences create the atmosphere for organisational change and can act as triggers of change. This is also recognised in strategic choice theory where it is argued that organisations react to their environment (Child, 1972; Miles and Snow, 1978; Thompson, 1967). As the current ECT emphasises the influence of the external environment, we focused only on those external influences that act as stimuli for change.

Change moderators. It is hard to imagine organisational change without intervention by groups who have an interest in business well-being – stakeholders (Schaltegger *et al.*, 2003). The existence and potential contribution of these groups to businesses activities mandates asking the question of how various stakeholders influence organisational change. We derive our identification of stakeholders from the works of Clarkson (1995), Freeman *et al.*, (2008), and Wheeler and Sillanpaa (1997).

Dissatisfaction and adaptation. Changes in external environments act as stimuli. Along with moderation by stakeholders, such stimuli are critical for initiating change. Among these, dissatisfaction has long been recognised in research on decision making and strategic planning (Chakravarthy and Lorange, 1991; March and Simon, 1958;

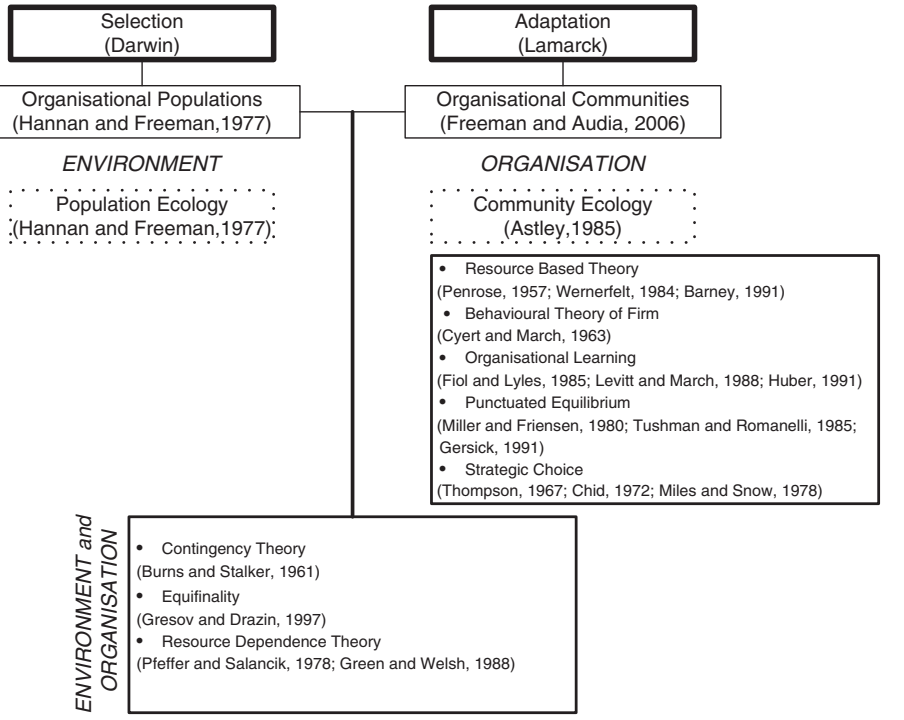

Figure 2.
Overview of various theories examined

Mintzberg *et al.*, 1976). Dissatisfaction arises from the perception of risk that the organisation might not survive changing conditions or that it might fail to meet desired goals. Therefore, we borrow the concept of dissatisfaction from Van de Ven and Poole (1995), arguing it is a precursor to variation.

In their seminal work, Nelson and Winter (1982) and Levin (2003) recognise that organisations can adapt to new and unexpected changes by self-organising and reconfiguring (Hearnshaw and Wilson, 2013). Moreover, previous research points out that many organisations change and align themselves with environmental changes – social, political, economic, and institutional (Daft and Weick, 1984; Smit and Wandel, 2006). Considering the relevance of adaptability in organisational change studies, we argue it as an important stage in the ECT.

In Figure 3, we represent an enhanced model of the ECT which incorporates – external environmental influences as stimuli and stakeholders as moderators. We also propose dissatisfaction and adaptation as two necessary stages in the ECT. In order to empirically investigate this enhanced ECT, we needed an appropriate research setting and method. These are discussed below.

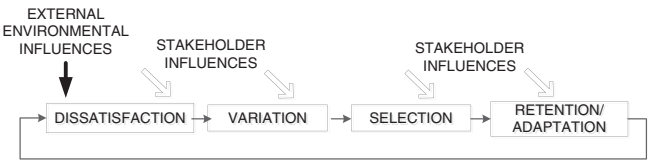

Figure 3.
An enhanced Evolutionary Change Theory

Research method and data

Pettigrew *et al.* (2001, p. 697) suggest "if the change process is the stream of analysis, the terrain around the stream that shapes the field of events, and is in turn shaped by them, is a necessary part of the investigation". Other scholars have suggested that process research is appropriate for examining forces influencing change (Langley *et al.*, 2013; Poole *et al.*, 2000; Van de Ven 2007). In process research, the focus shifts towards understanding how entities adapt, change, and evolve over time (Hernes and Weik, 2007; Van de Ven, 2007). Moreover, the ECT was put forward as a process theory by Van de Ven and Poole (1995), confirming the process orientation.

Research setting

In the 1980s, a wave of privatisation of state-owned enterprises (SOE) swept through the developed nations to become a component of public management policy. Taking a company private was a useful economic tool for governments to improve the efficiency and performance of SOEs (Letza *et al.*, 2004). Thus, the idea of NPM introduced in many western nations from the 1970s (UK, USA, Europe, Australia, New Zealand, and Canada) (Diefenbach, 2009) found its motivation from pro-privatisation arguments. Faced with an economic crisis in the mid-1980s, New Zealand embarked on significant economic and social reforms that would have substantial and lasting effects on the electricity industry (Funnel *et al.*, 2009). Change is not new for the NZEI as it has undergone significant changes and continued to evolve over the past four decades. Reforms emphasising privatisation, continue to be a significant part of the political agenda. When a Labour government came to power in 1984, radical reforms were initiated in due to rising public debt, higher unemployment, and increasing inflation. The Electricity Corporation of New Zealand which was set up as an SOE in late 1980s was later divided into three separate competing SOEs in 1999. The NZEI has continued to evolve over the years and became a matter of debate in 2011 again following the government's plan to pursue a mixed-ownership model. The substantial changes in the industry over the past four decades provides an ideal setting for empirically testing the enhanced ECT. Moreover, it provides a rich and varied political and social context.

