The use of soft systems methodology and complex adaptive systems concepts in evaluability assessment

AES Conference 3 September 2010
Wellington New Zealand

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To be covered today

- Some descriptions
  - Evaluability assessment
  - Complex adaptive systems concepts
  - Soft systems methodology
- What is complexity?
- How complex adaptive systems concepts can be useful in evaluation
- How soft systems methodology can be useful in evaluation
- Examples from our work

Descriptions

Descriptions – how I see…

- **Evaluability assessment:** process to understand the context that shapes programs and policies – so evaluations are credible and useful (McKegg & Sankar, 2009)
- **Complex adaptive systems concepts (CAS):** ways of thinking that help make sense of unpredictability (Eoyang, 1997)
- **Soft systems methodology (SSM):** a method of inquiring and learning in the real world of complex relationships – a series of activities or processes (Checkland and Scholes, 1999)

When might we use CAS or SSM?

Use traditional management style when the problem is:		Use complexity techniques when the problem is
Quite familiar to others in the past		New, quite different from before
Well defined		Fuzzy and unknown
Closed to outside influence		Open to outside influences
Related to a small number of people you know well		Related to a large number of people you do not know well
One you have successfully solved before		One you have tried to solve before and failed
Linear, the inputs and outputs are clearly distinguishable		Nonlinear, the inputs and outputs are not clearly distinguishable

Source: Adapted from (Eoyang, G. 1997. p9)

…what does the environment look like for evaluation in complexity – which way is up?

- It is hard to pinpoint activity that might influence change
- May be hard to tell who participants are, and identify all key sources of data
- The context/environment is included in the evaluation rather than screened out Eoyang and Berkas (1998)

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Complex adaptive systems concepts

Complex adaptive systems …

- dynamic
- have massively entangled relationships
- have different scales that might operate independently and simultaneously
- transformative and unpredictable
- emergent

(Eoyang & Berkas, 1998; Wilson-Grau, 2006; Zimmerman & Hayday, 1999).

Complex adaptive systems concepts

In CAS this is called…	What we see
Butterfly effect	A casual comment makes a huge impact on others (e.g. rumour or gossip of job cuts leads to key people finding work elsewhere)
Boundaries	Different groups of people react strongly to one another in unexpected ways (e.g. cultural clashes amongst those who seemed aligned)
Transforming feedback loops	Use of technology brings issues to the attention of a wide and potentially powerful audience (e.g. Facebook)
Fractals	Use an iterative improvement process to make change (e.g. evolving processes generate change in unexpected ways as a result of new information)
(Eoyang, G. 1997)	

Complex adaptive systems concepts

In CAS this is called…	What we see
Attractors	Huge changes to time and money available for projects (e.g. a change in Government reprioritises budgets and departments need to implement the changes rapidly)
Self organisation	“Overnight” changes in what is judged successful or desirable (e.g. a shift in community views)
Coupling	Organisations coupling with others in unexpected alliances which make both parties considerably stronger and more effective (e.g. mergers and takeovers)
(Eoyang, G. 1997)	

An example - STARS

Introducing STARS

- Acute mental health service for adults in crisis
- Innovative service in early development
- Based in the community - recovery orientated
- ‘High stakes’ and contested service
- Organisation wanted evaluation to be evidence-based right from the start

Why Evaluability Assessment for STARS?

- Evaluablity assessment was suggested to:
  - assist service developers' learning and development of the service
  - take into account the wider political and stakeholder context
  - develop an evaluation approach suited to the organisation

STARS Evaluability Assessment

- The environment in which the evaluability assessment was conducted was complex, confusing and unclear. There were diverse stakeholder groups and real concerns over a range of risks.

CAS	What we found
Butterfly effects	Documenting the Recovery Model helped Wellink communicate reliably, consistently and effectively with other stakeholder groups about the STARS project.
Boundaries	Complex inter-relationships between a wide range of stakeholders. Logic model was developed to show how STARS worked at entry, moving forward, and at exit for these stakeholders. Evaluability assessment illustrated the varying perspectives and needs of the different stakeholder groups.

