

## **Managing and Leading Organisational Evolution**

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### *Evolving in a turbulent, fast-changing world*

As we advance into the 21<sup>st</sup> century, organisations today face an increasingly turbulent environment, with major socio-economic, financial and political shocks disrupting the status quo. On the one hand, we are told that organisations need to exploit knowledge and increase competitive advantage through experiential learning. On the other hand firms also need to explore new practices and knowledge to meet the changing demands of their business worlds. However managing these competing needs for stability through the exploitation of knowledge whilst at the same time adapting to change, might threaten the very existence of the firm (March, 1991), as a focus on one constrains the other. For example, the exploitation of knowledge through experiential learning can lead to a build up of behavioural and socio-political inertia within the organisation, suppressing variations from lower levels, making subsequent change difficult (Tushman and Romanelli, 1985). Indeed, very successful groups can breed in-group solidarity and a move towards specialization, homogeneity and intolerance (Miller, 1999), as the perceived need for change is downplayed as the group “filters information in support of the status quo” (Tushman and Romanelli, 1985, p.211). As a result firms tend to do less scanning of markets, consider a narrower range of factors and criteria in making decisions, thus impairing the firm’s ability to respond creatively to changing external conditions (Aldrich and Ruef, 2006). In this way, success can lead to over-exploitation of existing knowledge, reinforcing existing practices and power balances, but with this an inability to adapt to changing futures. Therefore managing this tension between the need to both explore and exploit knowledge in the face of major environmental upheaval becomes a key issue for managers at all levels.

Lessons however can be learnt from the living world around us. 150 years after Darwin wrote his seminal book on the Origin of Species (Darwin, 1959), science has shown how nature’s survivors learn to adapt to the tumultuous changes in earth’s history, with some microscopic organisms adapting to change over the millennia. More recently a group of social scientists have been searching for clues in this evolutionary story, with a view towards understanding the wider ‘evolution’ of culture, politics, technology and more recently organisations (Aldrich and Ruef, 2006). In light of the need for all organisations to learn to adapt in the face of socio-economic and political challenges, an evolutionary language is emerging which offers entrepreneurs and business managers the opportunity to draw from nature’s survivors. In the biological world evolution occurs over time through three key mechanisms of variation, selection and retention. Social scientists have recently used these generalised evolutionary concepts to study the co-evolution of innovation (Ziman, 2000; Mokyr, 2000), organisational behaviour (Aldrich and Ruef, 2006; Hodgson and Knudsen, 2010), technology (Arthur, 2009; Murmann, 2003), and entrepreneurship (Breslin, 2008). These organisational evolutionary narratives conceptualise organisational change through the multi-level co-evolution of organisational knowledge (not genes) as represented by competencies (McKelvey, 1982), techniques (Mokyr, 2000), technologies (Arthur, 2009) and increasingly routines (Aldrich and Ruef, 2006; Feldman and Pentland, 2003; Nelson and Winter, 1982). In this way, scholars build a story based on evolution and survival, drawing on processes that have shaped the world around us.

Using this generalised evolutionary approach we can re-interpret change within organisations, such as the well-documented case of Continental AG, which recovered from the brink of organisational extinction in the 1990s (Breslin, 2011; Bruch and Vogel 2004). During the early 1990s, the world tire industry was plagued by overcapacity and a decline in vehicle registrations, and Continental alongside other competitors in the industry had been pursuing growth strategies in order to achieve economies of scale (Bruch and Vogel, 2004). During this period the organisation suffered poor profits, and was perceived as being bureaucratic and with a culture of centralised decision-making. In the latter half of that decade Continental reinvented itself through the exploration of new opportunities in automotive systems. In this co-evolutionary story managers at all levels had a role to play as an evolutionary language emerged to guide decisions and choices made.

*‘Learning to Evolve’*

The frontline manager is at the coalface of evolving knowledge within the organisation, and together with the operational team must ‘learn to evolve’ to suit the changing demands of the local business environment. In this sense, the frontline manager must create an environment in which skills and competences are continually *varied*, *selected* and *retained* within the team (Breslin and Jones, 2011). As frontline managers learn to evolve, they develop a set of ‘evolutionary heuristics’ which can inform their actions, and in the process influence these same evolutionary mechanisms, and the local evolutionary environment. At Continental, periods of stability and decline in the early 1990s had resulted in existing practices becoming firmly established and embedded in the organisation. Many of these practices had emerged during the decades of relative success prior to the 1990s, and despite the challenges of this latest period the over-exploitation of these competences resulted in inertia building up. As a result of both inertial and socio-political forces acting to maintain the status quo, *variations* in practices had become downplayed, with groups choosing to *select* and *retain* tried and tested procedures and competences, rather than explore new variations through creativity and entrepreneurial activity. In short, the organisation risked becoming extinct within the fast changing tire market and unable to evolve to meet these new challenges.