Data collection and analysis

Our research plan follows Van de Ven's (2007) recommendations, where identifying key issues and decisions are necessary to the method. The flowchart in Figure 4 demonstrates how we progressed from data collection to analysis. In line with other studies (Bingham and Kahl, 2013; Klarner and Raisch, 2013; Knudson and Ruttan, 1989; Maguire and Hardy, 2013; Wright and Zammuto, 2013), longitudinal data were taken from archival records from early 1984 through 2007. Real time data were captured from 2008 until end of 2012. We also interviewed an economist who has extensively reviewed the industry to gather his views. The use of multiple sources for gathering data ensured triangulation to strengthen implications for the proposed theory (Huberman and Miles, 2002). Following Scudder *et al.* (1989), a timeline of incidents was created (Jick, 1979). The data were then organised sequentially into "incidents" (Abbott, 1984; Poole *et al.*, 2000). A total of 350 were identified as relevant to the industry. We next identified theoretically meaningful "events" from the incident data (Poole *et al.*, 2000; Van de Ven, 2007). Before coding, it was important to defining how events would be mapped (Poole *et al.*, 2000). Utilising a deductive approach, we derived a set of theoretical constructs from the literature to

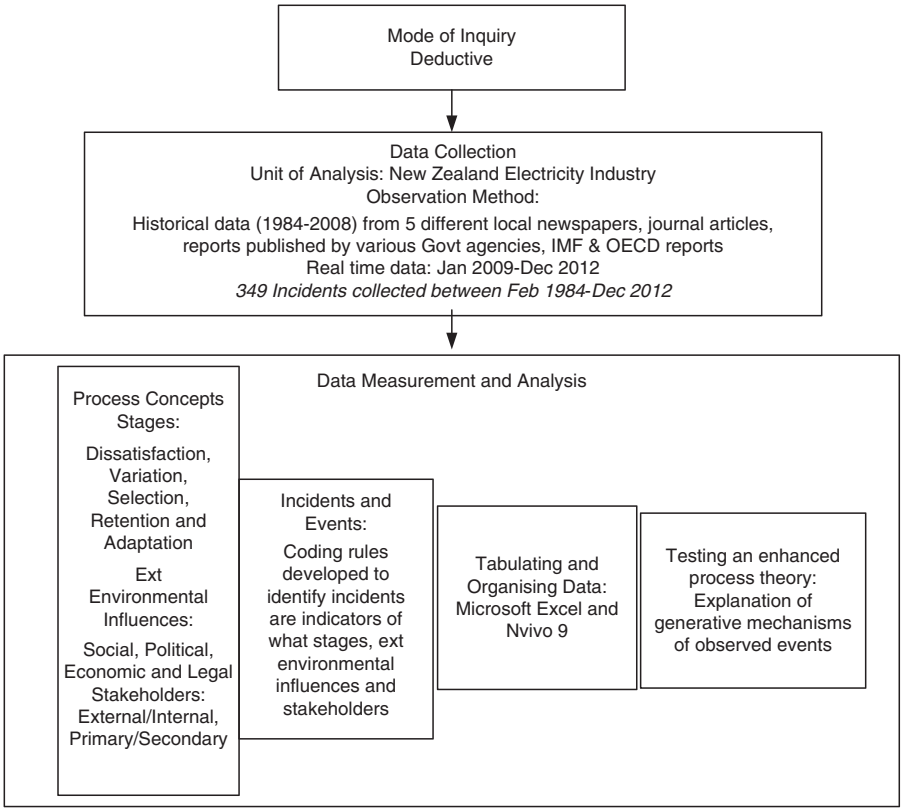

Figure 4.
Snapshot of research method

categorise events (Poole *et al.*, 2000). Coding rules were developed for classifying the incident data into the relevant theoretical constructs (indicated in Figure 4) and thus to achieve reliability and validity (Poole *et al.*, 2000; Van de Ven and Ferry, 1980). Coding was performed by the three researchers, who evaluated a random sample of 20 per cent of the incidents. Inter-rater reliability (IRR) of 90 per cent was initially achieved. The researchers resolved differences in categorisation through discussion and mutual consensus, following Van de Ven and Garud (1994). A second pass with another 20 per cent sample yielded an IRR of 99 per cent, thus demonstrating consistency comparable to other published studies (Balzarova and Castka, 2008; Van de Ven and Garud, 1994).

Findings

By coding the data into the theoretical constructs, we were able to examine patterns in the data. These included interactions between stakeholders and the role of external influences in relation to each incident. A brief overview of the key events by decade is presented in Table I.

External environmental influences (stimuli)

- Economic influences – a total of 121 incidents were identified as influenced by economic concerns confronting the NZEI.

