The Two Faces of Complexity

or

Seduced by Santa Fe

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Too big to fail...

...but too complex to manage
A personal anecdote
Who is accountable?
The two faces of complexity
So what do we really mean by organisational complexity?
Number of activities \times linkages between them

Inefficient systems
Unclear accountabilities

“Difficult to get things done”
How does complexity transpire?

DESIGN PROCESS
How does complexity transpire?

Power of Self-Organization

EMERGENT PROCESS
Applying the principle of emergence to organisations

- Agile development
- Self-organising teams
- Organisational learning
- Strategy as simple rules
- Open space technologies
- Managing at the edge of chaos
How does complexity transpire?

ENTROPIC PROCESS
Second law of Thermodynamics

“The entropy of an isolated system never decreases, because isolated systems spontaneously evolve toward thermodynamic equilibrium—the state of maximum entropy”
Organization as Open System

Environment

- Purposes
- Culture

Behavior And Processes

- Technology
- Structure

Inputs (Resources) → Outputs

Dashed Lines Show Feedback Loops


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Are organisations open systems?

“"It's always cozy in here. We're insulated by layers of bureaucracy."
What entropy actually looks like

Turf wars
Unclear roles
Steering committees
Layers of rules & procedures
Alienation and disengagement
“That’s more than my job’s worth”
Redundant and poorly-run systems
So what is the role of the leader in a complex organisation?
I. Selective top-down structural interventions
2. Keeping entropy at bay
3. Fostering emergent order
Overarching role of the leader: Making the system more open
Jesper Ek, Head of Diabetes Care, Roche Sweden

“To enable for people with diabetes to live their lives as unrestricted as possible”