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Creating a Professional Learning Community

Embedding AI in a Complexity-Thinking Framework

ABSTRACT

This article explores an approach to developing organisational and leadership capacity through the development of a professional learning community. This particular community was formed using an approach that integrates the framework of AI with complexity thinking to inform professional learning processes. The experience provides a new perspective on how AI applications can occasion emergence in professional learning, inform leadership of organisations and create a nexus of innovation.

Self-organising behaviour is common in the natural world. It is characterised by a collective of independent agents who self-organise in a dynamic manner in order to create emergence, a patterned higher order response to a threat or opportunity. Biologists exploring the group behaviour of many species (fish, ants, bees, birds) have noted that while the collective behaviour of these species is not predictable, neither is it chaotic.

For example, starlings that flock in groups of thousands do not behave chaotically; there is a pattern to their flocking such that individuals operate in unison and do not collide with one another (see Figure 1, p. 70). Studies of ecosystems as a whole show that they, too, change dynamically in response to external influences, and that while these changes are not necessarily predictable, they are not without pattern (Wheatley, 2006). This type of interaction is described as a 'complex adaptive system' and the process of collective self-organisation is known as 'emergence'.

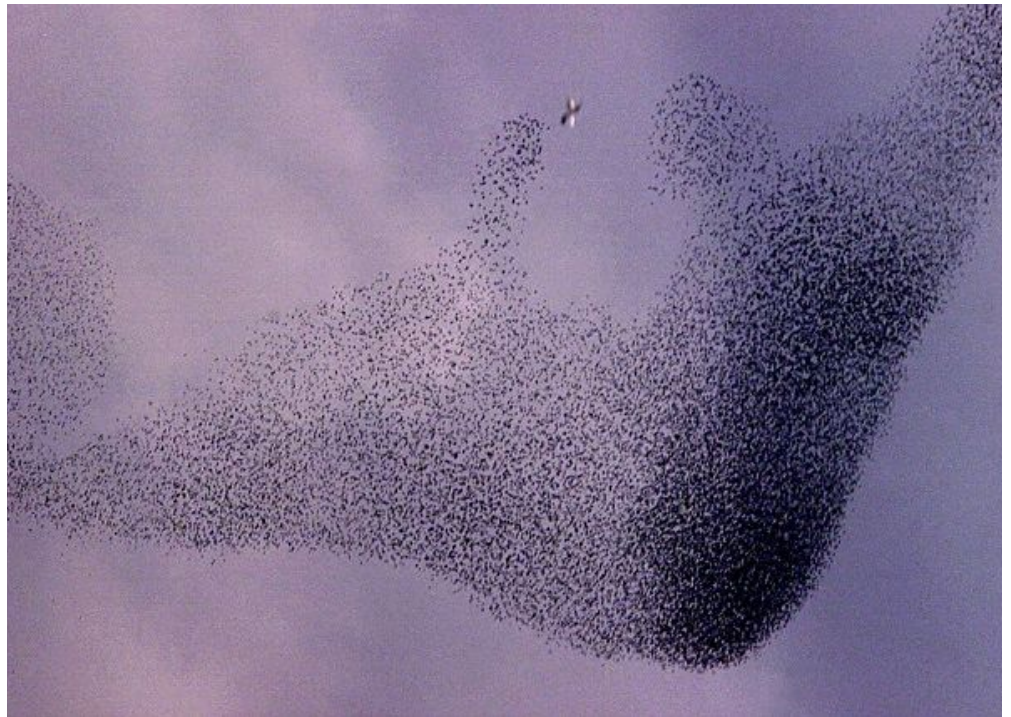
Organisations as Complex Adaptive Systems

Since the 1990s, literature pertaining to leadership within organisations has begun to embrace the idea that organisations are not be viewed simply as rational and linear-based structures. Instead, they suggest that organisations are more akin to complex living entities: they mimic biological systems with the ability to adapt in response to uncertainty, complexity and ambiguity (Wheatley, 2006). This idea of viewing organisations through a living systems lens grew out of the concept of complex adaptive systems described above (Davis and Sumara, 2006).

These models emphasise organisational systems made up of groups of independent agents that collectively respond to external pressures by self-organising and innovating, effectively emerging in new adaptive patterns (Davis and Sumara, 2006; Uhl-Bien and Marion, 2008). They also emphasise the need for participants to constantly learn and adapt in response to ongoing change

(Senge, 2002; Pascale, Millemann and Gioja, 2000). Hence, natural systems can perhaps provide some guidance as to processes that could enhance self-organisation and emergence in organisations.