Table I.
The three stages of evolutionary process

	Variation	Selection	Retention
Explained as	First stage of the natural selection process (Aldrich and Pfeffer, 1976) Raw material/pre-condition for selection (Aldrich and Pfeffer, 1976; Haveman, 1994) Exploratory response to stimuli (Aldrich and Pfeffer, 1976) Any departure from routine or tradition (Aldrich and Ruef, 2006)	Second stage of the natural selection process (Aldrich and Pfeffer, 1976) Differential selection of some variations based on criteria (Aldrich and Pfeffer, 1976) Selective elimination of certain types of variations (Aldrich and Ruef, 2006)	Third stage of natural selection process Aldrich and Pfeffer, 1976; Aldrich and Ruef, 2006 Opposite of variation (Aldrich and Pfeffer, 1976) Achieved through organisational stability and manifested in the use of unchanging standard operating procedures (Aldrich and Pfeffer, 1976)
Sources	Introduced into organisational population though the creation of new organisations (Aldrich and Pfeffer, 1976) Source of variation in organisation population is change in organisational structure and activities (Haveman, 1994) Variations are potentially introduced into populations and communities whenever new organisations are founded (Aldrich and Ruef, 2006)	Two conditions must be met for selection: there must be high rate of variations; and there must be high mortality rate for the organisations or structures involved (Campbell, 1969) Occurs through competition among the alternative forms that exist (Van de Ven and Garud, 1994) Selection criteria are set through the operation of market forces, competitive forces, competitive pressures, the logic of internal organisational structuring, conformity to institutionalised norms (Aldrich and Ruef, 2006)	Occurs when complex structures are maintained by consistent environmental pressures (Aldrich and Pfeffer, 1976) Forces that perpetuate and maintain certain technical and institutional forms that were selected out in past (Van de Ven and Garud, 1994) Occurs when variations are preserved, duplicated, or otherwise reproduced so that the selected activities are repeated on future occasions (Aldrich and Ruef, 2006) Competitive pressures on organisations (Aldrich and Pfeffer, 1976)
Types	Blind/unplanned: occurs independent of conscious planning, result from accidents, chance, or luck (Aldrich and Pfeffer, 1976; March, 1981; Brunsson, 1985; Aldrich and Ruef, 2006) Intentional/planned: conscious responses to difficult situations or problems (Aldrich and Pfeffer, 1976; Aldrich and Ruef, 2006)	Purest form of environmental selection is the selective survival or elimination of a complete organisation (Aldrich and Pfeffer, 1976) Internal selection within organisation: internal diffusion, imitation, promotion, and incentive systems may always be ways of selection (Aldrich and Ruef, 2006) Organisation-level selection: organisations exhibiting mal-adaptive variations in technology, managerial incompetence, non-conforming norms, or other problematic acts are more likely to decline Population-level selection: drives organisations towards standard set of routines (Aldrich and Ruef, 2006)	Internal retention within organisation: facilitated by humans' ability to learn and acquire habits that become routines (Hodgson, 2004; Aldrich and Ruef, 2006) Organisation-level retention: institutionalisation of practices in cultural beliefs and values (Aldrich and Ruef, 2006) Population-level retention: preserves the technological and managerial competence that all organisations use collectively to exploit the resources of their environments (Aldrich and Ruef, 2006)

- Political influences – the nature of the NZEI is such that it is tightly bound up with politics. New Zealand's government is an active, pivotal participant in the activities of the industry.
- Legal influences – to implement changes in the industry, a government must have appropriate legislation in place. We identified 67 incidents that were consequences of legislative implementation.
- Social influences – although issues in the social external environment may play a less significant part in influencing this industry, we identified 42 incidents reflecting social environmental factors.

Stakeholders (moderators)

There were several different groups able to influence change in the NZEI. The government of New Zealand has been regarded as an omnipotent stakeholder, as it influences all stages and entities across the change process. More importantly, it sets the "rules of the game" for other stakeholders in the industry. Table II summarises key incidents in the New Zealand electricity industry.

Stages of the enhanced ECT

Figure 5 provides details of the various connections between the five different stages of the proposed enhanced ECT:

- Dissatisfaction accounted for 26 incidents. In total, 11 of these lead to adaptation, whilst another 11 lead to variation. The economic external environment was a major source of dissatisfaction. Prominent stakeholders influencing dissatisfaction stage were classed as external-primary stakeholders.
- Variation provided 96 incidents, with 23 leading to selection. Variation was also mainly influenced by the external economic environment. External-secondary stakeholders had more influence over this stage.
- Selection offered 61 incidents, where 12 lead to retention, nine lead to adaptation, and six lead to dissatisfaction. Variation was also largely influenced by the external economic environment as well as external-secondary stakeholders.
- Retention accounted for 80 incidents. Totally, 12 lead to adaptation and two lead to dissatisfaction. Retention was influenced by both the economic and legal external environments. The external-secondary stakeholders exercised more influence on this stage.
- Adaptation offered 49 incidents. Totally, 13 lead to variation, which was affected by both the economic and social external environments. External-secondary stakeholders, again, had greater influence on this stage.

Discussion

Hodgson (2013) reiterates March's (1994) thought that the term "evolution" is widely used in organisational studies; however, it remains ambiguous. Additionally, Hodgson (2010, 2013) suggests that the term "evolution" generally evokes Darwinism, but can sometimes refer broadly to change. Cordes (2006) cites Witt (2003) to argue that current Darwinian theories of evolution fail to incorporate the dynamics of the evolution of capabilities. ECTs tends to confine dynamics to the Darwinian view of evolution (Hodgson, 2013). Hodgson and Knudsen (2010, p. viii) suggest that the Darwinian concept of evolution

Decade	1980-1989	1990-1999	2000-2009	2010-current
Political highlights	1980-1984: national 1984-1989: labour	1990-1993: labour/national 1993-1996: national 1996-1999: national/labour	2000-2005: labour 2005-2008: labour/national 2008-2009: national	2010-2011: national 2011-current: national
Legislations	State-Owned Enterprises (SOE) Act 1986 Commerce Act 1986 Ministry of Energy (Abolishment) Act 1989	Electricity Act 1992 Energy Companies Act 1992 Electricity Industry Reform Act 1998	Electricity Amendment Act 2001 Electricity Industry Reform Amendment Act 2001 Electricity and Gas Industries Act 2004 Electricity Industry Reform Amendment Act 2008 Commerce Amendment Act 2008	Electricity Industry Act 2010
Industry highlights	Review of the role and structure of the electricity division Electricity division. Revenue gains sought Review of electricity planning and generation costs, the treasury Electricity corporation of New Zealand (ECNZ) established as SOE Transpower set up as wholly owned subsidiary of ECNZ Electricity task force report recommending separation of transmission and generation and corporatisation	Ministry of Energy abolished Corporatisation of electricity supply announced Energy Efficiency and Conservation Authority formed Electricity M-Co formed Separation of ECNZ and transpower Contact energy formed as competitor to ECNZ 40% of contact energy sold ECNZ separated into 3 competing SOEs – Mighty River Power, Genesis, and Meridian	Electricity Complaints Commission established Electricity Commission established Electricity Governance Rules and Regulations 2003 set Electricity market review 2006 Review of electricity market design by Electricity Commission Ministerial review of electricity market 2009	Electricity Authority establishment board set up Electricity Authority established by disestablishing Electricity Commission Electricity Industry Regulations 2010 and Electricity Industry Participation Code 2010 replace Electricity Governance Rules and Regulations 2003 Government proposes Mixed-Ownership Model for the 3 SOEs – Mighty River Power, Genesis, and Meridian

