MACRO-CYCLES OF CHANGE: LEARNING FROM AN ORGANISATION'S HISTORY

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ABSTRACT

The paper reviews the macro-political and economic cycles impacting a large government agency in Australia and its change processes using the theory of punctuated equilibrium. The paper extends original work published in 2002 to include the current global economic crisis and change in the Australian federal government. It analyses problems in the corporate support area of the organisation, which seemingly has not heeded lessons learnt from its history and earlier major change programs. The paper reviews proposed changes in the light of systemic thinking, systems archetypes, and a causal loop diagram. Conclusions are drawn that the organisation did not take into account the macro-cycles of change, nor the unintended consequences arising from decisions to change. Recommendations for improvement are made.

INTRODUCTION

Macro-cycles impacting organisations are frequently neglected by managers undertaking or planning change. This paper reviews a case study of a large government agency in Australia and its change processes, understanding its political and economic environment with the theory of punctuated equilibrium.

The author noted that decision makers in the organisation had allowed the corporate support functions in the organisation to increase in size and diversity between the years 2002 and 2008, and had not learned from history in relation to previous downsizing of the functions in 1993 and 2002. This was particularly true for the human resources function, which was cut in 2002 at the end of a punctuated change cycle, yet was allowed to grow 'out of control' in succeeding years.

The paper proposes that a lack of learning from the organisation's history, and a lack of true systemic thinking within the organisation resulted in the need for further change. This is illustrated through a causal loop diagram and systems archetypes.

PUNCTUATED EQUILIBRIUM THEORY

The concept of *punctuated equilibrium* arises from a theory of natural historians Eldredge and Gould (1972) as an alternative to Darwinian, 'gradual' evolutionary theory. They proposed that new species arise abruptly, through sudden 'punctuations' of rapid change. Since the publication of Tushman and Romanelli (1985)'s translation of this work to organisational behaviour, it has been applied to many organisational situations (e.g. Anderson and Tushman, 1990; Kelly and Amburgey, 1991; Haveman, 1992; Miller and Chen, 1994). However, in recent times it has faded from the organisational change literature, but is being kept alive in the public policy literature (e.g. True et al, 1999; Jones et al, 2003; Berkman and Reenock, 2004).

In organisation studies, Miller and Friesen (1980) developed a model of organisational adaptation, which included periods of revolutionary change. Subsequently, the development of the theory of *punctuated equilibrium* for organisations was developed by Tushman and Romanelli (1985). They describe this theory as follows:

> organizations proceed through relatively long periods of convergence which are punctuated by bursts of fundamental and discontinuous changes throughout the system which lead, in turn, to the next period of incremental change and convergence (p.203).

The periods of convergence are further explained by Tushman and Romanelli (1985:171) as follows: "Convergent periods refer to relatively long time spans of incremental change and adaptation". The discontinuous changes are referred to as 'revolutionary changes' or 'reorientations'. Such reorientations, then, "are relatively short periods of discontinuous change where strategy, power, structure and controls are fundamentally transformed towards a new coalignment" (p.171). Tushman and Romanelli (1985:208) emphasize that organisations "do not evolve through a standard set of stages", but rather "may reach their respective strategic orientations through systematically different patterns of convergence and reorientation". Later, Romanelli and Tushman (1994:1143) noted that "Organizational transformations will most frequently occur in short, discontinuous bursts of change involving most or all key domains of organizational activity". However, there can be considerable variation, as Gersick (1991:12) explains that punctuated equilibria "are not smooth trajectories toward pre-set ends because both the specific composition of a system and the 'rules' governing how its parts interact may change unpredictably".

What distinguishes punctuated change from periods of stability or incremental change is the extent of change in the strategic orientation of an organisation. Tushman and Romanelli (1985:176) refer to "five domains of organization activity", which are incorporated in the strategic orientation. These are:
>   (1) core beliefs and values regarding the organization, its employees and its environment;
>   (2) products, markets, technology and competitive timing;
>   (3) the distribution of power;
>   (4) the organization's structure; and
>   (5) the nature, type and pervasiveness of control systems.

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Examples of punctuated change in organisations

The theory was confirmed in empirical research by Tushman et al (1986) in tracking the life histories of four large corporations: AT&T; General Radio; Citibank; and Prime Computers. They outline a progression of equilibrium periods when organizational systems, structures, and strategies were consistently reinforced toward increasing coherence with the organisations' basic missions. The equilibrium periods were punctuated by very brief periods of intense and pervasive change, resulting in the formulation of new missions and the initiation of new equilibrium periods. Tushman et al (1986:585) noted that in three of the cases, system-wide changes occurred "only after sustained performance decline", whereas the other case was "proactively initiated".

In a large-scale project, Anderson and Tushman (1991:49) "tracked 24 years of minicomputers data, over 100 years of cement industry history, and nearly 200 years of glass industry history and located only 17 discontinuities". In another study, Virany et al (1992) showed that organisations that achieved revolutionary change, in response to changes in their environments, performed better over their lives than organizations that were either never transformed, or were transformed excessively, without the clear stimulus of environmental change. Waclawski (2002:297) also notes that organisations that achieved this form of large-scale change "yielded significantly higher financial performance" than organisations that experienced either incremental change or no change. In a different case, Beugelsdijk et al (2002) examined the history of beer producer Heineken, and found that this organisation initiated its own revolutionary change through business strategy. Also, Sabherwal et al (2001) examined the histories of three corporations involved in the information systems industry, and found revolutionary periods in all three cases.

Other empirical research which has supported the theory across a range of organisation types includes airlines (Kelly and Amburgey, 1991; Miller and Chen, 1994), savings and loans (Haveman, 1992), cement (Anderson and Tushman, 1990), and newspapers (Amburgey et al 1993). As the examples have shown, punctuated change can be initiated by the organisation or externally driven.