Figure 1: Starlings flocking in response to the presence of a predator (<http://www.youtube.com/watch?v=XH-groCeKbE>)



We chose to simply frame the project with a focus of two broad themes: 'focus on the positive' and 'inclusivity'.

The Christchurch NGO Leadership Project

This doctoral research project was initiated in 2008 to explore ways to enhance leadership capacity in adolescent-focused non-governmental organisations (NGOs) operating in Christchurch, through the creation of a Professional Learning Community (PLC). Specific criteria were applied: this PLC was initiated with the directors and managers of organisations that ranged in size from 20 to 80 people and covered a range of settings, including education, recreation and residential and community therapeutic support – all working with adolescents. All the managers led NGOs with at least ten staff, had at least five years leadership experience in a leadership role and their organisations had to have existed for at least five years.

We deliberately accessed known networks and relationships to facilitate connections with others as part of a process known as 'snowball sampling' (Babbie, 2004), allowing managers to recommend people they knew who fitted the criteria above. Such an initiative has not been previously undertaken in New Zealand, particularly with its focus on gathering the majority of adolescent-focused NGO leaders in one city, and also in the use of an Appreciative Inquiry approach for the project.

Adopting a broad AI framework – positive focus and inclusivity

In this project, we used AI as both a capacity-building change process and as a research tool. In *Appreciative Inquiry: Research for Change*, Reed (2004) describes how AI can address the criteria expected of research and how an AI approach can transform and add to traditional research expectations. Reed applauds, as a research tool, two key broad themes of AI methodology – 'focus

'It has been a great initiative, getting people with our collective focus together. It has been great to interact with other leaders I didn't know.' NGO manager

on the positive' and 'inclusivity' – characteristics that distinguish it from other processes (p. 70).

'Appreciative inquiry focuses on supporting people getting together to tell stories of positive development in their work that they can build on' (p. 42). AI research as such is commonly described as being 'research with' instead of 'research on'. Information collected during the investigation is utilised in the learning space (rather than taken away to be analysed) and contributes to the developing knowledge of the participants and to the growth of the PLC as a whole. In this sense, the process relative to investigation findings is more about data creation and data synthesising than about data collection (Reed, 2004).

All learning experiences that were implemented in this project were informed by AI processes. (Jansen, Cammock and Conner, 2010). However, although we attempted to frame the project with the steps of Initiate, Inquire, Imagine and Innovate (Watkins and Mohr, 2001), we soon realised that we needed to be much more flexible in the processes and experiences in order to honour the theme of inclusivity and support collaboration. Hence, we chose to simply frame the project with a focus on two broad themes: 'focus on the positive' and 'inclusivity'. Within this broad philosophical stance, we were then able to customise the process with a high degree of flexibility and generate immense 'buy in' from the participants as they co-constructed their own learning process.

Inclusivity was emphasised by allowing participants to have ongoing input into all aspects of the project: the design of interview questions; selection of additional participants; direction of discussions; choice of input from books and speakers; analysis of data and ongoing modification of methodology. For example, an initial one-day focus group involved scene setting followed by 'appreciative interviews' in which pairs of managers interviewed each other for an hour about their peak leadership experiences and the values and beliefs that underpinned these experiences. These ideas were collated by pairs and shared with the full group. The managers then decided how best to conduct an inquiry about their leadership in action over the duration of the project. A range of strategies resulted:

- Leadership learning sets (groups of three to four leaders meeting regularly);
- Communicating through email/conference calls and face-to-face meetings;
- An online web-based forum site;
- Input from leadership consultants; and
- Access to, and distribution of, relevant literature.

Appreciative Inquiry as an enabling constraint

We were particularly interested in having this PLC develop a 'life of its own' in order to foster reflection, innovation and ongoing engagement. For this reason, a 'complexity thinking' approach was used to guide its creation (or emergence). Emergence in a complex adaptive system can either be spontaneous or enabled by the provision of certain conditions.

'The wonderful thing about our group is that we created it and we own it; it hasn't been set up by someone else on our behalf, which is normally what we experience in this sector.' NGO manager

In contrast to 'complicated' systems, which also have multiple parts that interact with each other in predictable and structured ways (i.e. an aircraft or an engine), the multiple parts or agents in a 'complex system' interact in an ongoing generative, unpredictable and self-determined fashion. Hence, emergence cannot be scripted or forced into existence, and outcomes cannot be fully anticipated.

