

Craig Horangic and Linda Lou Crosby

Cognitive-Edge Sensemaking



What is Cognitive-Edge Sensemaking?



- ◆ Application of new scientific thinking including complexity principles to organizations
- ◆ Open source movement for consultancy practice
- ◆ Trans-disciplinary research based on emergence, participation and co-evolution
- ◆ Theoretical Heritage: IBM Action Research, KM
- ◆ Framework for revealing complexity through the relaxation of certain assumptions
- ◆ Grounded on collective participation and the co-evolution of shared meaning. Diversity is a key element.

Applications



Cognitive-Edge techniques can be useful in a diverse range of application areas:

- Organizational change
- Employee satisfaction surveys
- Leadership development
- Decision-support
- Communication strategy
- Lessons learned
- Strategic planning
- Metrics and management
- Project management
- Knowledge capture
- Knowledge management
- Innovation strategies
- Policy making
- Communication strategy

Challenging common decision-making and operational models



- ◆ **Assumption of order – cause-and-effect relationship**
 - Discernible, Verifiable, Predictable
- ◆ **Assumption of rational choice—humans will make choices in their best interest**
 - Manipulation and education will manage behavior
- ◆ **Assumption of intentional capability-we see every “blink as a wink”**

True in some contexts, but far from universal. Our most common management tools accept these assumptions

Deep human desire for order




- ◆ Control: fixed, ordained, determined—It's woven into our culture
 - With the right information you can predict the future
 - There are right and wrong answers
- ◆ Chaos: astray, err, catastrophe—It's always bad news
- ◆ Predominate business perspective—From stopwatch carrying Taylorists to business process reengineering
- ◆ Lack of order is due to poor analysis, implementation or understanding
- ◆ Desire for order is compelling

Complexity Science – a foundational element




- ◆ Order without a central director which emerges through the interaction of many entities
- ◆ Self-organizing patterns without central direction
- ◆ Predicting and controlling behavior of systems is difficult
- ◆ Promotes interdisciplinary viewpoints (e.g.: evolution, mathematics, economics, telecommunications)
- ◆ Agent based modeling limited (it's not human)
- ◆ Distinction of human complex systems
 - Humans are not limited to one identity
 - Humans are not limited to acting in accordance with predetermined rules – intentionality always plays a role
 - Humans are not limited to acting on local patterns

Landscape of Management



<i>U n o r d e r O n t o l o g y</i>	Mathematical Complexity Axelrod, Kauffman	Social Complexity Snowden, Stacey, Juarrero
	Process Engineering Taylor, Hammer	Systems Dynamics Senge, Peters
	<i>Rules</i>	<i>Heuristics</i>
	<i>Epistemology</i>	

Ordered Systems Thinking

- 
- ◆ Analysis of physical conditions reveals rules and hypotheses that can be validated
 - ◆ Process builds a body of knowledge and enables prediction
 - ◆ Doesn't work in unordered circumstances
 - Decision-makers know it– they rely on gut feel, inspired leadership, cultural factors
 - ◆ Recognizing the difference between order and unordered unleashes capacity for effective organizational action

Cognitive-Edge Complexity



- ◆ Directed order – **Order**
- ◆ Emergent order – **Unorder**
 - Like the undead in Dracula – neither dead nor alive; similar but different
- ◆ The trap of believing everything is complex
 - The edge of chaos
- ◆ Things are simultaneously both ordered and unordered
 - Any separation is artificial (e.g.: cities)

Some key contrasts



Unorder

Order

Effectiveness

vs.

Efficiency

Resilience

vs.

Stability

Habits

vs.

