

# Here Be Dragons: Mapping future Possibilities Using an Emergent Framework

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“Here Be Dragons”[1] is a phrase believed to have been inscribed by mediaeval mapmakers to warn of the dangers beyond the boundaries of their defined world. Dragons were symbols of the unknown. The history of cartography is a history of representing reality. From sextants to satellite photography, new tools have led to new types of maps. Mapmakers have much in common with systems thinkers. They select boundaries and perspectives, making conscious choices on where to place their attention. Over time, maps of the same space change as do conventions for drawing, and rules for construction and interpretation. As new knowledge changes previous maps become but transitional objects in the evolution of new perspectives, perspectives that drive the dragons further away. What dragons do today’s organisational leaders expect to discover at the edge of their worlds? In particular, what approaches could they adopt to develop shared meaning and action in uncharted futures?

## Today’s Dragons

Today our scary creatures go by the names of Uncertainty, Ambiguity, Complexity and Conflict. They constitute our dragons of unknowing and bewilderment. While some leaders push these dragons to the edge of their universe others prefer, like St George, to tackle them head on.

### Uncertainty: The Dragon of Confusion

Uncertainty comes from a lack of information so the major task in reducing it is to gain more information. However, with the blurring of the roles of public, corporate and community organisations and the trans-national influences drowning us in contradictory signals, the search for the information to reduce this uncertainty can prove difficult.

### Ambiguity: The Dragon of Meaningful Contradictions

Ambiguity occurs when no matter how much more information is obtained, the situation is still no clearer. McCaskey (as cited in Weick 1995:93) also suggests ambiguous situations have multiple and conflicting interpretations as well as goals[2]. Ambiguity is a key aspect of ‘wicked’ problems (Rittel & Webber 1973) which are characterised by being unclear, definable from varying perspectives with no agreement on the problem situation itself, and no simple cause and effect relationships whose resolution would lead to a single solution.

## **Complexity: The Dragon of Ubiquitous Connections**

Complexity arises from too much information. Everything seems connected to everything else. Individuals have access to more and more information but it is not necessarily reliable or authoritative and its value depends on the questions that are asked. Nor is such information context or value free. This poses unique challenges in organisations as Griffin (2002:218) notes:

*“There is staggering complexity in the interdependency of people in a large organization in the movement of the living present. This is compounded by similar complexity in the many other organizations it interacts with. It is astounding that we continue to hold fantasies that single persons or small cliques of persons can steer such complexity to achieve targets they have set in advance.”*

## **Conflict: The Dragon of Coercion**

The concept of Power is a notion much studied, from Sun Tzu’s *The Art of War* to Machiavelli’s *The Prince*. It seems each culture and age has its own treatise on wielding and maintaining power. In our times we have *The 40 Laws of Power* (Greene 2005).

Power is wielded in organisations in a myriad of ways: positional, informational, technological, financial, familial, nepotism etc. Many power struggles are over identity or territory. In both cases they are debates about boundaries. As a result, Jackson (1991:164) says the social world is:

*“created by people who have conflicting aims and intentions and bring different resources to bear when the social construction is taking place. It follows that the social world escapes the understanding and control of any one person or group of people. It takes on the form of a highly complex and structured external reality that exercises constraint on the individuals who make it up.”*

In organisations where people are seeking to make sense of the world and develop shared meaning about purpose, direction and success, what frameworks can we provide that will deal with these four dragons?

## **The difficulties of exploring new territories with old maps**

**F**or more than fifty years there has been one ‘solution’ after another. Re-engineer; restructure; outsource; downsize; balance the scorecard; manage for total quality; benchmark and so on. Sometimes they do not bring the promised results[3].

These approaches share an assumption that the world can be commanded by the manager. The machine metaphor is a foundational premise, a metaphor that embodies the scientific method in management practice where it is expected that observation, measurement and micro-process analysis will yield control.

If our view of the future is not to be an extrapolation of the past, we need processes that allow the quiet, creative and even subversive voices to be heard. In other words, agreement on preferred futures emerges from dialogic processes, not from a latter day Moses descending the corporate mountain with the latest ‘10 ways to...’ As Vickers (1987:44) suggests:

“The conceptual world has a life of its own. Like the life forms in the physical world, ideas are born, grow, clash, excite, modify or destroy each other or coexist by reaching strange compromises with their rivals. ... We need an ecology of the conceptual world...”

Given this, how many of the tools and methods in today’s leader’s toolbox will usefully assist them to develop their teams’ shared future space?