The organisation responded to these challenges by kick starting the evolutionary process from the bottom-up. Variation, through entrepreneurial behaviour, was actively promoted within frontline groups and managers through a number of organisational initiatives, such as the Delegation of Authority and Responsibility (Bruch and Vogel 2004). Front-line managers were pushed to break with convention, challenge existing practices and pursue new strategic directions. This new language of creative destruction (Schumpeter, 1934) shifted evolutionary emphasis from selection and retention of the old, towards variation and the exploration of new knowledge. As a result existing knowledge as expressed through routines, competences and strategic initiatives was being challenged throughout the organization. For instance, the company radically shifted its approach to tire market, by viewing customer needs in terms of systems of components as opposed to individual parts such as tires. In effect these frontline managers learned to evolve, through the generation and *variation* of new knowledge and ideas, the *selection* of these ideas based on the accurate interpretation of customer feedback (as opposed to the maintenance of status quo), and the *retention* of that new form knowledge through practices and competences.

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	<b><i>Front-Line Managers ‘Learning to Evolve’</i></b>
<b><i>Variation</i></b>	<i>Generation of new knowledge through entrepreneurial behaviour</i>
<b><i>Selection</i></b>	<i>Accurate understanding of customer feedback</i>
	<i>Overcoming historical and socio-political resistance</i>

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*'Artificial Breeders'*

While skills and competences are placed at the core of the evolutionary process, the mechanisms of *variation*, *selection* and *retention* are nonetheless enacted through the individuals concerned. The management of these actors then becomes the role of the middle manager. How do the individuals in frontline groups facilitate or hinder the process of *variation*, *selection* and *retention*? Are the right individuals put together in the right way to facilitate or constrain the resulting evolution of knowledge? While existing practices can provide stability, they can also act to resist change, and in this sense the exploration of new practices might be resisted by the experiences and socio-political status quo directly associated with key individuals within the organisation. In this sense, while the focus of our evolutionary story shifts towards evolving knowledge, individuals and groups also matter and cannot be divorced from the evolutionary processes which define the development of that knowledge over time. It then becomes the job of middle management to manage the higher level process through which local knowledge evolves (without becoming directly involved in the evolutionary process itself), in much the same manner as Darwin's pigeon fanciers selected and pruned key desired characteristics in their prize pigeons (Darwin, 1859). In this sense they act as "artificial breeders" controlling the means through which knowledge evolves within groups, through the management of the broader process and people involved. At Continental this management of the agents of evolution was realised through initiatives such as the Delegation of Authority and Responsibility. This scheme actively promoted entrepreneurial behaviour not only through rhetoric, but by relocating and transferring individuals between groups to suit the needs of each division. For instance, individuals who exhibited "entrepreneurial potential" were identified and promoted through this initiative, into key frontline divisions depending on the changing demands of that local business environment. Similarly individual managers who resisted the process of *variation* in favour of the *selection* and *retention* of existing practices were removed (Bruch and Vogel 2004). Therefore in our evolution story, the middle manager's attention shifts onto the broader process of evolution through the management of the agents of evolution (i.e. frontline staff), and processes through which local knowledge evolves.

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*Middle Managers as 'Artificial Breeders'***Process***Managing the processes through which knowledge evolves***People***Identifying people who enable/constrain this process*

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*'Chief Evolutionary Officers'*