Rules

Emergent

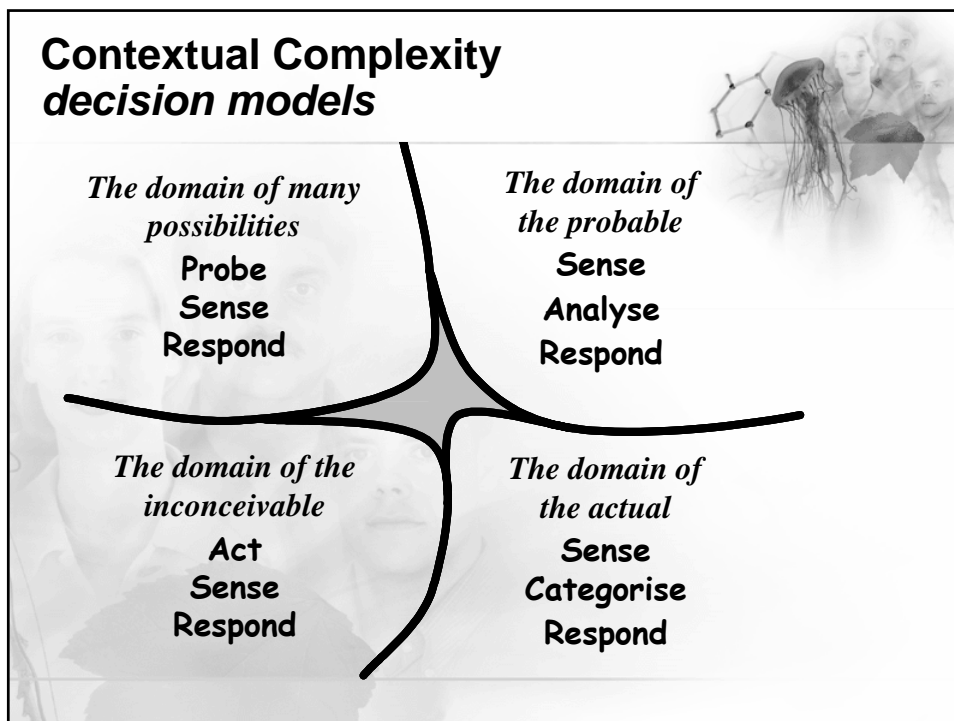
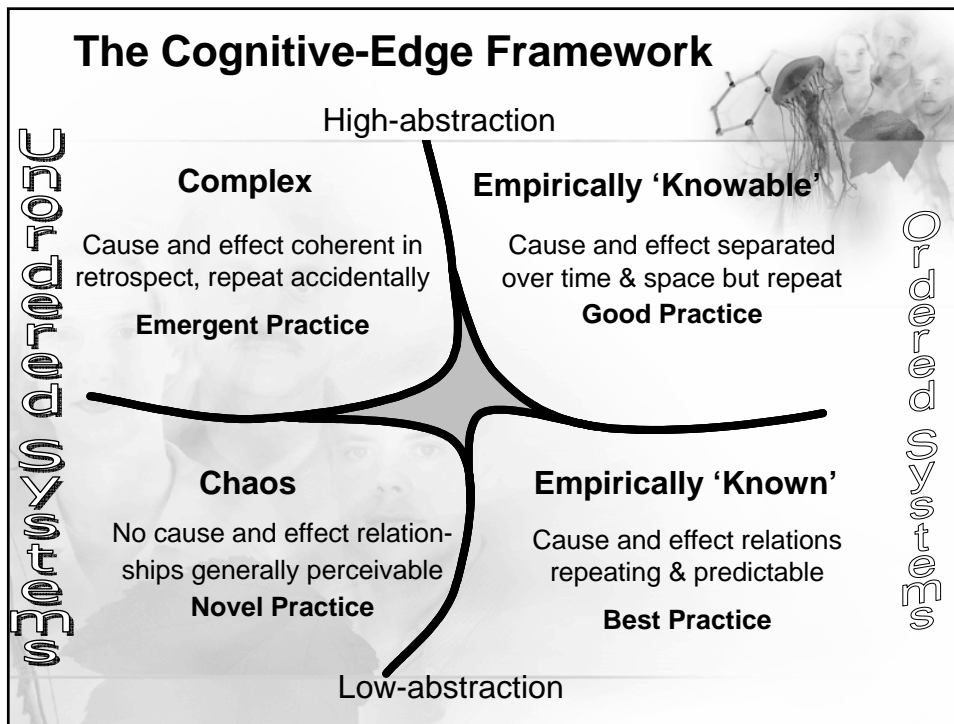
vs.

