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# Complexity, Leadership and Management in Primary Care



'Complexity' is an important framework for all working in primary care, but has particular implications for the notions of leadership and management [1–4]. This paper offers a model to address this issue, and is based on workshops offered at both the WONCA Conference in Basel 2009 [5], and an international medical education (AMEE) conference in 2007 [6]. I argue that viewing the concepts of leadership and management through the 'lens of complexity' [7] empowers leaders and managers in primary care to adapt their styles according to the needs of the organisation. In addition the use of musical metaphor leads to a deeper understanding of the issues involved.

## Workshop Plan

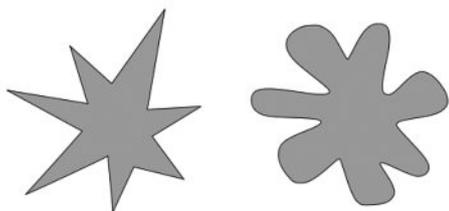
- Musical Overtures
- A view of 'complexity'
- Music competition
- Leadership and Management 'in harmony'
- Reflection and take home learning

## Musical Overtures

As an icebreaker, participants are asked to introduce themselves to each other in pairs or threes and to choose one 'Desert Island Disc'<sup>1</sup> – a piece of favourite or significant music they would take if cast away on a desert island. They are then asked to discuss why this music was significant for them, and to note the choice to reflect upon later in the workshop.

## A view of 'complexity'

The concept of 'complexity' is then introduced, commencing with definitions as per table 1 below. Synaesthetic associations, based on work by psychologists Köhler and Ramachandran, using 'KIKI' for 'complicated' and 'BOUBA' for 'complex', aid the learning process for many students [8–9]. The shapes are shown below in figure 1. 95–98% of people, speaking different languages and from different countries, associate the spiky shape on the left with the word 'KIKI', and the rounded shape on the right with the word 'BOUBA'. I offer the association of 'KIKI' with 'complicated', and 'BOUBA' with 'complex' (the words have significantly different etymologies – see below).



**Figure 1**

Synaesthetic associations, based on work by psychologists Köhler and Ramachandran, using 'KIKI' for 'complicated' (left) and 'BOUBA' for 'complex' (right).

Definitions used in the workshop are shown below [10].

**Table 1**

### Simple

- 'easily understood'
- 'not complicated or elaborate'
- 'straightforward'

### Complicated (associated synaesthetically with the shape 'KIKI')

- Antonym of simple
- 'Com' (with) – 'plicare' (fold)
- 'Folded, wrapped or twisted together'
- 'Mixed up in an involved way'

### Complex (associated synaesthetically with the shape 'BOUBA')

- More than just 'complicated'
- Latin 'complectere' (to encompass, embrace, enclose, comprehend, comprise)
- Sense of the whole – parts connected together, e.g. building complex: a SYSTEM

### Chaos

- Disorder
- Utter confusion  
(after Pratt et al 2005)

This can be shown visually using a model based on Stacey's original graphic representation of complexity [11], and modified by the more recent interpretation of 4 categories of ordered and disordered systems adopted by Snowden in his 'Cynefin' model [12–13]. Using the 'certainty of outcome' and 'agreement of process' as axes, a system of ordered simplicity is represented in the bottom left corner, moving through (ordered) 'complicatedness' into the 'zone of complexity', before entering 'chaos' and complete disorder in the top right. Whilst this model is not perfect, and has been rejected as too simplistic by its original author [14], most learners seem to find it helpful as an initial visual model when trying to embrace the basic concept of complex systems. The model is demonstrated in figure 2.

It is suggested that 'anxiety', at the level of both the individual and the 'system' [15], increases as one moves out from the bottom left-hand corner towards the zone of complexity.

<sup>1</sup> Desert Island Discs is a programme on BBC Radio 4 and is claimed to be the longest-running music programme in the history of radio. It was first broadcast on 29 January 1942, and hosted by its inventor, Roy Plomley. Guests are invited to imagine themselves cast away on a desert island, and must choose eight pieces of music to take with them; discussion of their choices permits a review of their life, and at the end of the programme they choose the one piece they regard most highly. They are automatically given the 'Complete Works of Shakespeare' and either the Bible or another appropriate religious or philosophical work, and are asked to choose one other book they would take with them. Guests also choose one luxury, which must be inanimate and of no use in escaping the island or allowing communication from outside.

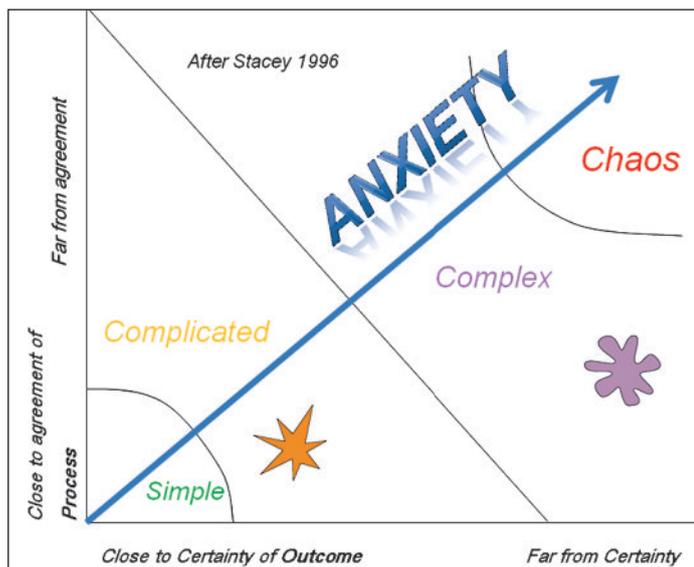


Figure 2

**Music competition**

A musical metaphor is then introduced to illustrate these zones on the graph: four pieces of music are played which, through their structure, illustrate the concepts of simple, complicated, complex and chaotic systems. Participants are asked to think about the musical structure of each piece in terms of the four system concepts discussed above.