STARS Evaluability Assessment

CAS	What we found
Transform-ing feedback loops	The Evaluability Assessment document and debriefings helped to provide clarity to a wider internal audience about the service development that had occurred up to the time of reporting.
Fractals	The Evaluability Assessment helped the organisation locate key information to make or monitor change. This was complex as there are a wide range of reporting tools in use. Documenting the issues was helpful to stakeholders.
Attractors	The Evaluability Assessment became a mechanism for groups of people to talk about issues that had been concerning them, in a constructive and managed way.
Coupling	Wellink senior staff have created new alliances through communication over what new acute services might look like, particularly in an international arena.

Benefits of CAS framing

- During the evaluability assessment, we were able to:
  - isolate the some of the key issues
  - avoid being overwhelmed by the complexity - more manageable with signposts and solutions available
  - take into account emerging or changing circumstances and feel comfortable in the confusion
  - ensure all key stakeholders were represented (and their perspectives heard)
  - understand and describe the interconnections that might not have been initially apparent

Evaluability Assessment benefits…

- Articulated the service model during its development
- Documented what 'recovery' might mean and evaluation implications
- Identified the principles of evaluation, which stakeholders believed were important
- Identified that data collection, interpretation and evaluation use to be embedded in the operation of STARS
- Identified that a wide range of stakeholders had an active interest in the evaluation
- Identified that stakeholders wanted the STARS evaluation to contribute to system-wide change to acute mental health care in NZ

Soft Systems Methodology

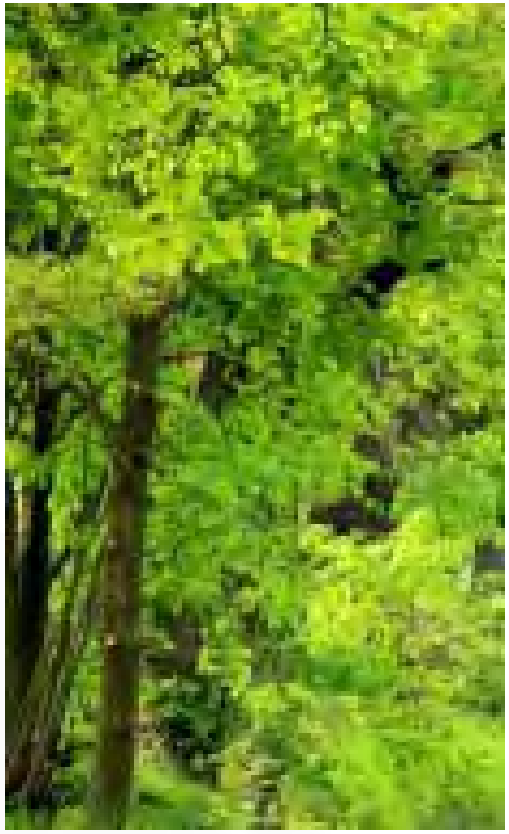
Soft systems methodology

- Checkland defines soft systems methodology as…

> ***"an organised way of tackling perceived problematical (social) situations. It is action-oriented. It organises thinking about such situations so that action to bring about improvement can be taken"*** (Checkland & Poulter, 2006, p. xv)

- Soft systems methodology:
  - includes a range of tools
  - can be used alone, or in concert with other tools
  - structures thinking and learning
  - makes sense of the complexity in a manner that informs decision-making in a timely way

Soft systems methodology in practice



- Facilitates learning
- Sense making
- What's happening and build models
- Participants discuss debate and take action
- Can be used iteratively

