

Introduction to Complexity Principles for large group (13.7.07)

- Many different ways of defining complexity, and complex adaptive systems. I have chosen 4 principles to work with as a starting point. You may have chosen different ones, of course...
 - Minimal specifications
 - Work with attractors
 - Value diversity as a source of creativity and sustainability
 - View a system through its interactions rather individual elements
- As a way of experiencing some of these principles, I would like to offer you an exercise.
- Distribute letters. They all have blu-tak on the back. How many words can you make?

Minimal specs here: use letters to make words

- What types of words have been made? What patterns can we see?

Attractors here could be:

- *English Language*
 - *Number of letters in words*
 - *Patterns of letters*
 - *Anything else?*
- What made it easier to make words?

Diversity as a source of creativity?

- Let me give you some more specifications:
 - There are 21 letters altogether. Form all the letters into a single 3-word phrase
 - 1st letter of first word is 'C'
 - Last letter of last word is 'M'
 - The pair of 'A's is split by a single letter
 - The pair of 'S's is split by a single letter
 - 1st letter of the middle word in 'A'

View the interactions rather than the elements

- Consider the difference between the static, seemingly random collection of letters at the beginning, and the dynamic process which led to the final emergent meaning.
- This is different to the traditional linear approach to viewing a system – which is to reduce it to its components in order to understand it, like a machine. But in complexity, the whole is greater than the sum of the parts, and using a linear, machine-based model doesn't work. I have a film clip to illustrate this valuing of holism and intuition over linear thinking.

The limitations of reductionism

Making *assumptions* of linearity is the commonest way we humans attempt to understand and control the non-linear situations we find ourselves in. This has been very successful in producing the technological world around us – but is proving unsuccessful in many ways too (health care, economics, weather, relationships)

MW 11.7.07