In public policy research, Berkman and Reenock (2004) traced the policy decisions of State governments in the USA over a forty year period from 1952 to 1992 and mapped them to the punctuated equilibrium theory. They found (p.796) two patterns of change, one being the "reconfiguration of executive branches along the lines of well-defined organizational models", which were *comprehensive reorganisations,* characterized by top-down decision making, extensive administrative reorganization within a short period of time (typically one or two years)". These involved the "elimination and consolidation of as many as 281 administrative bodies". The other pattern they noticed was that in "many states change was gradual and piecemeal", which suggested a "path to executive restructuring and reform, one that involves adjustments within departments and agencies over a longer term".

In another view, Wollin (1999:365) notes that in large organisations with "multiple change processes occurring at different parts of the system, it is possible for the system to never be completely stable, and at all times prone to major instability". He believes then that "the 'equilibrium' in punctuated equilibrium is rarely a true

equilibrium or steady state", but "the system may be relatively stable for prolonged periods, reflecting the experience and dynamics of many organizational systems".

Whilst supportive of the punctuated equilibrium model, Gersick (1991:33) notes that "punctuational patterns may be most evident in systems that have confining deep structures; they may be least evident in highly flexible systems".

Triggers of punctuated change

Tushman and Romanelli (1985:205) and Gersick (1991:23) discuss the triggers for revolutionary periods of change. The former propose that "reorientations will be triggered by sustained low performance, major shifts in the distribution of power and/or by discontinuous changes in product class conditions". The latter discusses key crises in the environment or within the organisation that enable receptivity to revolutionary changes. The shift in power is also emphasised by Miller and Friesen (1980:607), who state that "Revolutionary organizational reorientation may occur when there is a major shift in power among management groups of differing ideologies and perspectives". The key triggers are noted by Romanelli and Tushman (1994:1144) as:

> Severe crisis in the performance of an organization, major changes in its environment, and succession of its chief executive officer have been posited as forces potentially strong enough to overcome inertia and to stimulate fundamental organizational transformation.

Sustained low performance was earlier noted as a condition for change by Kuhn (1970:92), who states that "Encompassing remediality can also overcome momentum, causing the abandonment of a basic orientation or evolutionary direction because of perceived failures". Berkman and Reenock (2004:811) note that a "fiscal slowdown can be used by policymakers to promote topdown, comprehensive reform."

The various triggers associated with change require the confluence of three effects, according to Sastry (1997:258), who states that these are: "sufficient ability to change, high enough pressure for change, and a perception of a mismatch between organization and environment".

Incremental change – different to revolutionary change

Revolutionary change is not the norm, and, Tushman et al (1986:585) believe that incremental and punctuated change are quite different types of change, and are both appropriate in different circumstances. They note that the "task of managing incremental change, or convergence, differs sharply from managing frame-breaking change". Organisations more often experience incremental change, and some organizations undergo continuous change processes. For example, Miller and Friesen (1982:869) state that incrementalism "allows the organization to learn from its previous actions and still be in a position to remedy them". This is because "incremental change is compatible with the existing structure of a company and is reinforced over a period of years", whereas "frame-breaking change is abrupt, painful to participants, and often resisted by the old guard".

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Berkman and Reenock (2004:797), in their research on state governments found that many states showed a "pattern of *incremental consolidation*," where decision making was "decentralized rather than top-down and modular rather than holistic across all agencies with change occurring over many years". However, they (p.807) note that it "comes with a tradeoff" as state policymakers "will not get the same bang for their reformist buck". Their analysis showed that "a comprehensive reorganization will likely achieve a higher number of total agencies consolidated than the typical accumulated incremental acts." (Berkman and Reenock, 2004:807).

With punctuated change, equilibrium states can exist in both stable environments and incremental change environments. The characteristics of revolutionary change that are evident in punctuations include: major changes in business strategy; major changes in hierarchy or leadership; major changes in systems and structures; and major changes in the control systems. These characteristics do not undergo major change in adaptive or incremental change conditions, otherwise it would be considered revolutionary change.

The author believes that these factors do not change that much in adaptable organisations, unless in a revolutionary cycle. In such organizations, the business strategy is to be innovative and adaptable to meet market needs. This major strategy (of being adaptable, or having the propensity to be adaptable) does not change, only the specific foci at various points. Also, these organisations usually have a strategy of ongoing product development, which *does not* change, although the specifics of products and services *will* change. Leadership may change in these organisations, but rarely in a major spill or restructure, such as that referred to in the punctuated model. It is true that these organisations can cope with market turbulence without undergoing fundamental change, however such organisations may eventually face a punctuation or radical change in the future that their current adaptability may not be able to meet. In the punctuated view, this could be 100 years from now. Amis et al (2004:16) stress that "survival for many organizations will be predicated upon an ability to, at some point, negotiate some form of revolutionary transition".

Note that in the current financial crisis, the likelihood of revolutionary change is significantly higher than in more stable economic times. Organisations that were considered eminently stable have become unstable and even bankrupted or taken over by more fiscally conservative organizations.

Sundarasaradula et al (2005:375) note that "Either the systems can transform successfully or they fail". However, they explain that a successful transformation "not only results in systems that are more complex systemically", but also "enables them to successfully manage even more challenges imposed by the increasingly complex environment".

The next section describes the application of the punctuated equilibrium model to the agency's situation and history.

