

It's Alive

Self-Organization in the

Connected Economy

RAND Workshop on Complexity and Public Policy

September 27, 2000

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Connections and Phase Changes

Chemical Reactions



Life

Genetic Interactions

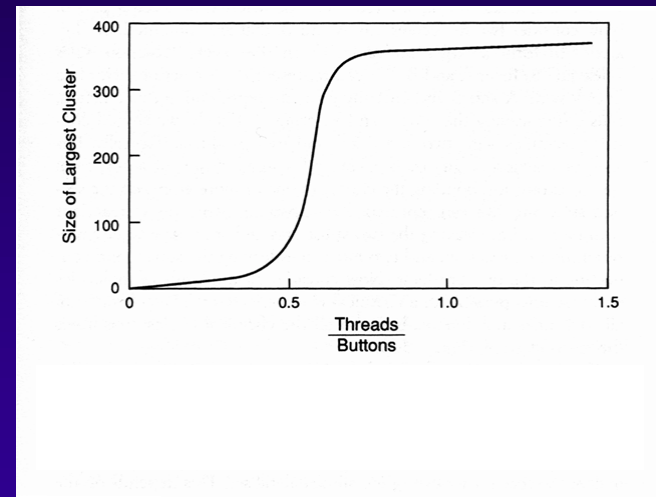
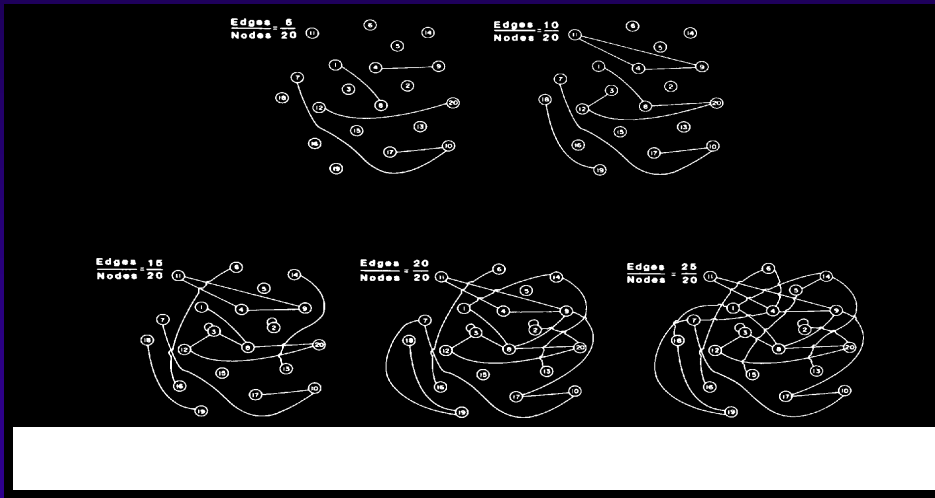