## Standing on the shoulders of giants

**A**s Stacey (2002) says, ‘There are voices from the fringes of organisational theory, complexity sciences, psychology and sociology that are defining a newer, participative perspective. With this inter-subjective voice people speak as subjects interacting with others in the co-evolution of a jointly constructed reality.’

There is a burgeoning literature in areas that foreground human intelligence: organisational learning; knowledge management; storytelling; creativity and innovation; and emotional intelligence. Some writers have moved from the machine metaphor to the biological suggesting the interrelatedness and connectedness of all things. But is this to replace one nonhuman metaphor for another? What would happen if we brought innately human attributes to the forefront of our thinking?

Coming together from different backgrounds and knowledge domains, the authors of this paper have been on a journey of exploration on this topic. The journey included two Deep Conversations with Professors Peter Checkland and Kees van der Heijden whose intellectual heritage and inspirational support we acknowledge[4].

The result of this journey thus far is the *ariadne* methodology which shares its essential logic with three of what Checkland calls ‘the four key thoughts’ of the Soft Systems Methodology (SSM) (Checkland 1999:A7) relating to modeling human activity systems from a declared *Weltanschauungen* as a learning system.

The remainder of the paper describes the current state of *ariadne*, a framework that foregrounds human attributes for Applying Research and Innovation to Advance the Development of Networked Enterprises (*ariadne*).

## Introducing *ariadne*

**A**riadne was a Cretan princess who assisted the Greek Theseus to kill the Minotaur in the Labyrinth by providing him with a magic thread and a sword. She persuaded the designer of the labyrinth, Daedalus, to provide her with the map. This ancient piece of lateral thinking removed the monster and stopped the annual slaughter of Greeks sacrificed to the terrifying half man, half bull - a Greek dragon.

*Ariadne*, the methodology, is an alternative approach to strategy work where more creative futures are needed. *Ariadne* provides a way for groups to arrive at new shared conceptual spaces in a process Inayatullah (2002:109) calls ‘co-evolutionary anticipatory action learning.’ The flow is iterative, moving at differing speeds and in differing directions, partnering the known with the unknown, interweaving the mundane and the mysterious.

## The basic shape of each phase

Before presenting the methodology, it is useful to reflect on its underlying logic which is outlined in Figure 1.

Keeping in mind the intention to be creative, conversational, collaborative, and co-evolutionary, the essential activities are:

- For any topic of study there exists knowledge which humans can access, determine its relevance and contest it.
- Consideration of this knowledge inspires the creation of transitional objects from many perspectives. These objects may be conceptual models and rich pictures (as per SSM); other modelling techniques, eg Bryson et al (2004); stories; scenarios as in van der Heijden (2005).
- These objects are the focus of dialogic exploration the purpose of which is learning. Here we use conversation, decision support tools, psychodrama, shared story-telling, drawing, etc.
- The process of developing shared meaning leads (hopefully) to the synchronicity and accommodation that are then captured in learning objects of some sort. These could be a discussion paper, a project plan, new models, stories, or a strategy document.

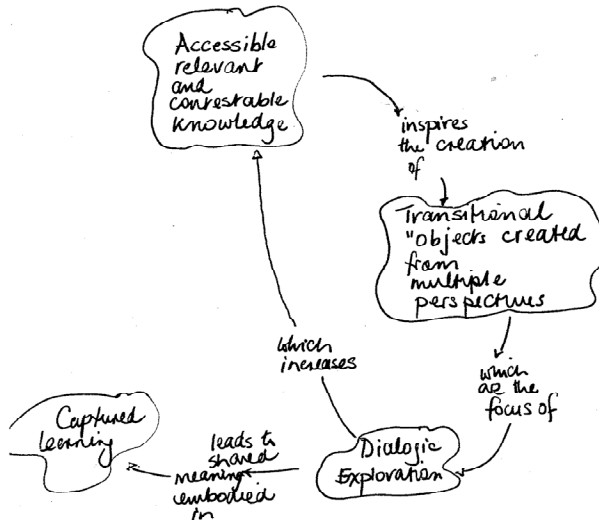


Fig1. Ariadne: basic shape of each phase.

c. LAllen + TLang, Emergent Futures Group.

**Figure 1** The basic shape of each phase of the methodology

This structure informs both the methodology as a whole and each of its activities.

### **Ariadne: An emergent futures methodology**

Let us now turn to the full methodology (Figure 2) to explain how this holistic approach facilitates thinking about the future in innovative ways.