The 'simple' ordered system is represented by a piece from the British rock band 'Status Quo'<sup>2</sup>. This group have played the same style of music for the last 40 years using a basic '3 chord' structure, and yet their leaders were honoured by the Queen in the New Year Honours List 2010 for services to music: they remain very popular throughout the world. What they play is simple in its structure, (some might even say repetitive ...) but they play it very well. It is well-known that their style has not changed much since the 1970s, and in a typically self-deprecatory manner, they entitled their 2007 album 'In Search of the Fourth Chord'!

'Complicatedness' is illustrated by a Bach Partita<sup>3</sup>, which is layered and contrapuntal; this scored classical music may be played in a very similar manner by different performers on many occasions. It is suggested that, in a sense, the music can be 'taken apart and put back together again'.

'Chaos', placed at the top right hand corner of the graph, is illustrated by a chaotic saxophone solo played by Neil Innes from the Bonzo Dog Doodah Band on a track called 'Big Shot' released in 1967. The solo is a parody of a lead saxophone solo, is completely chaotic in its structure and sounds like cacophony. It perfectly illustrates 'chaos' from a musical point of view.

The metaphor for 'Complexity' is jazz. A live recording of a jazz orchestra is played<sup>4</sup>, and some initial structure gives way to a complex

sax solo by Wayne Shorter who uses many 'experimental' phrases, often brilliant, yet with a few 'mistakes' interspersed<sup>5</sup>. Indeed on the same album there is another take of the same tune, yet the saxophone solo is completely different: his second improvisation is equally good, yet nothing like the first solo. Jazz is complex: simple musical rules guide the players though the song, but improvisation means the content varies with each new rendition.

**Leadership and Management in harmony?**

In this context, the differences between leadership and management can now be considered. As Kotter has described [16], leadership is about motivation and inspiration, establishing direction and, importantly, change. Management however relates more to planning, organising, controlling processes and problem solving. Fundamentally it is about predictability and order, and shies away from creativity and change. In terms of complexity thinking, it is suggested that managers attempt to move the organisation and the agents within it to a state of order, thus reducing anxiety within the organisation [15]. Thus the direction of travel is down towards the bottom left-hand corner of the diagram. In contrast leadership is about moving out of the 'safe' zone of stability and order into the 'zone of complexity', where creativity and change can occur. The direction of travel is in the opposite direction to management. However, of course the leader must be aware of the risk of moving beyond and into chaos, remaining aware of the environment and the state of the system in order to avoid this outcome if possible. In any complex system it is uncertain how much one agent can change the context for others, and hence it is interesting to contemplate what the notion of 'leadership' really means within a complex system [2]. Some authors would hold the view that leadership is really about being a 'change agent' within the system [17–18], but others would argue that the notion of leadership is much more subtle, and that attempting to 'stand outside the system' to push it into a different state is a flawed way to consider the notion of leadership [1, 19]. I would argue that this model offers support for a form of 'adaptive' leadership, and leaders might adopt a more 'managerial' (or order-seeking) style, or a more 'change-orientated' style depending on the state of the 'system' or its environment. It is suggested that, although undeniably simplistic, this model offers a helpful visual and metaphorical way for those new to the field of complexity to gain a basic understanding of how leadership and management relate to order and complexity in health care systems. The model is depicted in figure 3.



Figure 3

<sup>2</sup> For example: 'Caroline' (Rossi and Young) 1973.  
<sup>3</sup> Partita Number Four in D by J.S. Bach, played on the harpsichord by Ralph Kirkpatrick 1958.  
<sup>4</sup> 'Sweet-and-Sour' from 'Caravan' 1962, Art Blakey and the Jazz Messengers featuring Wayne Shorter on saxophone.  
<sup>5</sup> Indeed another jazz musician, Miles Davis, was reported to have said: 'If you don't make mistakes, you're not trying hard enough'.

These dual functions are important concepts to consider for all practitioners and administrative staff in primary care, which by its very nature is an archetypal 'complex system' [7, 20].

### Reflections and take home learning

The workshop participants are finally reminded again of the musical metaphor and how it relates to the complexity model. Leadership can be seen as 'Jazz' [21], and management as 'Status Quo', or perhaps 'Bach'. Avoiding chaos is an important aim for managers and leaders alike. Some suggested questions for primary care clinical leaders and managers are posed as follows:

#### Questions for Clinical Leaders

1. How should you lead your clinical jazz band?
2. What simple rules would you set for your jazz group?
3. When do you choose to play Status Quo, Bach or Jazz?
4. How do you feel the rhythm of your team or organisation?

These can be considered in a small group format within the workshop, or taken back to the workplace and considered by the clinical or managerial team. Discussion of these questions often produces interesting outcomes, even for nonmusical participants.

Finally, participants are asked to reflect privately whether the choice of their 'Desert Island Disc' tells them anything about their role as leader or manager in a primary care setting.

### Conclusions

The notion of 'complexity' both as a theory and a metaphor, combined with musical models, provides a powerful learning opportunity about leadership and management in the complex world of primary care. The model seems to resonate with many health professionals, and can inform an 'adaptive' leadership style. The model has generally been well-received by workshop participants, with some claiming a major transformation in their understanding of the concepts presented. The use of this model is recommended to all primary care educators with an interest in complexity, leadership and management. The author would be pleased to correspond with anyone interested in using the model, and would be pleased to provide appropriate workshop materials.

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