THE POLITICAL AND FUNDING CYCLES OF THE AGENCY

In Molineux and Haslett (2002), a pattern of boom and bust in the agency's funding was found to be partly related to economic circumstances and annual funding cycles,

and partly tied to government policy initiatives (or lack thereof). The organisation was never quite sure as to its funding position each year. Although three-year funding agreements had been in place over some years, the Cabinet altered this in every annual budget cycle. The agency generally received more funding when the Australian economy was growing well, and less funding when the economy was stagnating or in recession. Also, the agency received more funding when there were significant policy issues, and reduced funding, due partly to efficiency dividends, in the years where there was an absence of new policy. This tied the organisation to political and government cycles.

Molineux and Haslett (2002) found three punctuations over the period 1980 to 2002, which is a quite high instance of revolutionary change, but it reflects the changing nature of government and public service during that time. The punctuations were initially identified by the author reviewing the content of the agency's annual reports and staffing figures. The punctuations were confirmed via a selection of ten senior executives, who were taken through a structured interview process to review the history of the organisation. A requirement for interview was that the executive had occupied a senior position in the agency during the entire period. The executives confirmed the punctuated change periods, which are outlined in Figure 1. The periods were explained by Molineux and Haslett (2002), and are briefly noted in the following paragraphs.

The first period of punctuated change occurred during the second term of the Bob Hawke-led ALP government, first elected in March 1983. This period occurred after December 1984, and characterised major deep structure changes in the agency, including major changes to organisational values and structures, a new CEO, and a very major shift in policy. These changes are related to the concept of 'environmental factors' in the punctuated change model. An example of this policy was a move away from a philosophy of 'we must get it right', leading to the checking of every client transaction, to a philosophy of 'trusting the client to get it right'. This change in philosophy led to huge changes in the way work was done in the agency, and entailed a very different form of relationship with the community. A further characteristic of this period included the change of management style, from one based on authority and hierarchy, to one based more on involvement and industrial democracy, consistent with the ALP Government's policy.

This first punctuation commenced in 1985 and took until 1987, when the organisation moved into a more stable period of gradual change and modernisation. The major initiative of this new period from 1987 was a ten-year plan of modernisation, and a consequent legally-binding agreement with unions to a range of industrial democracy practices for the life of this ten year project. This new form of stability, based on continual change of systems and processes (but at the same time bedding down the new values), brought in an era of gradual change, where moderate reform became the norm. In the context of punctuated equilibrium, this period would be considered an equilibrium period, due to the consistency of values and leadership, and the continuous and gradual nature of the changes. Wollin (1999:365) confirms this when he states that an equilibrium state "is rarely a true equilibrium or steady state", but "the system may be relatively stable for prolonged periods".

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The first punctuation, from 1985 to 1987, was the first revolutionary period in the organisation's living memory (since at least the early 1960s, and *"probably not since the post-war years"*, according to a long-serving staff executive). From this evidence it is clear an enormous amount of inertia (Tushman and Romanelli, 1985) had been created over many years, which needed major change efforts to shift. Inertia works in a way that reinforces equilibrium.

The second change identified was during an economic downturn in 1992, which led the ALP Government to change policy, and Paul Keating became leader. This downturn forced the Government to pull back funding from the agency. The scene was then set for the second period of punctuation for the organisation. This was different from the first, as the organisation shifted back to more traditional economic 'rationalist' values. A new CEO was appointed, the policy environment altered, and massive changes were made in structure and organisational size, including the redundancy of just over 5% of the organisation's permanent staff. A major change in structure, from one based on regional management of functional groupings, to one based on national management of market segments, occurred. Also, there was a major parliamentary inquiry into the operations of the agency. This punctuation commenced in late 1992 and was finished by early 1995.

Following this period, a new period of equilibrium commenced which lasted until 1999, when the John Howard-led Liberal-National Government brought in major reform in their second term in office. The third period of revolutionary change did not, at this time, mean a change in CEO. However, the CEO and executive team realised that major change was essential to deliver the Government's reform agenda. This period was characterised by a change in philosophy and direction, a major increase in resources (staffing increased by 35% in just one year), and significant changes in the management, power, and structural influences within the organisation. New management philosophies in this period were enunciated in the agency's People Strategy, and were characterised by an emphasis on mutual benefit between management and employees, differentiation in workforces, and the desire to work towards a 'performance' culture. The management and power arrangements significantly altered, as the implementation of the Government's reform agenda became the driving force of the organisation. Massive shifts in staffing from established areas of the agency to the new reform areas occurred. Reform implementation took over as the major executive agenda. New structures were put it place to manage the reform processes. This third punctuation period commenced in 1999 and concluded in 2001.

By early 2001, a reversion to the values of the previous equilibrium period occurred due to funding cuts by the Government, and consequential reactive actions taken by the management of the organisation. All other changes in the last thirty years could be categorised in terms of 'incremental' change. A timeline detailing the periods of punctuation and equilibrium is shown at Figure 1, with '0' representing equilibrium periods, '1' representing a period of planned incremental change, and '2' representing periods of punctuation.

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Periods of Change and Equilibrium 1980-2009