Table II.
Key incidents in New Zealand electricity industry

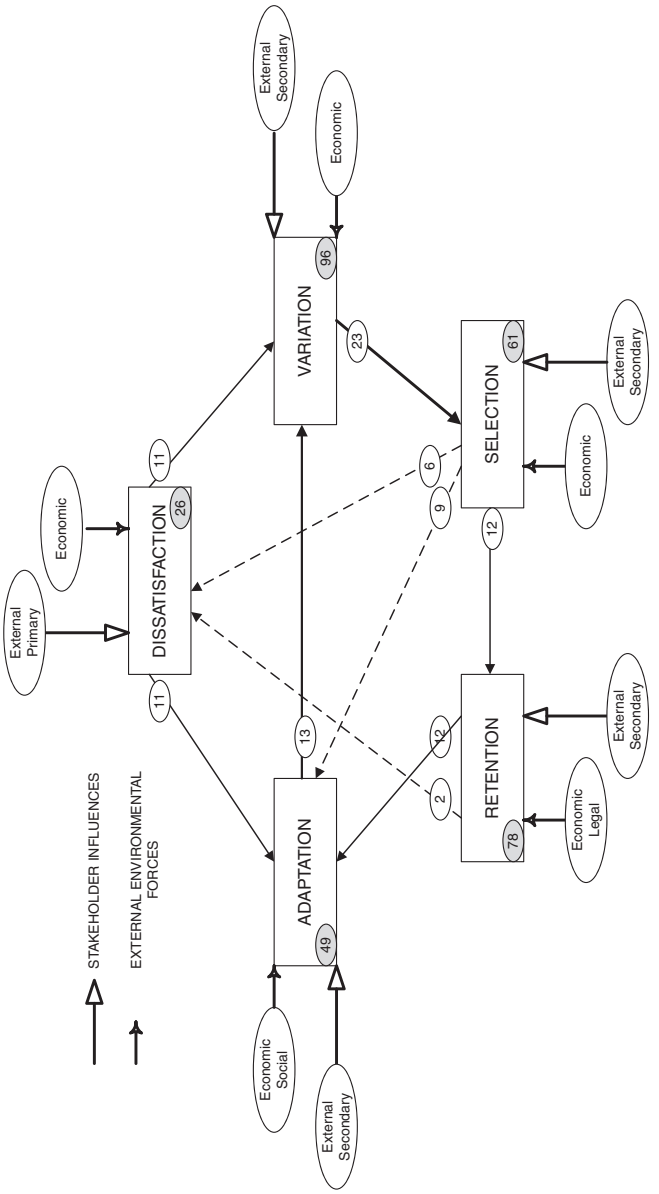

Figure 5.
Findings – the enhanced Evolutionary Change Theory

(variation, selection, and retention) "is a meta-theoretical framework that stimulates further enquiry and provides a repository for contingent auxiliary theories and models". The findings support a newly proposed enhanced ECT and provide insight into organisational change in a public context by incorporating additional influences. Figure 5 reveals that the process of evolutionary change is complex. It is not a circular process moving from one stage to another, but rather one where change may "jump" from one stage to another that may not follow directly from it. For example, rather than being restricted to a selection-to-retention path, selection may instead lead to adaptation or dissatisfaction.

The enhanced ECT emphasises that stakeholders may play a significant role in the organisational change process. Our study of the NZEI has identified different stakeholder groups who can influence the process of change in public enterprises. It clearly recognises the significant role government plays as the most powerful stakeholder. As these enterprises are formed from public revenue, decision makers therefore have a responsibility towards the public (Davis *et al.*, 2010). Our research also identified other stakeholder groups that influence the operation of the NZEI. This is likely to offer policy makers a clearer view of the importance of potential stakeholders and also their likely reactions to changes in the industry. Recently, calls for more longitudinal and process focused research have been increasing (see Pettigrew *et al.*, 2001; Langley *et al.*, 2013). Moreover, Kuipers *et al.* (2014) indicated the need for more in-depth longitudinal studies which examine the process of organisational change in public enterprises. The present study addressed these needs.

Limitation and future research recommendations

Although this study makes a contribution to the organisational change literature, it has limitations which need to be acknowledged. These relate to data collection, examination of internal influences, and generalisability of the enhanced ECT. This research argues that evolutionary change progresses through five individual stages influenced by stimuli and moderators in each; however, this project only examined the role of external environmental influences on the change process and internal environmental forces were not accounted for. The nature of the NZEI was such that it is strongly influenced by changing economic and political circumstances, with the government as a powerful stakeholder. It is possible that other industries in different geographical locations may respond to different external environmental and stakeholder influences. Most importantly, although robust in its examination of the NZEI, this project has focused on one industry to appraise the enhanced ECT, limiting generalisability. Future research should examine the enhanced ECT with a different industry. Diverse geographical locations might demonstrate (or compromise) its generalisability, augmenting its explanatory strength further still. Additionally, more research should accommodate the influences of both external and internal environments to add to theoretical robustness. Such extensions are likely to further enhance our understanding of evolutionary change.

Conclusion

Although significant theoretical development has occurred over the past two decades and the field of organisational change has thus become richer (Weick and Quinn, 1999), it can be argued that it is still far from mature (Pettigrew *et al.*, 2001). Kuipers *et al.* (2014) clearly indicate the need for more in-depth longitudinal studies which examine the process of organisational change focused specifically on public enterprises. We attempted to address this gap by examining change in the NZEI. This study has provided strong evidence of how stimuli and moderators influence the organisational change process, advancing our knowledge and understanding of organisational change in public enterprises from an evolutionary perspective.

