

# Leadership in a Complex World

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How should the leader respond to an increasingly complex and uncertain world? 2011 saw the tsunami in Japan, the Arab Spring, the Occupy Movement in the US and Europe, the euro crises, and the continuing rise of carbon emissions. All events with far-reaching consequences. The science of complexity theory has much to contribute in considering how to react to this increasing turbulence and uncertainty.

Complexity theory provides a new scientific perspective on what it means to say that the world is complex. It brings into question the efficacy of prediction and control. When it comes to strategy, leadership and change, it places emphasis on the need to evaluate degrees of uncertainty, to recognise the potential for irreversible change and on the consequent need for fore-sighting, for a portfolio approach, for learning and contingency.

## ***What is complexity theory?***

Complexity theory shows us that organisation and markets are:

- **Organic**
  - They have more in common with ecosystems, with evolving organisms than with machines; they are not in general predictable or controllable.
- **Self-organising and temporary patterns of relationships**
  - They often display patterns of relationships (such as ways of working in organisations or buying patterns in markets) which can be relatively stable but still display some variation and fluctuation and may indeed evolve, eventually, into new patterns.
- **Contingent on history and context**
  - The future depends on the *detail* of what happens, does not smoothly follow from the past.
- **Affected by multiple causes**
  - In general there are no simple cause-and-effect chains; outcomes are influenced by several factors acting together, together with the effects of chance, history and the wider environment.
- **Spasmodic, non-linear change**
  - Sometimes current patterns are very resilient, sometimes change can be fast and radical

- **Emergent**
  - Change can lead to the emergence of features qualitatively different from the past.

### ***How is this relevant to managers?***

What does that mean for managerial processes such as strategy development and leadership?

#### **Limitations of strategy development**

Complexity theory presents managers with a scientific justification as to why strategies, however well-researched and conceived and implemented, may not achieve what was planned. Although the future is not random, it is affected by many interacting factors. What happens next depends on the *detail* of what happens and on how behaviours and actions – both internal and external - work together. And the future may not just be a little different from the past, it may be radically different.

Complexity thinking positions strategy development as more provisional, encourages experimentation and underlines the benefits of ‘hedging our bets’ by adopting a portfolio approach. Complexity thinking places focus on fore-sighting and on scenario planning – scanning the horizon for signs of impending change, for innovations or shocks or new entrants that have the potential to reshape the market. And it re-affirms the importance of ‘managing by walking about’ – there may be unexpected successes emerging that were not intended but can usefully be nurtured; there may be a need to connect up people and resources and facilitate synergies and there may be a need to change direction if the current intentions are just not working out. So strategy development and strategy implementation become much more closely entwined.

#### **Leadership**

Complexity thinking emphasises the limits to top-down management. If there is not a simple relationship between input and output, and if the current patterning of relationships may not continue to hold sway, the leaders must in part ‘nudge’ and encourage and facilitate what works rather than seek to impose what to do and how to do it. That is not to say that clarity of intention and direction are not vital ingredients but how such intentions are implemented may need to be more provisional and more sensitive to context (both inside the organisation and within the markets it serves) and to the potential for the context to change. Leadership may be more effective where learning is shared, where intentions are woven together by bringing together many perspectives. And, from a psychological viewpoint, leaders in complex contexts must be able to handle ambiguity and make judgments when the ‘facts’ are unclear or evolving.

## ***Conclusion***

Acting as if the world is measurable, controllable and predictable does not make it so. And yet neither is the world chaotic and random. There are patterns of relationships such as market dynamics and patterns in demography and economic behaviour. The issue of judgement is to ask how stable and universal are such patterns, how we anticipate impending change and how we respond to emerging futures that may have many different features from the past.

Adopting complexity thinking does not throw away existing management practices, but it does change our attitude to their likely success and emphasises the need for regular review, for learning and for anticipating major qualitative change. Complexity thinking addresses the balance between, on the one hand, assuming predictability and stability, and on the other, handling uncertainty, novelty and change.

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