Legend: 0=equilibrium period   1=incremental change period   2=punctuated change period
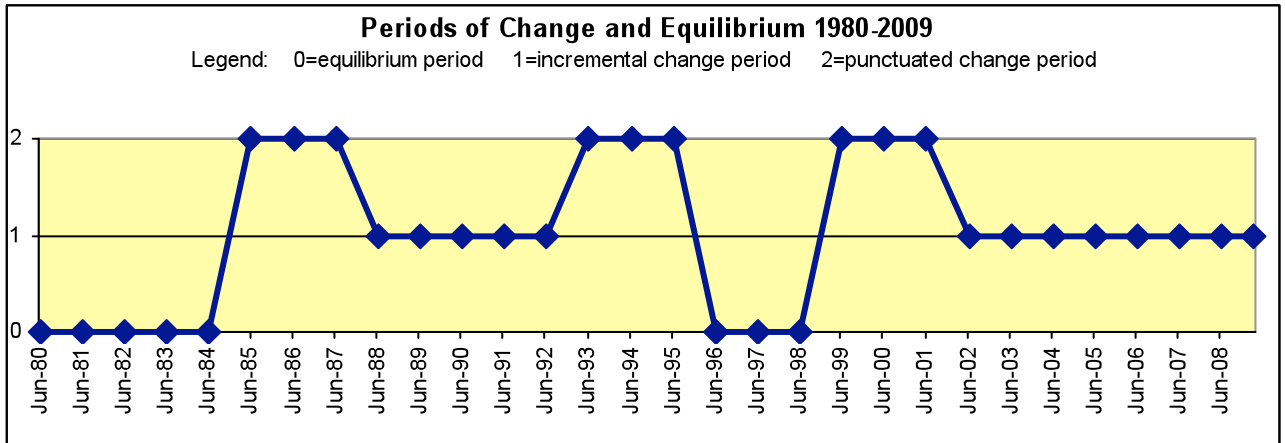
Figure 1: Periods of change and equilibrium 1980-2009

Cycles and triggers in the Agency's change history

The punctuations and periods of equilibrium were not even, and the length of cycles were not consistent. Gersick (1991:12) explains such situations by stating that:

> Punctuated equilibria are not smooth trajectories toward pre-set ends because both the specific composition of a system and the 'rules' governing how its parts interact may change unpredictability during revolutionary punctuations.

The three categories of triggers for punctuated change (Tushman and Romanelli, 1985) are matched in Table 1 with an assessment of the presence or absence of triggers during the period 1980-2009 for the agency. These assessments were made on a synthesis of information in the agency's Annual Reports, and the assessment of the executives interviewed by the author. In all three punctuated periods, the environment was a key issue driving change. The Government initiated the major reforms for the first and third periods, and cut back the funds of the agency for the second period. Performance was a major issue in the first period, due to the inability of the organisation to cope with change in its environment with its existing resources, structures, and processes. It was an issue in the second period due to a parliamentary inquiry investigating the agency's performance. In the third period, the organisation's resources, structures and processes were entirely inadequate to cope with a major reform. In the first and second periods, new CEOs were appointed.

Table 1: Triggers for change in punctuated and equilibrium periods

Period:	Triggers:		
	Performance	**Environment**	**CEO change**
1980-1984	No	No	No
1985-1987*	Yes	Yes	Yes
1988-1992	No	No	No
1993-1995*	Yes	Yes	Yes

1996-1998	No	No	No
1999-2001*	Yes	Yes	No
2002-2009	No	No	Yes

* Period of punctuated change

Table 2 matches Tushman and Romanelli's (1985) five domains of organisation activity where reorientation would occur, against an assessment of the arenas of major change during the period 1980-2009 in the agency. This table outlines the factors involved in major change and the perceived significance of changes, according to interviews with the senior executives. The executives were requested to assess the extent of the punctuated change and equilibrium periods in terms of the five domains. The results shown in Table 2 are the average of the executives' responses. In 2009, the author re-interviewed five of the senior executives who have remained in the organisation since 2002 to determine an evaluation of factors for the 2002-09 period.

The first punctuated period (1985-7) was characterised by the most major turnaround in strategy that the organisation had seen. This was associated with a distinct shift in the core values enunciated by the executive group, and devolution of power and control. The second punctuated period (1993-5) radically shifted power from generic regional managers to national business managers, and restructured the organisation from regional functional-based activity, to national market-based activity. The third punctuated period (1999-2001) brought in a completely new strategy that was more suited to the agency's changing environment. Radical shifts included changes to the way the organisation worked with the community, and client interfaces. The senior executives confirmed that there where no significant changes in the period following the third punctuation.

Table 2: Evaluation of factors contributing to punctuated change or equilibrium

Period:	Factors:				
	Strategy changes	**Power shifts**	**Structure**	**Control systems**	**Core values**
1980-1984	Low	Low	Low	Low	Low
1985-1987*	Very high	High	High	High	Moderate
1988-1992	Moderate	Low	Low	Moderate	Low
1993-1995*	High	Very high	Very high	High	Moderate
1996-1998	Moderate	Low	Low	Low	Low
1999-2001*	Very high	High	High	Moderate	Low
2002-2009	Moderate	Low	Low	Moderate	Low

* Period of punctuated change

The equilibrium period 1980-84 was nominated as a period of low change, but increasing pressure to change, as the inertia in the organisation built. The equilibrium

period 1988-92 was nominated as a period of incremental change, with a period of planned change, the 'Modernisation Program' where computerisation was brought into the organisation. The 1996-8 period was nominated as a period of equilibrium as it followed the period of rapid change, and the changes were embedded into the culture and structure of the organisation. The 2002-09 period was characterised by incremental change as a program of planned change, involving the introduction of major new computer systems was introduced: the 'Change Program'. This was quite comparable to the Modernisation Program in the late 1980s and early 1990s.

Managers and team leaders in the organisation experienced a great deal of freedom in both the first and third revolutionary cycles. Human Resources became 'flavour of the month' during these cycles (according to a senior HR manager), and experienced a significant surge in power and influence, as well as increases in resources. For example, the number of senior executive members with full-time HR corporate responsibility increased from one to three during the third punctuation. Extra funding was provided for corporate HR projects, and HR staff were given more responsibility, particularly around change initiatives, as well as a higher profile. This extra freedom, funding and power is reported by Amburgey et al (1993), who found that organizations enjoy increased freedom in the period immediately following an organisational revolution. However, this did not hold for the second punctuation, which was revolutionary, but also reversionary. Agency executives interviewed believed that in the second period, power, freedom and funding was taken away from lower level managers, and that power was concentrated at senior management levels.