References

Abbott, A. (1984), "Event sequence and event duration: colligation and measurement", *Historical Methods*, Vol. 17 No. 4, pp. 192-204.

Aldrich, H.E. and Pfeffer, J. (1976), "Environments of organizations", *Annual Review of Psychology*, Vol. 2, pp. 79-105.

Aldrich, H.E. and Ruef, M. (2006), *Organizations Evolving*, Sage, London.

Aldrich, H.E., Hodgson, G.M., Hull, D.L., Knudsen, T., Mokyr, J. and Vanberg, V.J. (2008), "In defence of generalized Darwinism", *Journal of Evolutionary Economics*, Vol. 18 No. 5, pp. 577-596.

Amburgey, T.L., Kelly, D. and Barnett, W.P. (1993), "Resetting the clock: the dynamics of organizational change and failure", *Administrative Science Quarterly*, Vol. 38 No. 1, pp. 51-73.

Armenakis, A.A. and Bedeian, A.G. (1999), "Organizational change: a review of theory and research in the 1990s", *Journal of Management*, Vol. 25 No. 3, pp. 293-315.

Astley, W.G. (1985), "The two ecologies – population and community perspectives on organizational evolution", *Administrative Science Quarterly*, Vol. 30 No. 2, pp. 224-241.

Astley, W.G. and Van de Ven, A.H. (1983), "Central perspectives and debates in organization theory", *Administrative Science Quarterly*, Vol. 28, pp. 245-273.

Balzarova, M.A. and Castka, P. (2008), "Underlying mechanisms in the maintenance of ISO 14001 environmental management system", *Journal of Cleaner Production*, Vol. 16 No. 18, pp. 1949-1957.

Barney, J. (1991), "Firm resources and sustained competitive advantage", *Journal of Management*, Vol. 17 No. 1, pp. 99-120.

Bingham, C.B. and Kahl, S.J. (2013), "The process of schema emergence: assimilation, deconstruction, unitization and the plurality of analogies", *Academy of Management Journal*, Vol. 56 No. 1, pp. 14-34.

Brunsson, N. (1985), *The Irrational Organization*, John Wiley, New York, NY.

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

By, R.T. (2005), "Organisational change management: a critical review", *Journal of Change Management*, Vol. 5 No. 4, pp. 369-380.

Campbell, D. (1969), "Variation and selective retention in socio-cultural evolution", *General Systems: Yearbook of the Society for General Systems Research*, Vol. 16, pp. 69-85.

Chakravarthy, B.S. and Lorange, P. (1991), *Managing the Strategy Process: A Framework for a Multibusiness Firm*, Prentice Hall, Englewood Cliffs, NJ.

Child, J. (1972), "Organizational structure, environment, and performance: the role of strategic choice", *Sociology*, Vol. 6 No. 1, pp. 1-22.

Clarkson, M.E. (1995), "A stakeholder framework for analyzing and evaluating corporate social performance", *Academy of Management Review*, Vol. 20 No. 1, pp. 92-117.

Cordes, C. (2006), "Darwinism in economics: from analogy to continuity", *Journal of Evolutionary Economics*, Vol. 16 No. 5, pp. 529-541.

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

Daft, R.L. and Weick, K.E. (1984), "Toward a model of organizations as interpretation systems", *Academy of Management Review*, Vol. 9 No. 2, pp. 284-295.

Davis, E.B., Kee, J. and Newcomer, K. (2010), "Strategic transformation process: toward purpose, people, process and power", *Organization Management Journal*, Vol. 7 No. 1, pp. 66-80.

Diefenbach, T. (2009), "New public management in public sector organizations: the dark sides of managerialistic 'enlightenment'", *Public Administration*, Vol. 87 No. 4, pp. 892-909.

Feldman, M.S. (2004), "Resources in emerging structures and processes of change", *Organization Science*, Vol. 15 No. 3, pp. 295-309.

Fernandez, S. and Rainey, H.G. (2006), "Managing successful organizational change in the public sector", *Public Administration Review*, Vol. 66 No. 2, pp. 168-176.

Fiol, C.M. and Lyles, M.A. (1985), "Organizational learning", *Academy of Management Review*, Vol. 10 No. 4, pp. 803-813.

Freeman, J. and Audia, P.G. (2006), "Community ecology and the sociology of organizations", *Annual Review of Pschology*, Vol. 32, pp. 145-169.

Freeman, R.E., Harrison, J.S. and Wicks, A.C. (2008), *Managing for Stakeholders: Survival, Reputation, and Success*, Yale University Press, London.

Gersick, C.J. (1991), "Revolutionary change theories: a multilevel exploration of the punctuated equilibrium paradigm", *Academy of Management Review*, Vol. 16 No. 1, pp. 10-36.

Green, S.G. and Welsh, M.A. (1988), "Cybernetics and dependence: reframing the control concept", *Academy of Management Review*, Vol. 13 No. 2, pp. 287-301.

Gresov, C. and Drazin, R. (1997), "Equifinality: functional equivalence in organization design", *Academy of Management Review*, Vol. 22 No. 2, pp. 403-428.

Hannan, M.T. and Freeman, J. (1977), "The population ecology of organizations", *The American Journal of Sociology*, Vol. 82 No. 5, pp. 929-964.

Hannan, M.T. and Freeman, J. (1984), "Structural inertia and organizational change", *American Sociological Review*, Vol. 49 No. 2, pp. 149-164.

Hannan, M.T. and Freeman, J. (1989), *Organizational Ecology*, Harvard University Press, Cambridge, MA.

Harrison, J.S. and John, C.H.S. (1996), "Managing and partnering with external stakeholders", *The Academy of Management Executive*, Vol. 10 No. 2, pp. 46-60.

Haveman, H.A. (1994), "The ecological dynamics of organizational change: density and mass dependence in rates of entry into new markets", in Baum, J.A.C. and Singh, J.V. (Eds), *Evolutionary Dynamics of Organizations*, Oxford University Press, New York, NY.