The representation is consistent with an SSM conceptual model. As Checkland (1999: A49) reminds us, the world is not made of systems that we can engineer but the inquiry process can be designed as a system. As we are using a methodology and not a step-by-step tool there are some general principles to remember. Each 'phase' is in essence a sub-system so *ariadne*, can be holographically applied to design each activity. For each phase, decisions are made about methods and outcomes. Those outcomes, essentially the transformation of the sub-system, feed into the next phase of the process but can also be translated into 'deliverables' if required by clients or participants.

In addition, each phase (as well as the overall project) is monitored against performance criteria that may be agreed in advance and/or modified in progress. We will say something about critical reflection later. Outlined below is a short introduction to *ariadne's* activities. While each activity relies on the logic outlined in Figure 1, particular knowledge domains and capabilities are emphasised here.

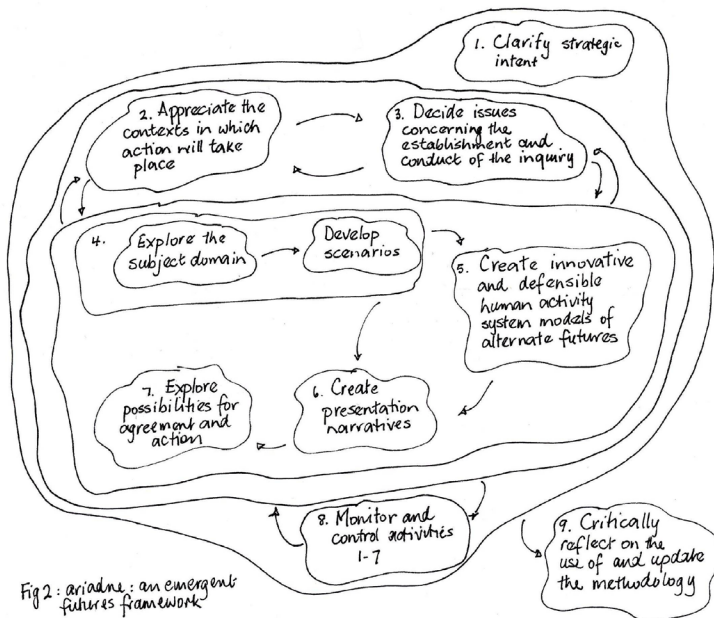


Fig 2: ariadne: an emergent futures framework

c. L'Allen & Tilang  
Emergent Futures Group.

**Figure 2** The ariadne methodology

### *1. Clarify strategic intent*

This activity sits outside the whole framework because it is the foundational driver and checking point, the beginning and the end. Here we gather the questions to be addressed but we phrase them in open, aspirational and non-outcome focused language, thus avoiding a single ‘problem’ statement. Given that we are undertaking what Midgely (2002) calls a ‘systemic intervention’ we also take a fluid approach to the boundaries of our intentions. This activity influences and is influenced by all other activities.

### *2. Appreciate the contexts in which action will take place*

Here we seek to gain an understanding of the environment in which action will be taken to address the strategic issues. We explore what social, political and other factors inform the design and conduct of the inquiry.

This phase is grounded in the perceptions of those associated with the enterprise. The aim is to gather as much richness as possible. Decisions about how to handle power are also made here.

### *3. Decide issues concerning establishment and conduct of the inquiry*

Here we design the Inquiry System, giving attention to factors such as roles (e.g., who is the client, the decision taker, the inquirer, etc), the transformation sought from the inquiry, available time and resources, the appropriate methods to be used, determining how success will be judged, and how milestones, etc will be communicated.

An important decision made here is the choice of boundary for the Inquiry System. As Flood (1999: 92) points out:

*“mental constructs determine what is in view and might be taken into account at the moment and what is out of view and thus excluded from consideration. The boundary judgment will therefore determine at this point in time the client, issues and dilemmas of concern, and purposes to pursue.”*

Activities 2 and 3 feed into and are fed by activities 4 – 7.

### *4. Explore the subject domain and develop scenarios*

Here we move beyond the immediate context of the strategic issues and look at developments in the relevant subject domain(s). We do this for two reasons: to generate new insights about innovations that we can incorporate into our strategic directions; and to gather perceptions on key trends and drivers of change. This helps ensure that potential choices are aligned with the major changes that could occur in the future. Dator (2002) refers to this as ‘surfing the tsunamis of change.’