The impact of downturns following the second punctuation was quite devastating to corporate HR. There was a huge loss of capability (35% reduction in just one financial year, 1995-6), and a consequent build up of shadow line HR functions to counteract the loss of corporate capability. This consequential build up of shadow line HR capability is described later in Figure 4, and arose directly from the huge reductions in funding for corporate HR activities. Business lines perceived the performance of corporate HR was not up to the standard required by them, and so they invested their own line funds to build line HR functionality.

The Economic Crisis and Review of Corporate Functions

It was mentioned earlier that the current world economic crisis (2008-09) is a major catalyst for change, and is likely to force many organisations to undergo revolutionary change. There has been a significant impetus for cost reduction due to efficiency cuts placed on APS organisations by the new Kevin Rudd-led ALP government. These efficiency dividends have meant that APS organisations have needed to find cuts from somewhere to enable core functions to remain operable. In the agency's case, the bloated corporate support areas were an obvious target, following six years of expansion, duplication, and over-servicing.

An earlier attempt in 2006, some effort was established within the major divisions of the agency to reign some of this back by centralising some activities at the divisional level, rather than the business line level. This generated some small savings, but not to the extent seen by the executive as being significant.

In 2008, the agency's executive decided to review the costs of its corporate support functions, so an external consultant was contracted. They found, not surprisingly, that HR service costs were entirely above industry benchmarks, there was duplication and inconsistency, and recommended an integrated HR structure based on "five pillars", similar to that advocated by Ulrich et al (2008). The five pillars advocated to the organisation were: Corporate Centre, Centres of Expertise, Shared Services, Business Partners, and Outsourced Suppliers. All of these would report to the head of HR in the organisation. This would be a significant change for HR, as over a third of HR staff did not report this way, but were responsible to line-based or divisional-based senior managers. The new structure is currently being implemented with savings through synergy, consolidation and consistency estimated to be up to 33%. Most of the savings would be achieved through the integration of centres of expertise and the creation of more shared services functions, eliminating the need to duplicate these services, and reducing unnecessary over-servicing. The agency's Executive accepted the report, but decided to go with a longer-term implementation, which would see various functional areas of HR reorganised over a two-year period from 2009.

The reason for the latest proposed change is that the costs of providing HR are out of control, they are seen as not being strategically aligned, and there is duplication and reinvention across the business lines. Since the cost reductions in 2002, the poor investment at the time in corporate HR has resulted in the blossoming of business line based HR. This has enabled each line to build its own HR systems, as the corporate centre was not providing the services required to invest in and build capability. Not surprisingly, this led to significant duplication, where different lines all built their own leadership programs, learning and development strategies, mobility programs, etc. Interestingly enough, the Corporate HR area had also increased its resources over the same period, due to an increased demand for services. In the period from 2002 to 2009, the organisation's staffing increased by 28%, however Corporate Support increased in the same period by a total of 63%, and line-based HR increased by 100%. The demand for services resulting from cuts to Corporate HR in 2002 has caused an uncontrolled growth without any overall design or strategic intent.

There is significant variation in HR ratios between organizations, according to research undertaken by Brewster et al (2006). Larger HR departments are more likely to occur in "innovative sectors and industries", where "the brief of HR departments is likely to be expanded, necessitating a wider range of specialists" (Brewster et al, 2006:5). They (p.11) found that "on average per 1,000 employees, 15.9 HR staff members are employed", although there was significant variation across countries and sectors. They discovered that organizations in central government "are 32% more likely to have a large HR staff ratio" (Brewster et al, 2006:13).

Another factor in large HR numbers is a high level of organisation investment in training and development. This factor is certainly true of the agency, where its unique capability is supported by grow-your-own intensive learning and development programs. An understanding of the requirements for human capital of the organisation would clearly indicate that this is an organisation that requires an investment strategy in its human resources. Such investment strategies are expensive, as it requires significant effort to grow your own expertise. You can't just buy it off the shelf. As the intellectual capital required is of a high level to sustain

organisational capability, long term development, performance and recognition systems are essential to build capability and maintain commitment to the organisation.

The "People Philosophy" of the organisation developed in 1999 showed an insight into this understanding as the executive team saw the need to differentiate its human capital requirements, and move away from a one-size-fits-all approach. This led to an understanding of work types, where the organisation realised it was employing several different workforces, each requiring its own HR strategy. This resulted in higher investment in the core workforce, and differentiated approaches within the same overall philosophy and organisational values. After the budget cuts in 2002, this strategy was abandoned.

The expansion of corporate support areas was an unintended consequence of many decision makers, making independent decisions. Such unintended consequences occur for several reasons, according to Waldman (2007:277), who states that in addition to "the long delay between cause and effect, many problem solvers believe that good intentions and logic are sufficient to achieve positive, predictable outcomes". He adds that "Silo thinking is common and many do not consider the broader context of narrowly drawn decisions."

Systemic thinking, with the use of tools such as Causal Loop Diagrams, is required to analyse the impact of decisions and determine possible unintended consequences.

ADAPTATION OF SASTRY'S MODEL

In a systemic exploration of the punctuated equilibrium theory, Sastry (1997) developed a system dynamics model to map and test the punctuated equilibrium model of organisational change. Sastry (1997:242) notes that "In this model, change is produced by a negative, or self-correcting, loop. Convergence is the result of positive feedback, or self-reinforcing processes". Using Sastry's causal loop diagram "Simplified causal diagram of the punctuated change theory" (p.244), the author developed Figure 4, which explains the causal process at work in the agency. The author has not followed Sastry's process in turning it into a dynamic systems model, but has used the diagram to explain complexity and non-linear behaviour.

