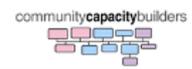


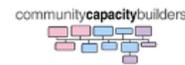
Complex Problems



In this lecture we are going to define complex problems and look at how to address them.

Complex Problems

- There are not clear relationships between cause and effect: they are multi-causal
- They have many interdependent elements/parts
- The parts change each other – they adapt
- The problem is constantly changing
- They do not have a right answer



Now compared to simple and complicated problems, complex problems are a very different type of problem. This is because they do not have clear relationships between cause and effect - they have multiple causes, and these multiple causes are intertwined and interconnected.

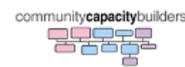
So they have many interdependent elements or parts. Because of this multicausality and interdependency, the parts of the problem change each other – they adapt. And because of this, the problem is constantly changing.

Given these characteristics, complex problems do not have a right answer. Therefore finding a right answer is not the focus when addressing complex problems.

Addressing Complex Problems



- Been likened to 'raising a child'
- Need to focus on the whole system
- No recipe or blueprint
- Initiatives for addressing complex problems are not replicable



Addressing complex problems has been likened to 'raising a child'. There are many causal, intertwined and interdependent factors that influence how successfully you can raise a child.

For complex problems, like raising a child, the whole is greater than the sum of the parts, raising a child is more than the parts such as family life, friends, education, socio-economic status etc. It is about the intertwined and interdependent causal factors such as family life, friends etc.

To address this type of problem you need to focus on the whole system

The focus needs to be on the:

- whole ecosystem of intertwined and interdependent causal factors and
- the ecosystem of initiatives and organisations that are addressing these causal factors.

For this type of problem, following a recipe or blueprint generally does not work and is often detrimental. If you've raised a child you have probably experienced how everything does not quite go to plan.

Also initiatives which address complex problems are not replicable - raising one child successfully by taking a particular approach does not guarantee success with raising a second child if you take the same approach.

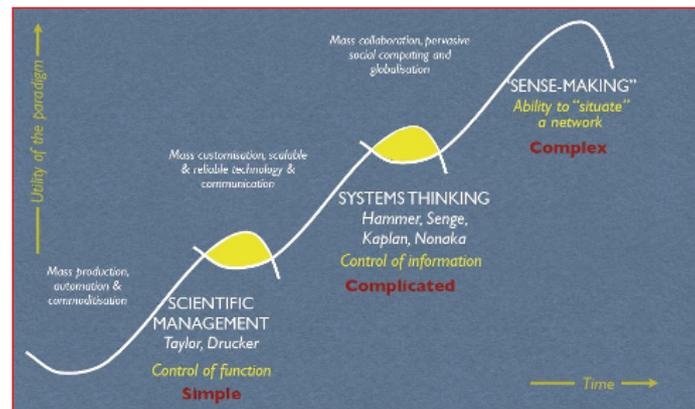
Every child is different – they are surrounded by a different ecosystem of intertwined causal factors that are influencing them.



This image is a good illustration of how the whole is greater than the sum of the parts.

You could not follow a blueprint to build a dog. That's because a dog is not complicated, it is complex.

Need to Situate a Network



Dave Snowden (cited in Graves, T., 2010)

communitycapacitybuilders

This diagram, from a presentation by Dave Snowden, highlights the need to focus on taking coherent action when addressing complex problems. Coherent action means aligning and coordinating activities.

The diagram shows three paradigms which aligns to three types of problems: simple, complicated and complex.

- Scientific Management for simple problems - focuses on controlling what people do
- Systems Thinking for complicated problems – focuses on having all the information, and
- Sensemaking for complex problems - focuses on situating a network - this does not mean controlling a network, it means giving the network coherence – enabling the network to align and coordinate its activities without attempting to control it.

If we look at the six approaches to social entrepreneurship we have covered in this program, the complexity approach focuses on situating a network – the approach recommended in this diagram for addressing complex problems.

- The social innovation school approach aligns to the systems thinking approach.
- The other four approaches, the social enterprise, participatory governance, communitarian, and marketisation approaches align to the scientific management approach.

•While the social innovation school approach does focus on addressing complex problems it does not do this by situating a network; it does it by creating an initiative to address a complicated problem using systems thinking. It is aware though of where its initiative fits within the broader network of initiatives that are addressing the complex problem.

References

- Graves T. (2010), Solution-space: Beyond Cynefin?, viewed 31 December 2016, <<http://weblog.tetradian.com/2010/02/23/beyond-cynefin/>>