SSM Approach

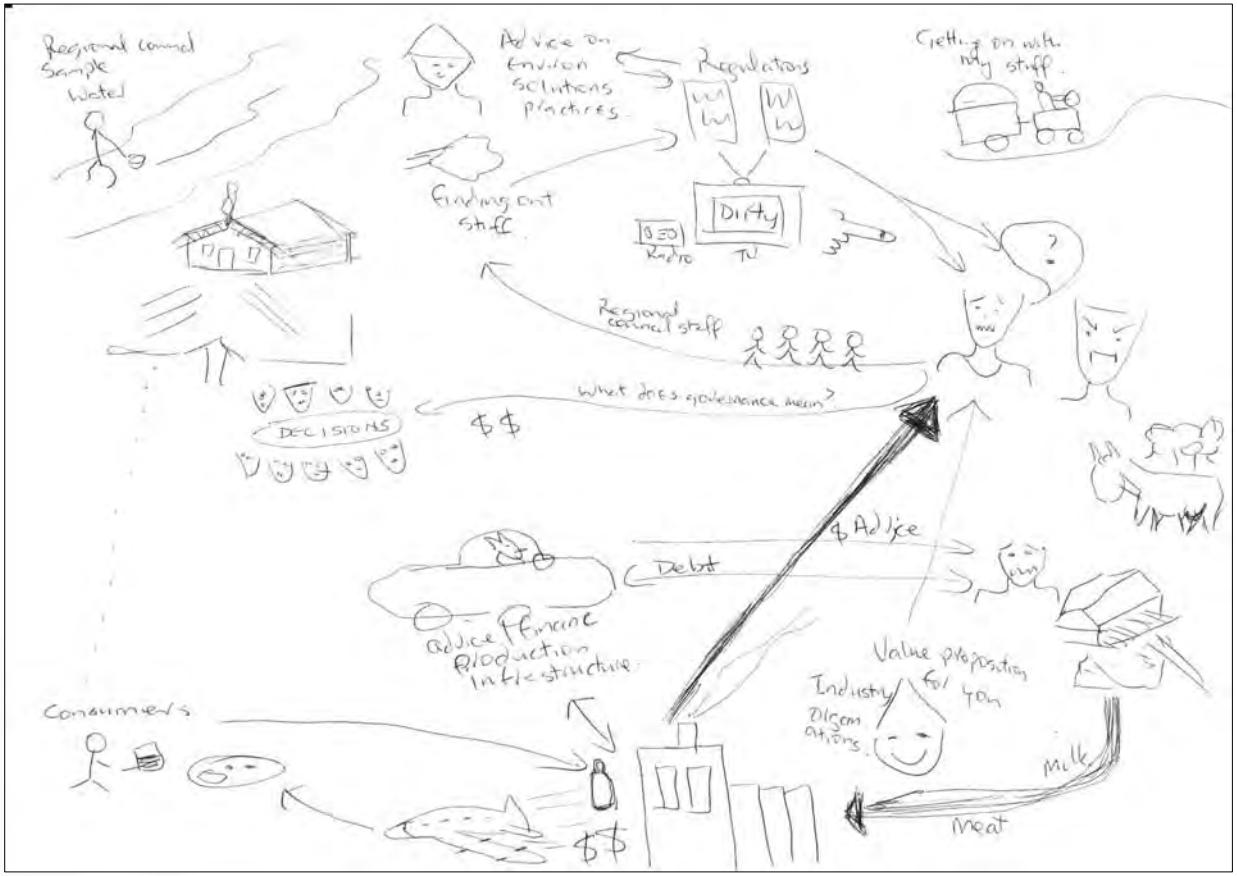
- Rich pictures – an approach to describe the ‘problematical situation’
- CATWOE, PQR and 3 E’s – mnemonics to help describe the real world
- Model building of the ideal situation
- Discuss ways to get to the ideal situation
- Define/take action

An example – SSM in the environmental field

Recent example in the environmental field

- Used rich pictures and CATWOE to
  - isolate the some of the key relationships and issues
  - harness the complexity -which was then made more manageable
  - capture the emerging and changing circumstances
  - ensure key stakeholders' perspectives were represented
  - understand and describe the interconnections/ opportunities that might not have been initially apparent.