Causal Loop Diagrams (CLDs) contain "a simple language which can be introduced organically into discussions so that problem owners quickly start to use them" according to Lane (2008:12), who adds that "the suppression of detail observed in CLDs can be attractive to senior managers who aim to get a strategic overview of a problem rather than wade through detail". He finds that CLDs are "very effective in illustrating feedback" (p.18).

In the model, two drivers to HR strategy are shown as '*change initiative*', and '*funding available for corporate HR*'. The existing *HR strategic orientation* is then measured against new strategic requirements from the change initiative. This element of the model is called '*appropriateness*'. In a commentary on Sastry's model, Pala et al (2001) state that the element *appropriateness* shows whether the organisation's strategic orientation is in alignment with the strategic orientation required. The *appropriateness* of the existing strategy determines the *performance of corporate HR*, along with an assessment of capability. This leads into the *perceived performance of*
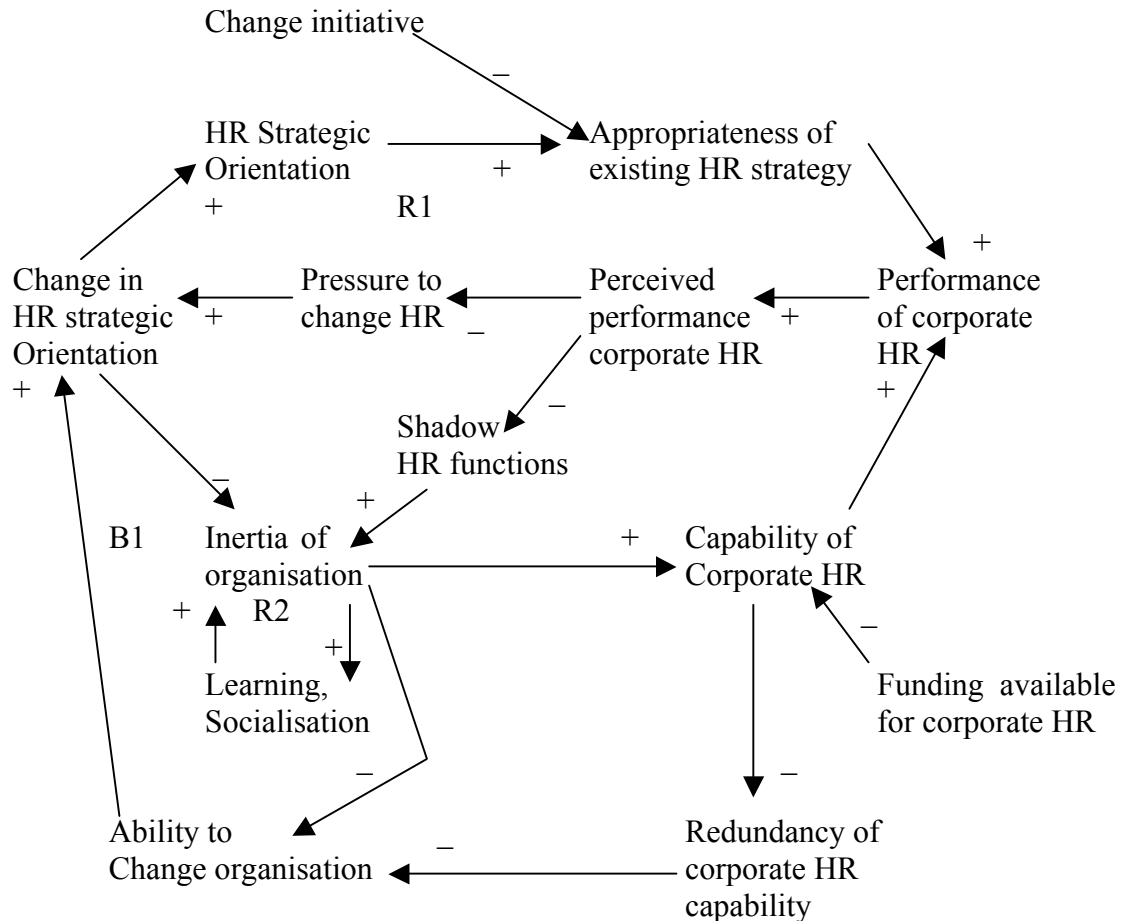
corporate HR with subsequent *pressure to change*, if performance is not up to scratch. Changes then occur to the *strategic orientation*, which matches the new initiative, and so becomes more appropriate. This is a reinforcing loop, R1.

Balancing this is the inertia loop, B1. The *inertia of the organisation* reduces the *ability of the organisation to change,* and limits changes to *HR strategic orientation*. Also, *shadow HR functions* arise in business lines, developed as a result of a reduction in *funding for corporate HR* and related perceived lower performance of corporate HR. This also increases inertia, and reduces the *capability of corporate HR* to deliver change.

Inertia is reinforced, R2, through the ongoing *learning and socialisation* of the workforce into traditional methods, values, and deep structure. A reduction in funding also leads to a *redundant capability of corporate HR*, which further reduces the *ability of the organisation to change*.

In the original 2002 model, the executive members of the agency did not believe the existing strategic orientation for HR was appropriate, which is why the People Strategy was developed. In the latest 2009 version of the model, a number of decision makers in different divisions of the business were all making this decision, that the appropriateness of the strategy was not correct. As the corporate HR was not delivering it, *shadow HR functions* grew, and were relied on more. As the business more and more relied on these functions, there was no pressure on corporate HR to change its strategic orientation. It was not until an external crisis, the global financial situation occurred, and budgets were cut, that there was an external driver introduced for urgent change.