A subject domain is a branch of knowledge or field of study chosen in relation to the strategic intent. For example, if the inquiry concerned the future of business education at Curtin University of Technology the subject domain would be business education in universities.

This knowledge feeds into the scenarios that are written using a compelling storyline, which are named and checked for plausibility and internal consistency.

Good scenarios are relevant, effective, mutually exclusive, and sustainable (Schoemaker 1995).

#### *5. Create innovative and defensible human activity systems models of alternate futures*

Here we create models of a range of futures as alternate directions. Ideas are ‘mined’ from previous activities, distilled from scanning the subject domain (s) and the scenarios as well as conversations about the social, cultural and political contexts. Using SSM principles for conceptual model building, we produce not representations of the “real” world but devices to encourage discussion and learning, “transitional objects” that exist solely for the purpose of the process, not as some future reality.

Then we pause to consider whether our models would be deemed innovative by checking on our strategic intent. We are not considering whether they would be acceptable to stakeholders or clients. Rather we are still seeking richness and imaginative alternatives.

We then select defensible models to take forward usually to a larger group than that which has developed the models. Here we bring the innovative ideas closer to imagined implementation, not for rejection, but for testing their viability and likely acceptance and workability. We sweep again through the subject domain material for missed ideas or new perspectives. In addition, material is organised and documented ready for story building and later defending.

#### *6. Create presentation narratives*

Here we take the selected models and other information and transform them into narratives in formats and with content that will most suit the situation. This stimulates a wider discussion without going through the whole process again. We use narrative methods to achieve this. The stories’ purpose is to stimulate discussion by sharing perceptions; seeking accommodations; learning more widely and deeply; and combining the logic of the models with emotions.

#### *7. Explore possibilities for agreement and action*

Now we hope emergent agreement will happen. There are no guarantees or easy ways to achieve this. This is an intention. It may not work. One can be responsible for the process but not the outcome, and whatever the outcome, it is the “right” one for the enterprise.

Many skills are needed to lead groups to accommodation where every individual feels they have been heard and understood and not only have they found some common agreement that they can they ‘live with’ but they are committed to them intellectually and emotionally.

What is hoped for in this phase, is an agreement on the way forward that can be accommodated by key stakeholders as well as an agreement on what the change is going to look like.

Issues of power will more than likely surface here with a vengeance. We may even get some surprises. Often when it comes to the actual implementation, even those who were previously supportive may balk at their responsibilities in bringing about the change in which case we loop back to earlier phases because it means the work is not complete.

## Conclusion

**A**riadne has been developed in response to the characteristics of the world in which we now find ourselves. It is not a map of the world. More like a trusted companion that reassures us that whatever paths we discover will create wonderful opportunities and whatever dragons we meet along the way, we will flourish. The dragons of uncertainty, ambiguity, complexity, and conflict will be seen for what they are: creatures of our imagination that learning and new shared meaning will transform into creatures of wonder, innovation and perhaps still a little mystery. For our perceptions of the world are our individual stories. We hope that *ariadne* is a contribution to the development of processes for thinking and acting for the future in this world.

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## Notes

- [1] 'Hic sunt dracones' <http://www.maphist.nl> argues there is only one occurrence, on the Lenox Globe in the New York Public Library
- [2] Other characteristics include:



- Nature of problem is itself in question
- Information (amount and reliability) is problematical
- Multiple, conflicting interpretations
- Different value orientations, political/emotional clashes
- Goals are unclear, or multiple and conflicting
- Time, money, or attention are lacking
- Contradictions and paradoxes appear
- Roles are vague, responsibilities are unclear
- Success measures are lacking
- Poor understanding of cause-effect relationships
- Symbols and metaphors are used
- Participation in decision-making is fluid

[3] For example, "American corporations are expected to spend some \$US 50 billion per year during the latter part of the 1990s on reengineering projects, with 80% of that amount going into information systems. More than two thirds of those efforts are likely to end in failure, according to ... Michael Hammer. According to a survey by Arthur D. Little Inc, only 16% of executives say they are fully satisfied with the results of their reengineering efforts while 39% say they are totally dissatisfied. Finally, according to a survey of 400 Canadian and American firms by Deloitte & Touche the main reasons for reengineering failures seem to be the significant resistance to change and the lack of consensus and commitment among senior executives."

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[4] For a record of the first Deep Conversation with Professors Checkland and van der Heijden see <http://www.jcipp.curtin.edu.au/local/docs/DeepConversation.pdf>

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