Reductionist

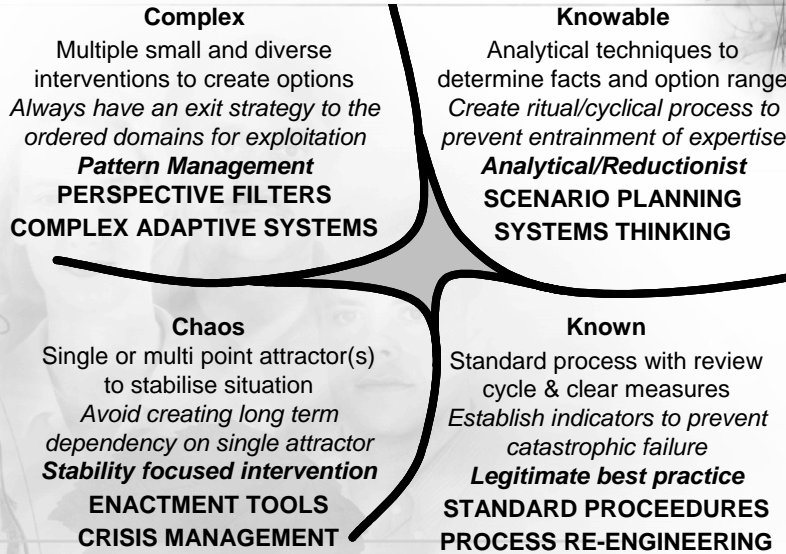
Patterns

vs.

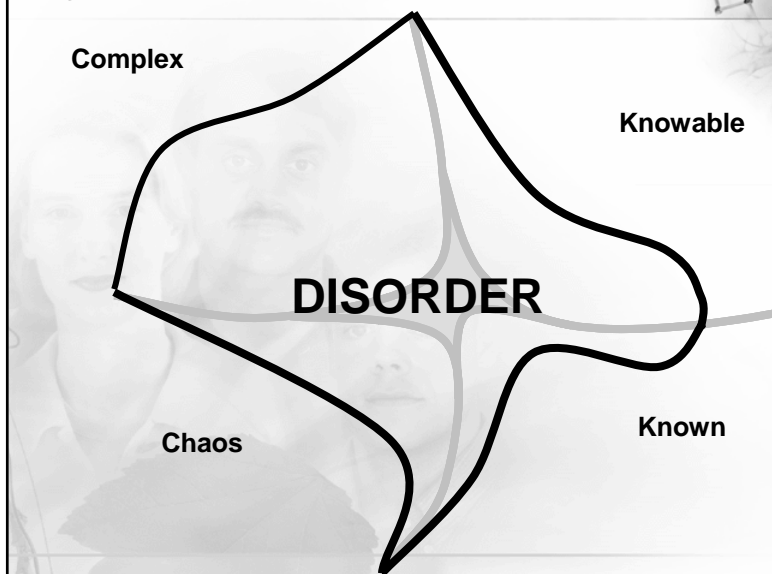
Outcome-based



Contextual Complexity Intervention types



Interpretation of state determined by preference for action



Cognitive-Edge Sensemaking Framework



- ◆ Limited value in producing logical arguments or empirical verifications
- ◆ Great value:
 - Improved sensemaking and decision-making capabilities
 - Foster's 'outside the box' thinking due to new constructs
 - Collective sense-making allows shared understanding to emerge
 - Truly values diversity of perspective
 - Weak signal detection