Example of a rich picture of sustainable environments in relation to farming



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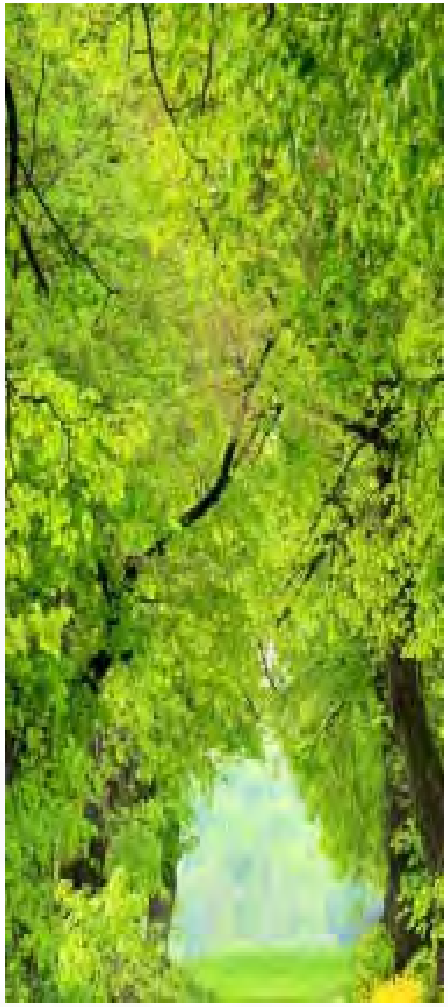
Benefits of SSM



- Has useful tools to improve understanding of complex situations and circumstances
- Informs rather than just describes service development
- Provides basis for robust discussion and transformation
- Facilitators and participants do not need detailed subject knowledge of current circumstances to use SSM – so useful in uncharted environments such as during an evaluability assessment

Benefits of SSM

- Rich pictures are a quick effective way to access wide range of information on current context
- CATWOE allows for different perspectives to be explored in ways that can be insightful

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But….

- Do have to trust in the SSM process
- It may seem confusing and unclear during the process
- Set expectations there will be ambiguity at times
- Provide reassurance and timely feedback

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A word to new users

- Do need to learn to use SSM
- Has a language of its own
- Use recent SSM approach by Checkland – methodology has undergone considerable development over the years
- Can use alongside other learning approaches
- Can use in any order

Summary

- CAS and SSM offer ways of thinking and learning that offer signposts to deal with complexity
- Soft systems methods can be quick, efficient ways to access contextual information
- When used in evaluability assessment these approaches can be useful in complex situations to:
  - isolate key issues and avoid being overwhelmed by the complexity
  - take account of emerging or changing circumstances
  - ensure key stakeholders' perspectives are represented
  - understand and describe the interconnections that might not have been initially apparent
  - identify the evaluation needs for stakeholders taking into account context