If frontline managers learn to evolve, and middle managers manage the people and process through which this evolution of knowledge takes place, what role does senior management play? The attention of the latter shifts onto the creation and management of an organizational ecology appropriate for the changing corporate environment. In this sense senior management need to consider the competitive *selection* environment at each level of the organisational hierarchy. The greater the number of levels within an organisation's hierarchy, then the greater the complexity involved in managing this process. As noted above, balancing the need for both the exploitation and exploration of knowledge, involves on the one hand organisations breaking down the invisible barriers within the hierarchy of evolving systems and unlocking creativity and *variations* from all levels, and on the other hand allowing enough stability to become established within the various levels to ensure this knowledge is then *retained* and exploited within these same groups. When the organisation's behaviour is dominated by the exploitation of existing practices, the resultant socio-political situation can

lead to *variations* coming from lower levels within the organisation being suppressed. So for example, lower level *variations* introduced by individuals or other groups are inhibited because they disagree with the established routines and/or because they challenge the existing status quo. Whilst exploitation involves bringing individuals into the collective fold and modifying their individual behaviour to that of the group, exploration involves unlocking the sources of *variation* from lower levels through individual creativity and learning. In particular this involves un-tapping sources of *variation* from individuals within the group, and as well as exploring different practices used by other groups and individuals both within the organisations and beyond. From the senior manager's perspective, managing this broader corporate process and the competing needs for exploitation and exploration, thus involves balancing the interaction between the evolutionary systems of the different hierarchical levels within the organisation, from individual to group and organisation. Increasing the interaction between levels through the exploration of knowledge can be achieved by increasing the competitive *selection* pressures at lower levels within organisations, as the "chief evolutionary officer" (Murmman, 2003) acts to encourage diversity and competition amongst individuals and groups (Breslin, 2011).

At Continental this process involved the careful management of selection environments at each level in the organisation's hierarchy. Decision making at Continental had been predominantly centralized before the changes of the 1990s, with the organization being structured largely around functional divisions (Bruch and Vogel 2004). It was recognized that the world view espoused by researchers, engineers and managers within the organization were ill-suited to the changing industry in which it operated. By promoting *variation* by fostering entrepreneurial behaviour amongst engineers, whilst at the same time strengthening the link between frontline managers and customers, the competitive *selection* environment was dramatically shifted from the corporate centre to the level of the individual and group, promoting differential fitness to better reflect the changing circumstances in the marketplace. In addition to the promotion of entrepreneurial activity and behaviour within Continental, organizational divisions were also put in direct competition with each other, further increasing the pressure for continuing *variation* (Breslin, 2011). By promoting individual capabilities, and encouraging competition in this manner, the notion of competitive *selection* was shifted from that in which the environment *selects* the organization based on overall corporate performance (as existed before the 1990s) to one in which individual managers could alter practices and compete against each other with a view to improving differential performance at more local levels. In the process differential fitness at the level of the individual was promoted as individuals strove to outdo each other, further promoting *variation* and the exploration of new competences. By actively promoting individuals from within the organization who exhibited behaviour which increased the amount of *variation* and creativity, and by putting groups in competition with each other, senior management stimulated the process of exploration within Continental by shifting the competitive *selection* pressures to the level of the group and individual. In addition senior management cultivated a new evolutionary language within the organisation, in which continued evolution through *variation* and entrepreneurial activity was promoted at all levels. Von Gruenberg (CEO) stressed the importance of entrepreneurs who "assert themselves against any and all resistance" (Bruch and Vogel 2004, 746). To assist in this process, senior management made clear to plant managers and employees throughout the organization of the "absolute inevitability of change" (Bruch and Vogel 2004, 748), and von Gruenberg encouraged senior managers to "constantly and fundamentally question the status quo in their respective areas".

<b>Systems</b>	<i>Managing the hierarchy of co-evolving systems</i>
<b>Multi-Level</b>	<i>Managing the interaction and competitive selection environments at different hierarchical levels</i>
<b>Culture</b>	<i>Cultivating a Co-Evolutionary Language within the organisation</i>

### *Conclusion*

The world around us shows evidence of nature's survivors who have adapted to changing environments, whilst other species have become extinct. Whilst clearly the detailed mechanisms between biological and cultural evolution differ, we can nonetheless learn from these broader principles of evolution. Reinterpreting the challenges faced by organisations in this manner shifts the focus of attention onto co-evolving components of knowledge which underpin competitive advantage within companies. This organisational knowledge, as expressed through practices, competences, skills and routines, evolves through the actions of individuals and groups, yet has a life beyond the involvement of specific individuals and is retained within the broader ecology of the organisation and industry. Managers at different levels have a key role to play in managing and leading this organisational evolution. By developing an evolutionary language in this way, broader multi-level and organisation-wide implications of evolving local behaviour can be considered in the development of futures. In this manner individuals might interpret their behaviour and those of others in terms of the broader hierarchy of evolutionary systems which ultimately influence the survival of the organisation.

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