Change initiative

HR Strategic ——————→ Appropriateness of
Orientation   +   existing HR strategy
    +   R1

Change in   ←— Pressure to   Perceived   Performance
HR strategic   +   change HR   _   performance   +   of corporate
Orientation   corporate HR   HR
+   +   +
                 _   Shadow
        _   HR functions

B1   Inertia of   +   Capability of
       organisation —————→ Corporate HR
   +   ↑   R2   _
          + ↓
    Learning,   Funding available
    Socialisation   for corporate HR

          _   _

Ability to   Redundancy of
Change organisation ←———— corporate HR
           _   capability

Figure 4: Causal factors associated with the performance of corporate human resource strategy. (After Sastry, 1997)

There is a probable consequence of implementing the new structure suggested by the consultants, and where systemic thinking is also lacking. Ulrich et al (2008:830) advocate that an HR organisation should first be "organized to mimic the business organization in which HR operates" and an HR department in a large multi-geographic and diverse business should "reflect this business organization structure by adapting five roles and responsibilities". These are: Service Centres; Corporate HR; Embedded HR; Centres of Expertise; and Operational Executors.

The proposed new structure in the agency is only partially aligned to this, as it does not include the operational executors role, located close to the business. This could lead to another situation where the agency replays the model's causal structure in the future, as the business becomes more isolated from its HR services, then its perceived performance decreases, once again leading to the creation of shadow HR functions out of local management need.

In an analysis of HR departments in the public sector, Teo and Rodwell (2007:280) found that the perceived effectiveness of the HR department was found to be "influenced by the degree of involvement of the HR function in operational activities, which in turn increased their level of influence and strategic integration". This finding adds further weight to the voices of systems thinkers for the agency's

management to consider more carefully the implementation of a new model. If the operational side of HR is not working effectively, again, the perception of the performance of HR will reduce accordingly, and shadow HR functions will continue to blossom.

SYSTEMS THINKING IS REQUIRED

The tendency to create shadow HR functions is outlined by Ulrich (1997). For management, this was an unintended consequence of their action to reduce funding, but for a systems thinker, this is a natural reaction of a system. It can be seen in Senge's (1990:380) 'shifting the burden' archetype, noted in Figure 3. The symptomatic solution – cuts to corporate HR – caused the side effect of the creation of shadow functions. A 'fundamental' solution was not implemented. The systemic thinking required to bring about long-term solutions is difficult, because systems are complex and have many inter-related parts that are hard to understand. Such thinking, though, may deliver significant benefits in the long-term. Senge (1990) outlines the implications of short-term thinking in the systems archetypes 'Fixes that fail', and 'Shifting the burden'. In Figure 2, the 'Fixes that fail' archetype is shown.


Problem   Fix

Delay

Unintended
consequences
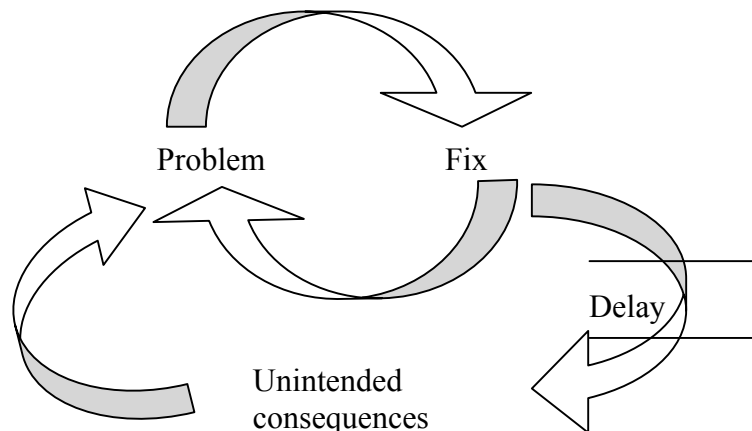
Figure 2: 'Fixes that fail' archetype (Senge, 1990:388)

The 'Fixes that fail' archetype shows that short-term fixes may resolve immediate problems, but over time develop unintended consequences that were not envisioned by the decision-maker due to a lack of systemic thinking involved. A similar issue is raised in the 'Shifting the burden' archetype, shown in Figure 3. In this archetype, a problem symptom is dealt with using a symptomatic solution, which causes side effects, while the fundamental solution that may resolve the problem is not considered. The fundamental solution, of course, may take more time to implement to obtain the intended result. Senge (1990:92) notes that:

> The systems viewpoint is generally oriented toward the long-term view. That's why delays and feedback loops are so important. In the short term, you can often ignore them; they're inconsequential. They only come back to haunt you in the long term.

The difference between the symptomatic and fundamental approaches is also noted by Kim and Senge (1994:277), where they state: "Everyone acknowledges the sins of short-term goals for business performance rather than on high-leverage areas for system-wide redesign and significant improvement".
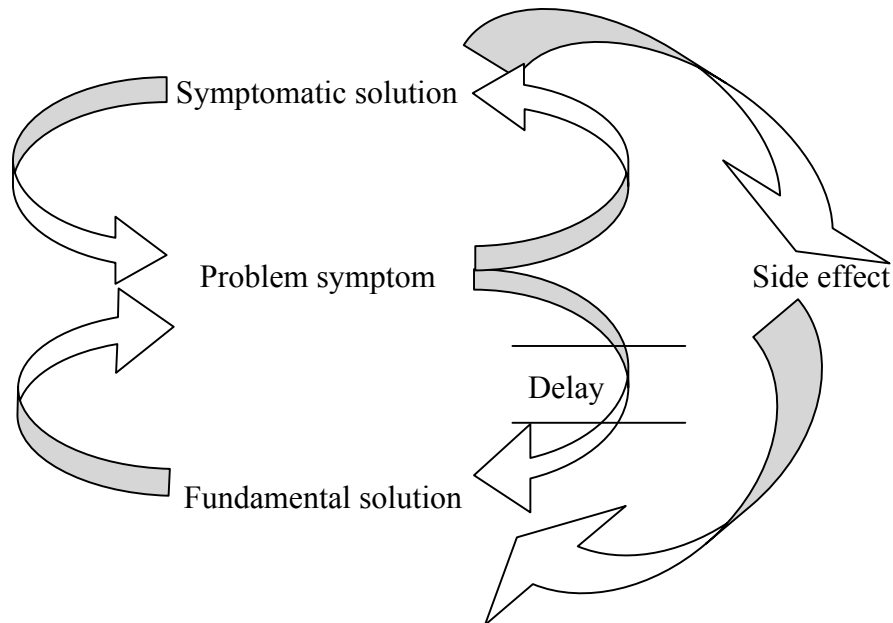
Figure 3: 'Shifting the burden' archetype (Senge, 1990:380).