Hearnshaw, E.J. and Wilson, M.M. (2013), "A complex network approach to supply chain network theory", *International Journal of Operations and Production Management*, Vol. 33 No. 4, pp. 442-469.

Hernes, T. and Weik, E. (2007), "Organization as process: drawing a line between endogenous and exogenous views", *Scandinavian Journal of Management*, Vol. 23 No. 3, pp. 251-264.

Hodgson, G.M. (2004), "Reclaiming habit for institutional economics", *Journal of Economic Psychology*, Vol. 25 No. 5, pp. 651-660.

Hodgson, G.M. (2010), "Choice, habit and evolution", *Journal of Evolutionary Economics*, Vol. 20 No. 1, pp. 1-18.

Hodgson, G.M. and Knudsen, T. (2010), *Darwins Conjecture: The Search for General Principles of Social and Economic Evolution*, University of Chicago Press, Chicago, IL.

Hodgson, G.M. (2013), "Understanding organizational evolution: toward a research agenda using generalized Darwinism", *Organization Studies*, Vol. 34 No. 7, pp. 973-992.

Hood, C. (1991), "A public management for all seasons", *Public Administration*, Vol. 69 No. 1, pp. 3-19.

Huber, G.P. (1991), "Organizational learning: the contributing processes and the literatures", *Organization Science*, Vol. 2 No. 1, pp. 88-115.

Huberman, M.A. and Miles, M.B. (2002), *A Qualitative Researcher's Companion*, Sage, Thousand Oaks, CA.

Jick, T.D. (1979), "Mixing qualitative and quantitative methods: triangulation in action", *Administrative Science Quarterly*, Vol. 24 No. 4, pp. 602-611.

Klarner, P. and Raisch, S. (2013), "Move to the beat-rhythms of change and firm performance", *Academy of Management Journal*, Vol. 56 No. 1, pp. 160-184.

Knudson, M.K. and Ruttan, V.W. (1989), "The management of research and development of a biological innovation", in Van de Ven, A.H., Angle, H.L. and Poole, M.S. (Eds), *Research on the Management of Innovation: The Minnesota Studies*, Harper and Row, Ballinger, NY, pp. 465-488.

Kuipers, B., Higgs, M., Kickert, W., Tummers, L., Grandia, J. and Van der Voet, J. (2014), "The management of change in public organisations: a literature review", *Public Administration*, Vol. 92 No. 1, pp. 1-20.

Langley, A., Smallman, C., Tsoukas, H. and Van de Ven, A.H. (2013), "Process studies of change in organization and management: unveiling temporality, activity, and flow", *Academy of Management Journal*, Vol. 56 No. 1, pp. 1-13.

Letza, S.R., Smallman, C. and Sun, X. (2004), "Reframing privatisation: deconstructing the myth of efficiency", *Policy Sciences*, Vol. 37 No. 2, pp. 159-183.

Levin, S.A. (2003), "Complex adaptive systems: exploring the known, the unknown, and the unknowlable", *Bulletin of the American Mathematical Society*, Vol. 40 No. 1, pp. 3-19.

Levinthal, D.A. (1994), "Surviving Schumpeterian environments: an evolutionary perspective", in Baum, J.A.C. and Singh, J.V. (Eds), *Evolutionary Dynamics of Organizations*, Oxford University Press, New York, NY, pp. 167-178.

Levitt, B. and March, J.G. (1988), "Organizational learning", *Annual Review of Sociology*, Vol. 14, pp. 319-340.

Lewin, A.Y., Weigelt, C.B. and Emery, J.D. (2004), "Adaptation and selection in strategy and change: perspectives in strategic change in organizations", in Poole, M.S. and Van de Ven, A.H. (Eds), *Handbook of Organizational Change and Innovation*, Oxford University Press, New York, NY, pp. 108-160.

McKelvey, M. (1998), "Evolutionary innovations: learning, entrepreneurship and the dynamics of the firm", *Journal of Evolutionary Economics*, Vol. 8 No. 2, pp. 157-175.

Maguire, S. and Hardy, C. (2013), "Organizing processes and the construction of risk: a discursive approach", *Academy of Management Journal*, Vol. 56 No. 1, pp. 231-255.

March, J.G. (1981), "Footnotes to organizational change", *Administrative Science Quarterly*, Vol. 26 No. 2, pp. 563-577.

March, J.G. (1994), "The evolution of evolution", in Baum, J.A.C. and Singh, J.V. (Eds), *Evolutionary Dynamics of Organizations*, Oxford University Press, New York, NY.

March, J.G. and Simon, H.A. (1958), *Organizations*, Wiley, New York, NY.

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

Mintzberg, H., Raisinghani, D. and Theoret, A. (1976), "The structure of 'unstructured' decision processes", *Administrative Science Quarterly*, Vol. 21 No. 2, pp. 246-275.

Morgan, G. (1996), *Images of Organizations*, Sage, Thousand Oaks, CA.

Nelson, R.R. and Winter, S.G. (1982), *An Evolutionary Theory of Economic Change*, Belknap Press of Harvard University Press, Cambridge, MA.

Paulino, V.D.S. (2009), "Organizational change in risky environments: space activities", *Journal of Organizational Change Management*, Vol. 22 No. 3, pp. 257-274.

Pettigrew, A.M. (1985), "Contextualist research and the study of organizational change processes", *Research Methods in Information Systems*, pp. 53-78.

Pettigrew, A.M., Woodman, R.W. and Cameron, K.S. (2001), "Studying organisational change and development: challenges for future research", *Academy of Management Journal*, Vol. 44 No. 4, pp. 697-713.

Pfeffer, J. and Salancik, G.R. (1978), *The External Control of Organisations*, New York.

Poole, M.S. (2004), "Central issues in the study of change and innovation", in Poole, M.S. and Van de Ven, A.H. (Eds), *Handbook of Organizational Change and Innovation*, Oxford University Press, New York, NY, pp. 3-31.

Poole, M.S. and Van de Ven, A.H. (2004a), "Introduction", in Poole, M.S. and Van de Ven, A.H. (Eds), *Handbook of Organizational Change and Innovation*, Oxford University Press, New York, NY, pp. xi-xvi.