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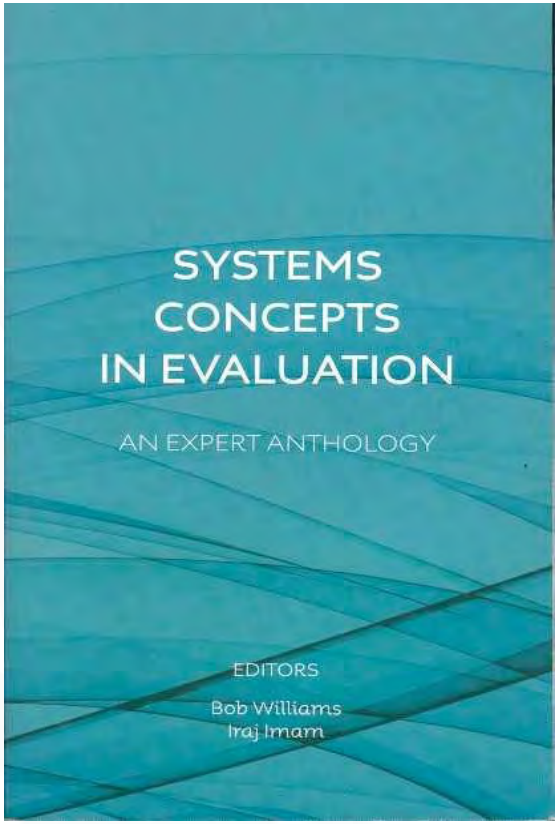
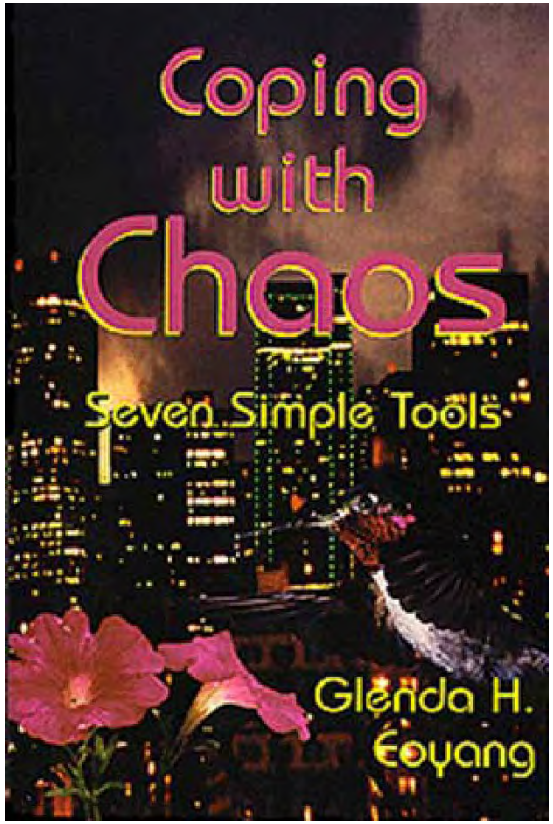
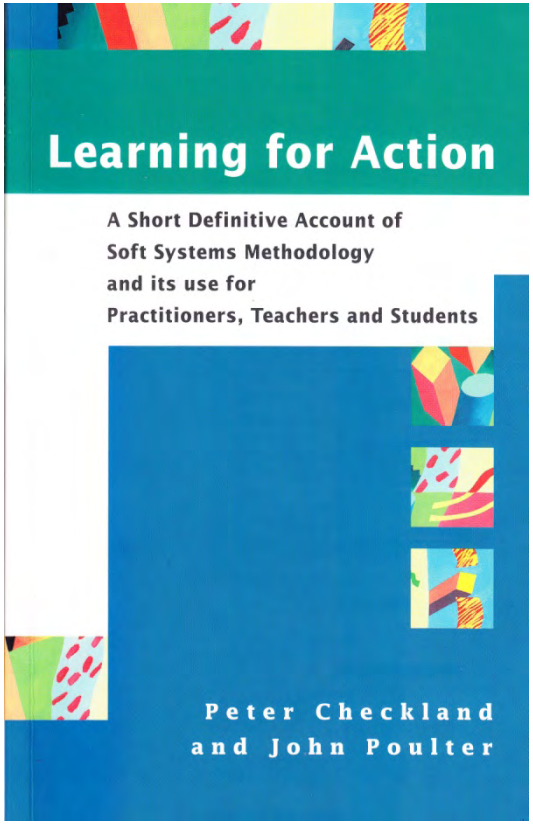
Appendices

If you were to read just three books…







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Acknowledgements

- With thanks to
  - Wellink for allowing the use of the STARS Evaluability Assessment for this presentation
  - our client working in the environmental space for allowing the use of some of the soft systems material this presentation
  - my colleagues in the Kinnect Group, particularly Kate McKegg and Nan Wehipeihana.

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