The process of learning from history, a layperson might think, should be fairly straightforward. However, as people are isolated in divisional silos, and are working to solve short-term problems, history is the last thing on their minds. Complexity is another dimension in this. Sterman et al (2007:685) states that people make decisions using "routines and heuristics because the complexity of the environment exceeds their ability to optimize even with respect to the limited information available to them". In addition, Weil (2007:139) notes that the principle of bounded rationality "recognizes that decision makers rely on simple mental models which have serious limitations." These mental models become "increasingly deficient as problems grow more complex, as the environment changes more rapidly, and as more people must participate in key decisions".

In discussing the various systems techniques, Flood (1999) recognises the relevance and importance of systemic thinking for contemporary management in a world that is more complex and less certain. He also suggests that the use of systems maps and systemic understanding is critical in relation to this understanding. Flood (1999:129) notes that: "Systemic thinking offers a particularly profitable way of gaining meaningful insights into things that are local to us in space and time" and "deepening systemic appreciation facilitates construction of incisive insights into each viewpoint". Maani and Maharaj (2004:33) have found that systemic thinking "does not affect performance directly, but it rather affects *understanding*, which can then lead to better task performance." It is this understanding or insight into complex systems that can enable better or more informed decision-making.

Barton and Haslett (2007) advocate a dialectic between analysis and synthesis to improve understanding and enhance debate. They note (p.153) that understanding and explanation "will, as far as systemic thinking is concerned, always be oriented towards deeper contexts and therefore, the construction of new patterns." They explain that it is "the construction and synthesis that constitute the search object", whereas "analysis is purely a tool in order to reach it" and if "analysis is given precedence, the construction and synthesis will lag behind."

Without systemic thinking about the organisation, its macro-cycles and learning from history, the organisation is likely to repeat the same mistakes. Why does this happen? Is it true that mechanistic thinking is such a dominant paradigm that it completely overpowers synthetic thinking? Despite the introduction of systemic techniques in an organisation, there seems to be a reversionary effect back to analytic-only methods instead of a dialectic between analytic and synthetic methods.

CONCLUSION

In the agency, it was found there were three periods of punctuated change over a thirty-year period. Most recently, the world economic crisis has obliged the Kevin Rudd-led ALP government to reduce funding to its agencies and departments, and for the public service to create savings and efficiencies. The major savings required by the agency's executive team were decided to be from the corporate support areas of the organisation.

It can be seen from an analysis of the history of the agency and a comparison with the causal loop diagram at Figure 4, that cuts to corporate support areas such as HR are followed by increases in shadow HR functions. Since 2002, the agency has let this grow unchecked, without a coherent whole-of-organisation HR strategy. The author believes this is a direct result of a lack of systemic thinking by executives about their context and history over time. The centralisation strategy proposed by consultants and accepted by the agency's executive is therefore likely to experience the same unintended consequences as the previous restructures in 1995 and 2002.

Implications for practice

A number of implications and recommendations for managers and change agents can be drawn from this research.

1. *Learn from history.*
It is clear from the analysis of the agency's history that it is about to repeat the same mistake for the third time, which is to undertake a downsizing of the HR function without taking into account the impact of unintended consequences of the decision. Executive teams should review the history of the organisation, and call for analysis of past events to track the long-term impacts of major restructures. This should then lead to learning about the unintended consequences of decisions, so that action can be taken to prevent history repeating itself.

2. *Fit within the organisation's cycles.*
Ancona and Tushman (2001:656) describe the process of "entrainment", which "entails adjusting the pace or cycle of one activity to synchronize it with that of

another". Organisational change agents should therefore consider mapping the cycles of the organisation over time, to obtain some insight into long-term cyclic behaviour. A cyclic mapping of organisational history may be completed by following the processes outlined in this paper. Executive teams should demand an analysis of all impacts of restructure recommendations, using causal loop diagramming or longitudinal analysis. They can then track the patterns of punctuation, equilibrium, and incremental change, which will inform them about the organisation's macro-cycles. This will enable them to entrain their change programs to suit the organisation's environmental context. During equilibrium periods, change agents should use processes of incremental change rather than large-scale change. This is due to the high level of inertia that accumulates during periods of equilibrium. During these times, resistance to change is much stronger, and there is rarely any major force at the top levels of the organisation that can progress large-scale change.

3. *Use systemic thinking and follow a dialectic of analysis and synthesis.*
As recommended by Barton and Haslett (2007), organisations should review their strategy in a cyclic process of analysis and synthesis, where each informs the other. Systems methodologies should be adopted by organisational executives to get a more holistic understanding of their organisational context, impacts of decisions, causal processes and projected consequences.

4. *Improve management training to incorporate systems methodologies.*
Managers should receive training and development in systems thinking philosophy, methodologies, tools and techniques, and actively practice using them.

In summary, the theory of punctuated equilibrium has significant messages to managers engaged in change projects in large organisations. Managers should be aware of macro-organisational cycles, and review their change management practices and activities accordingly.

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