Poole, M.S. and Van de Ven, A.H. (2004b), "Theories of organizational change and innovation processes", in Poole, M.S. and Van de Ven, A.H. (Eds), *Handbook of Organizational Change and Innovation*, Oxford University Press, New York, NY, pp. 374-397.

Poole, M.S., Van de Ven, A.H., Dooley, K. and Holmes, M. (2000), *Organizational Change and Innovation Processes: Theory and Methods for Research*, Oxford University Press, New York, NY.

Schaltegger, S., Burritt, R. and Petersen, H. (2003), *An Introduction to Corporate Environmental Management Striving for Sustainability*, Greenleaf Publishing Ltd, Sheffield.

Scudder, G.D., Schroeder, R.G., Van de Ven, A.H., Seiler, G.R. and Wiseman, R.M. (1989), "Managing complex innovations: the case of defense contracting", in Van de Ven, A.H., Angle, H.L. and Poole, M.S. (Eds), *Research on the Management of Innovation: The Minnessota Studies,* Ballinger/Harper-Row, New York.

Singh, J.V., House, R.J. and Tucker, D.J. (1986), "Organizational change and organizational mortality", *Administrative Science Quarterly*, Vol. 31 No. 4, pp. 587-611.

Smit, B. and Wandel, J. (2006), "Adaptation, adaptive capacity and vulnerability", *Global Environmental Change*, Vol. 16 No. 3, pp. 282-292.

Thompson, J.D. (1967), *Organization in Action: Social Science Bases of Administrative Theory*, McGraw Hill, New York, NY.

Tushman, M.L. and Romanelli, E. (1985), "Organizational evolution: a metamorphosis model of convergence and reorientation", in Staw, B. and Cummings, L. (Eds), *Research in Organizational Behaviour*, JAI Press, Greenwich, CT.

Van de Ven, A.H. (1992), "Suggestions for studying strategy process: a research note", *Strategic Management Journal*, Vol. 13 No. 5, pp. 169-188.

Van de Ven, A.H. (2007), *Engaged Scholarship – A Guide for Organizational and Social Research*, Oxford University Press, New York, NY.

Van de Ven, A.H. and Ferry, D.L. (1980), *Measuring and Assessing Organizations*, Wiley, New York, NY.

Van de Ven, A.H. and Garud, R. (1994), "The coevolution of technical and institutional events in the development of an innovation", in Baum, J.A.C. and Singh, J.V. (Eds), *Evolutionary Dynamics of Organizations*, Oxford University Press, New York, NY, pp. 425-443.

Van de Ven, A.H. and Poole, M.S. (1995), "Explaining development and change in organizations", *Academy of Management Review*, Vol. 20 No. 3, pp. 510-540.

Weick, K. and Quinn, R.E. (1999), "Organizational change and development", *Annual Review of Psychology*, Vol. 50 No. 1, pp. 361-386.

Wernerfelt, B. (1984), "A resource-based view of the firm", *Strategic Management Journal*, Vol. 5 No. 2, pp. 171-180.

Wheeler, D. and Sillanpaa, M. (1997), *The Stakeholder Corporation: A Blueprint for Maximizing Stakeholder Value*, Pitman, London.

Wright, A.L. and Zammuto, R.F. (2013), "Wielding the willow: processes of institutional change in English county cricket", *Academy of Management Journal*, Vol. 56 No. 1, pp. 308-330.

Further reading

Austin, J. and Bartunek, J. (2003), "Theories and practices of organization development", in Borman, W., Ilgen, D. and Klimoski, R. (Eds), *Handbook of Psychology-Industrial and Organizational Psychology*, Wiley, New York, NY, pp. 309-332.

Bertram, G. (Ed.) (2006), *Restructuring the New Zealand Electricity Sector 1984-2005*, Elsevier, London.

Bertram, G. and Twaddle, D. (2005), "Price-cost margins and profit rates in New Zealand electricity distribution networks since 1994: the cost of light handed regulation", *Journal of Regulatory Economics*, Vol. 27 No. 3, pp. 281-308.

Betton, J. and Dess, G. (1985), "The application of population ecology models to the study of organizations", *Academy of Management Review*, Vol. 10 No. 4, pp. 750-757.

Braybrooke, D. and Lindblom, C.E. (1963), *A Strategy of Decision: Policy Evaluation as a Social Process*, Free Press of Glencoe, New York, NY.

Burnes, B. (2004), *Managing Change: A Strategic Approach to Organisational Dynamics*, Prentice Hall, Harlow.

Cameron, R.L. and Duignan, P.J. (1984), "Government owned enterprises: theory, performance and efficiency", *Association of Economists' Conference*, *Wellington, February*.

Carroll, G.R. (1984), "Organizational ecology", *Annual Review of Sociology*, Vol. 10, pp. 71-93.

Donaldson, L. (1996), "The normal science of structural contingency theory", in Clegg, S.R., Hardy, C. and Nord, W.R. (Eds), *Handbook of Organizational Studies*, Sage, London.

Evans, L. and Meade, R.B. (2005), *Alternating Currents or Counter-Revolution? Contemporary Electricity Reform in New Zealand*, Victoria University Press, Wellington.

Freeman, J. (1981), *Patterns of Innovation and Organization in the US Semiconductor Industry, Workshop on Innovation Management*, International Institute for Applied Systems Analysis, Laxenburg.

Freeman, J. and Hannan, M.T. (1983), "Niche width and the dynamics of organizational populations", *American Journal of Sociology*, Vol. 88, pp. 1116-1145.

Freeman, R.E. (1984), *Strategic Management: A Stakeholder Approach*, Pitman, Marshfield, MA.

French, W.L. and Bell, C.H. (1995), *Organization Development: Behavioral Science Interventions for Organization Improvement*, Prentice Hall, Englewood Cliffs, NJ.

Funnell, W.N., Jupe, R. and Andrew, J.L. (2009), *In Government We Trust: Market Failure and the Delusions of Privatisation*, Pluto Press, London.

