Seven approaches to complexity

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I have allowed myself to get sucked into a debate on the value of the SECI model. To my mind in the hands of consultants and IT vendors it has become *the model that launched a thousand failed knowledge management initiatives*. In responding to an as ever intelligent post from Richard Vines this morning I created a list of different approaches currently being taken on the use of complexity in social systems. I did this quickly so it is probably wrong, but share it below in the hope that others will improve and add to it.

1. The use of the word "complex" in its normal English language use, occasionally picking up some of the language of complexity science,. Frequently confusing complex with complicated systems and with the assumption that complexity should be reduced. This category also includes primitive so called Darwinian approaches to evolution (cull the bottom 10% etc.)

2. The computational approach (mass simulation, humans as ants etc.) which is more commonly known as agent based modeling. To my mind, in respect of its truth claims in the context of social systems, this confuses prediction with simulation much as its Newtonian predecessors confused *correlation with causation*.

3. Those in systems thinking, who have take complexity concepts of self-organisation and some of the other language such as "emergence" and used to to validate approaches based on second order cybernetics.

4. An assertion that individuals participate in self organising wholes as individuals with a focus on the autopoietic sustaining of social structure in which the human subject is seen as a psychic system participating in those social systems (this is a common position on living systems theory - Capra, Wheatley etc)

5. Various post modernist schools that use complexity to justify social constructivism, relativist and many other "isms' that challenge the existence of knowable reality.

6. Participative complexity, linked to Stacy and others which is based on communicative interaction with participation as a form of systemic self-organisation in contrast with an agent model. For Stacy there is no self organising whole outside the ordinary day to day interaction between living bodies. This school is virulent in its attacks on systems thinking by the way (and often elegantly so)

7. Contextual or Cognitive complexity (myself and others) who assert that the context can determine if a system is complex or not, and if so what type of complexity applies. Not all human systems operate far from equilibrium. Here the argument is that humans can create stable systems in which cause and effect relationships repeat consistently and to which highly structured methods (six sigma etc) can be applied. The issue then is to determined the boundaries between ontological states and apply the appropriate method. A lot of my objections to Nonaka is that he takes a single ontology approach - as do most management scientists and further that such approaches are normative in nature.

Interestingly 5-7 are European in origin, the first universal (regretably) and 2-4 are US based.