Ecology

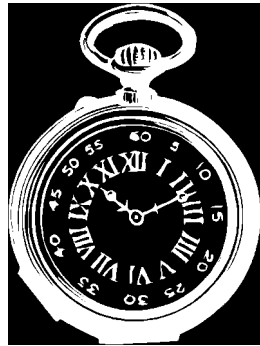
Business, Transactions



Connected Economy



Lock In: Non-Linear Strategic Behavior



JVC

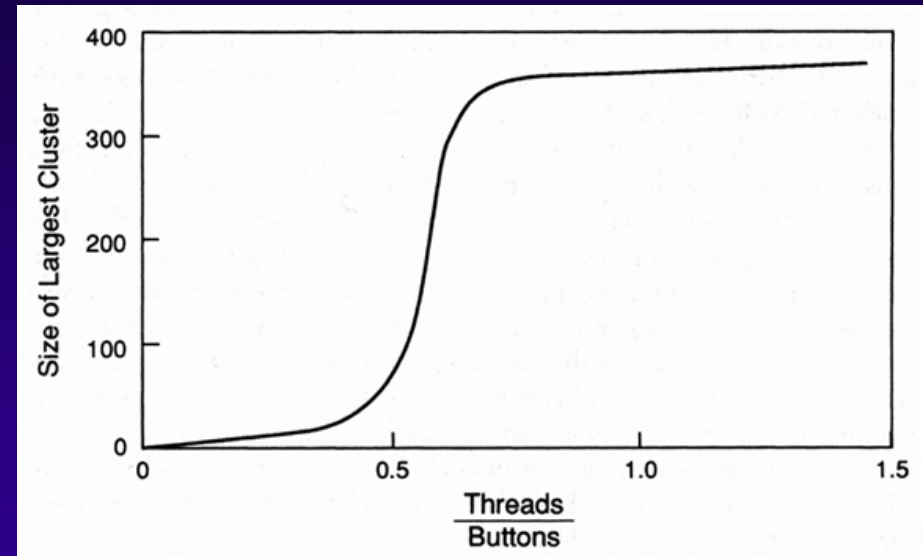
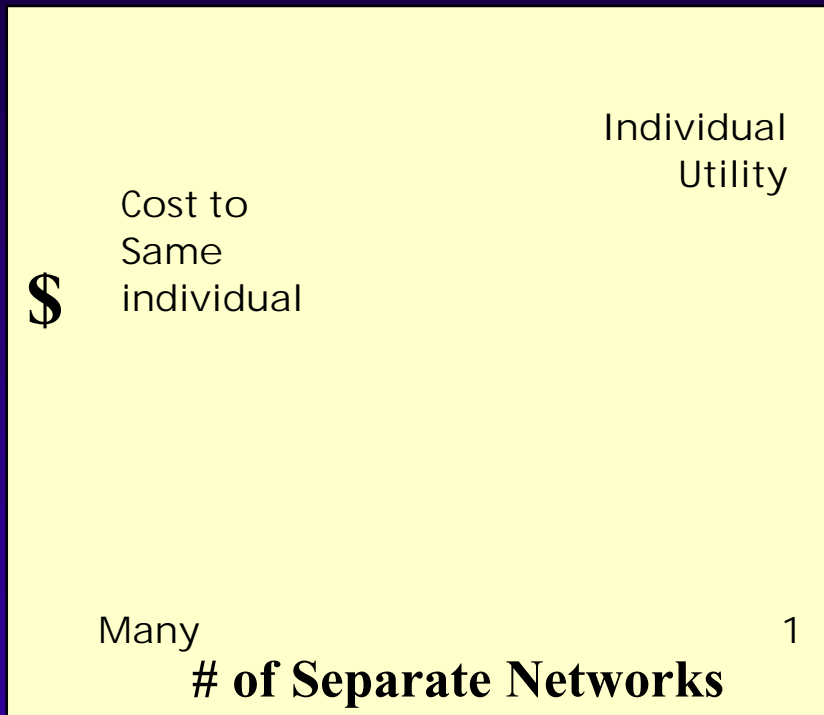
SONY

English

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How Does Lock-In Work?

Positive economic feedback leads to phase change in the market



JAVA is Attempting to Trigger Lock In

Companies
Committed
to Java



US\$100 million

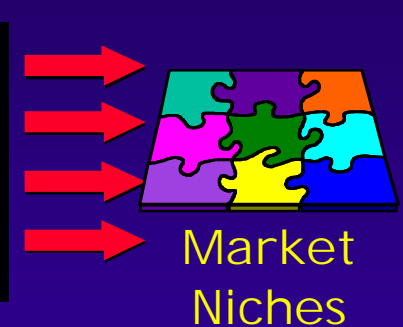
Venture Capital
Capability



Increased
Market
Commitment
to Java



Increased
User
Acceptance
of Java



Improved Penetration of Java

Non-Incremental Strategies

Traditional Economics
Halls of Production

Increasing Returns
Casino of Technology

Concepts

- Diminishing Returns
- Static Equilibrium

- Positive Feedback
- Path Dependence

Features

- Rational Expectations
- Competition Over Market Share
- Superior Product Wins

- Winner-Take-All
- First to Scale Wins

Examples

- Steel,
- Shampoo
- Construction

- VHS Standard
- DOS/Windows
- QWERTY Keyboard

Management Implications

If we like market economics, why do we have soviet organizations?

Viral Marketing for Health

- Microfinancing—Grameen Phones
- Recombination—OneWorld.Web
- Rewarding the Contagious—World Economic Forum

5 Implications of CAS Theory for Management

- Experiment, don't plan—in silico, if possible
—e.g. Supply Chains, Factories
- Recombine, don't invent
- Innovate, don't perfect
- Act, don't coordinate
- Trust, but verify

THE BATMOBILE IS JET-POWERED.
BULLETPROOF. FIREPROOF.
AND REACHES SPEEDS OVER 300 MPH.
COULD WE POSSIBLY IMPROVE ON IT?