Grundy, T. (1993), *Managing Strategic Change*, Kogan Page, London.

Hernes, T. (2007), *Understanding Organization as Process*, Routledge, London.

Langley, A. (1999), "Strategies for theorizing from process data", *The Academy of Management Review*, Vol. 24 No. 4, pp. 691-710.

Langley, A. and Tsoukas, H. (2010), "Introducing perspectives on process organization studies", *Process, Sensemaking, and Organizing*, Vol. 1 No. 1, pp. 1-27.

Lawrence, P.R. and Lorsch, J.W. (1967), *Organization and Environment: Managing Differentiation and Integration*, Harvard University Press, Boston, MA.

Levinthal, D.A. (1991), "Organizational adaptation and environmental selection-interrelated processes of change", *Organization Science*, Vol. 2 No. 1, pp. 140-145.

Lewin, K. (1951), *Field Theory in Social Science*, Harper, New York, NY.

Lewis, S., Passmore, J. and Cantore, S. (2008), *Appreciative Inquiry for Change Management: Using AI to Facilitate Organizational Development*, Kogan Page, London.

Lindblom, C.E. (1968), *The Policymaking Process*, Prentice Hall, Englewood Cliffs, NJ.

Luecke, R. (2003), *Managing Change and Transition*, Harvard Business School Press, Boston, MA.

Meyer, A.D., Goes, J.B. and Brooks, G.R. (1993), "Organizations reacting to hyperturbulence", in Huber, G.P. and Glick, W.H. (Eds), *Organizational Change and Re-Design*, Oxford University Press, New York, NY, pp. 66-111.

Miller, D. (1982), "Evolution and revolution: a quantum view of structural change in organizations", *Journal of Management Studies*, Vol. 19 No. 2, pp. 131-151.

Miller, D. and Friesen, P.H. (1980), "Momentum and revolution in organizational adaptation", *Academy of Management Journal*, Vol. 23 No. 4, pp. 591-614.

Miller, D. and Friesen, P.H. (1982), "Innovation in conservative and entrepreneurial firms: two models of strategic momentum", *Strategic Management Journal*, Vol. 3 No. 1, pp. 1-25.

Miller, D. and Friesen, P.H. (1984), "A longitudinal study of the corporate life cycle", *Management Science*, Vol. 30 No. 10, pp. 1161-1183.

Penrose, E.T. (1959), *The Theory of Growth of the Firm*, ME Sharpe, White Plains, NY.

Poole, M.S. and Van de Ven, A.H. (1989), "Toward a general theory of innovation", in Van de Ven, A.H. and Poole, M.S. (Eds), *Research on the Management of Innovation*, Harper and Row, Ballinger, NY, pp. 637-662.

Romanelli, E. and Tushman, M.L. (1994), "Organizational transformation as punctuated equilibrium: an empirical test", *Academy of Management Journal*, Vol. 37 No. 5, pp. 1141-1166.

Rose, M.R. and Lauder, G.V. (1996), *Adaptation*, Academic Press, San Diego, CA.

Scott, G.C. (1996), *Government Reform in New Zealand*, International Monetary Fund, Washington, DC.

Senior, B. (2002), *Organisational Change*, Prentice Hall, London.

Seo, M., Putnam, L.L. and Bartunek, J.M. (2004), "Dualities and tensions of planned organizational change", in Poole, M.S. and Van de Ven, A.H. (Eds), *Handbook of Organizational Change and Innovation*, Oxford University Press, New York, NY, pp. 73-107.

Tsoukas, H. and Chia, R. (2002), "On organizational becoming: rethinking organizational change", *Organization Science*, Vol. 13 No. 5, pp. 567-582.

Tushman, M.L., Newman, W.H. and Romanelli, E. (1986), "Convergence and upheaval: managing the unsteady pace of organizational evolution", *California Management Review*, Vol. 29 No. 1, pp. 29-44.

Van de Ven, A.H. and Poole, M.S. (1988), "Paradoxical requirements for a theory of organizational change", in Quinn, R. and Cameron, K. (Eds), *Paradox and Transformation: Toward a Theory of Change in Organisation and Management*, Harper Collins, Ballinger, NY, pp. 19-80.

Van de Ven, A.H. and Sun, K. (2011), "Breakdowns in implementing models of organization change", *The Academy of Management Perspectives*, Vol. 25 No. 3, pp. 58-74.

About the authors

Dr Hafsa Ahmed, PhD, is currently working as a Strategy Advisor (Policy) at Environment Canterbury Regional Council. She recently completed her Doctoral Study at the Faculty of Commerce at the Lincoln University, New Zealand. Hafsa has completed a Master of Business Administration Qualification prior to pursuing her Doctoral Studies. She held managerial positions at a leading multi-national bank where she implemented and managed Six Sigma projects. Alongside her Doctoral study, she has also been working as a Research Assistant on an organisational resilience project at the Lincoln University. Dr Hafsa Ahmed is the corresponding author and can be contacted at: Hafsa.Ahmed@ecan.govt.nz

Dr Michaela Balzarova, PhD, is a Senior Lecturer of Business Management in the Faculty of Commerce at the Lincoln University, New Zealand. Michaela's research explores the interface between business and the environment. In particular, Michaela's interests focus on voluntary regulation and business strategic response to environmental and social concerns associated with business practices. Michaela studies various strategies including the adoption of management standards, stakeholder strategies in standards development, and strategies and partnerships in CSR. Recently, Michaela has begun focusing on the new wave of environmental policies that emphasise the use of eco-labelling as novel approaches to communicate environmental and social credentials of products and services.

Dr David A. Cohen, PhD, is an Associate Professor of Marketing in the Faculty of Commerce at the Lincoln University, New Zealand. His research interests are broad and cross-disciplinary, encompassing marketing and management theory, micro- and rural finance, consumer behaviour in banking, foods and pharmaceuticals marketing, and the effects of advertising and promotion on consumers' health behaviours. His students research projects are focused on intellectual capital in financial institutions, word-of-mouth requests and referrals, brand creation and enhancement, supply chain efficiency, and organisational stakeholder influences on management practices and policies.