Davis and Sumara (2006, p. 136) describe the conditions for enabling emergence as 'enabling constraints' which provide a fine balance between 1) diversity and redundancy; and 2) coherence and randomness.

Simply stated, these conditions are; 'not too loose, not too tight', allowing sufficient space for innovation without degenerating into chaos. The analogy of two open hands held apart as if gently holding an object suggests an open space where creativity can occur yet the hands themselves might represent the frame within which this is fostered. These hands are neither clasped (too tight) nor behind one's back (too loose); an optimum space is required for emergence to occur. While these conditions can be planned and focused, outcomes cannot be fully determined, as they are result of the collective emergent behaviour of the individual – within-system.

Balancing diversity and redundancy

Internal redundancy is the manner in which agents in a system are similar or share commonalities; this is vital for shared interactions to occur. (Davis and Sumara, p. 139). On the other hand, internal diversity is the way in which agents differ in all regards. It is in the tension between these two polarities that the creative opportunity lies.

To see how the theory played out in this project, one source of enabling constraints was provided by the selection criteria for participants. Internal redundancy was provided by focusing exclusively on adolescent-focused NGO organisations, rather than funders or government organisations. It also focused only on the managers of each organisation, not other leaders amongst their staff teams. Managers said that this focus led to a sense of collegiality, connection and support.

Internal diversity was provided by including a range of NGO organisations from a range of settings – education, recreation and residential and community therapeutic support. The diversity was also visible in the different genders and ethnicities represented. The initial lack of familiarity amongst participants gave rise to a creative edge in the process and the sense that the participants did have a lot to learn from each other.

Balancing coherence and randomness

The second 'enabling constraint' occurred as a result of providing sufficient coherence and randomness in the structure of the project, defined here as: '...the structural conditions that help to determine the balance between sources of coherence that allow a collective to maintain a focus of purpose/identity and sources of disruption and randomness that compel the collective to constantly adjust and adapt' (Davis and Sumara, 147).

Figure 2: Exploring our leadership using AI principles



'It's the creation of a place from which to reflect. We have developed an inspiring, creative, exciting space to share.' NGO manager

Coherence was provided by the AI key themes that had initially been agreed upon. This constrained the project to focus on (1) the positive (what was working) and (2) inclusivity (all decisions were to be made in consultation with all participants). These two principles acted as touch stones, non-negotiable parameters within which both coherence and randomness could come into play.

The second of these themes, inclusivity, facilitated a degree of randomness where, as the study progressed, the original initiatives of the project were evaluated with the participants and were progressively adapted to fit their needs. For example, the initial plan of including online forums and learning sets of three to four people was abandoned in favour of half-day focus groups on a regular basis. It also allowed a wide range of new materials, literature and topics to enter the process, which fostered a sense of 'research with, not research on', leading to a sense of freedom and creativity for participants, and ultimately, to a sense of collective ownership.

During the half-day focus groups, held every two months, the leaders experienced a range of activities: peer interviews; group reflection on relevant research-based literature; and interactive sessions delivered by leadership consultants; as well as the processes of collective sense-making and collaborative coding of emerging themes related to leadership.

Figure 2 maps the cyclical process of learning that was developed throughout the project. The arrows in the centre of the diagram denote the leaders exploring and pondering their leadership roles, considering how they could experiment with and nurture their leadership. This generative process was not only cumulatively cyclical but also complex, organic and emergent. While the reflection tended to be triggered during the focus groups, much of it, along with experimentation, occurred in the interval between the scheduled meetings.

'This group has been like an oasis in the desert for me. I have benefited so much from having this opportunity to meet, spending this time focussed not on my organisation, but on me and what makes me an effective leader.' NGO manager

The process also involved a number of stimuli and inputs that were fed into the process as described in Figure 2. By actively balancing these enabling constraints in this project, the project facilitators and the leaders themselves were able to occasion the emergence of a vibrant, dynamic professional learning community.

A nexus for innovation

At the end of the research project in March, 2010, the leaders in this project decided that they wanted to continue their collective processes as a self-managing and sustaining professional network. The co-emergence of this professional network is still in progress and has the potential to not only continue to nurture the leadership of those involved but to be influential in the wider youth development and education sector, in terms of advocacy and collaboration. The emergence of this NGO leadership network, beyond the duration of the project, suggests the potential of integrating the framework of AI with a complexity lens into professional learning processes. In particular, the creation and use of customised AI-based enabling constraints, which can occasion emergence in professional learning and also inform leadership of organisations, promises a rich area of innovation and creativity.

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