Russ Marion
Coffee and Conversation about Research

COMPLEXITY LEADERSHIP THEORY AND RESEARCH
TRADITIONAL PREMISE

Leadership

Selection

System

Energy

Energy
TRADITIONAL PREMISE: LINEARITY

\[ Y = aX \]

\[ X \]

\[ Y \]
TRADITIONAL ASSUMPTION: EQUILIBRIUM

\[ \text{NaCl} \rightleftharpoons \text{Na}^+ + \text{Cl}^- \]
COMPLEXITY THEORY

- Requires no energetic input
  - Alan Turing and cell differentiation
  - Branson, Missouri
- Non-linear
  - Decline of USSR
  - Sudden onset of riot
- Far-from-Equilibrium
  - Complex systems border on instability
COMPLEX SOCIAL SYSTEMS

- Neural-like networks of interacting, interdependent agents under tension
- Effective at processing complex information flows
- Competent at organizational learning
- Adaptive in complex environments
- Tend toward creative productivity
- Required in knowledge economy
Complexity Leadership Theory (CLT) is the study of the generation and emergence of complex dynamics within an organization.
CONDITIONS THAT ENABLE COMPLEX DYNAMICS

- Interaction, interdependency (IDEO, Google)
- Adaptive tension
- Heterogeneity
- Task-related conflicts
- Trust, risk-taking, effective LMX, controlled power, empowerment, psychological safety
- Resource-rich
- Vision
COMPLEXITY LEADERSHIP THEORY

ENABLING LEADERSHIP:

- Adaptive Climate
  - Psychological Safety
  - Risk-Taking & Flexibility
  - Collaborative Communication

- Complexity Conditions
  - Interaction
  - Interdependence
  - Heterogeneity
  - Adaptive Tension

ADAPTIVE FUNCTION:

- Adaptive Leadership
- Complexity Dynamics
  - Nonlinearity
  - Bonding
  - Attractors

Emergence

Bureaucratic Leadership
Research Question: How does creativity and innovation emerge and develop in an organizational environment

Ontology/Epistemology: Constructionism, critical realism, collectivism, grounded theory(?)

Methodology: Grounded theory

Sample: 30 managers and workers in the credit card division
Research Variables:

A. Primary Idea Generation Variables
B. Primary Idea Flow Variables
C. Structural Variables
D. Leadership Variables
E. Contextual variables
Entanglement Model of Innovation & Emergence

Idea Generation
(Enabling ...

Leadership
(Enabling ...

Idea Flow
Adaptive ...

Innovation
Administrative)

Enabling Conditions
a. Engagement,
b. Interactions,
c. Tension & 
Pressure,
Adaptive
Climate

Aggregation
Effects

Formal
Strategy

Phase
Transition
Modified
Strategy and
Structure,
Revised
Processes & 
Procedures

Enabling
Conditions

Amplifying

Informal
Dynamics

Emergent
Strategy

Dampening

Bureaucracy

Increasing
Returns

Historical Context
DYNAMIC NETWORK ANALYSIS

- Explores dynamic relationships among agents, tasks, knowledge, resources, beliefs, and locations
- Reveals group and individual characteristics and dynamics
AGENT BY AGENT NETWORK
<table>
<thead>
<tr>
<th>ORGANIZATIONAL STATISTICS</th>
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<tbody>
<tr>
<td>Relational Coupling</td>
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<tr>
<td>Density</td>
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<td>Learning Capacity</td>
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<td>Connectedness</td>
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<td>Average Speed</td>
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QUESTIONS