

Cross-disciplinary Dialogue in Academia:

Debating Complexity and Organic Development at Singapore Management University

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A group with diverse backgrounds...

- ⌘ ecology
- ⌘ political science
- ⌘ physics
- ⌘ business / physics
- ⌘ philosophy / religion
- ⌘ cognitive science

... and diverse interests

- ⌘ comparative systems theory
- ⌘ public policy
- ⌘ process and control optimization
- ⌘ evolution of technology
- ⌘ philosophy of science and logic
- ⌘ the process of cognition
- ⌘ etc

The Format

Bi-weekly informal discussion
round, ca. 2h

Participants debate a paper distributed in
advance, rotating interests

The Contents – examples

⌘ Stuart Kauffman's autocatalytic sets as a metaphor for the origins of life and creativity

⌘ Fitness landscapes and Boolean networks in biology

⌘ Complexity theory in plural rationalities and cultural theory - Thompson

⌘ Economic and technological evolution

The Contents – examples (cont'd)

⌘ Generalizations and predictive power in social sciences - Macintyre

⌘ Emergence

⌘ Peirce, reality, and truth: knowledge as a limit or knowledge as a walk on a fitness landscape with local optima

⌘ Choice and human happiness

⌘ Chaotic dynamics in the safety process planning in nuclear power plants

The roadblocks to cross-disciplinary discussion

⌘ same words don't always have same meanings

⌘ stepping out of your habitat exposes you to “beginner's mistakes”...

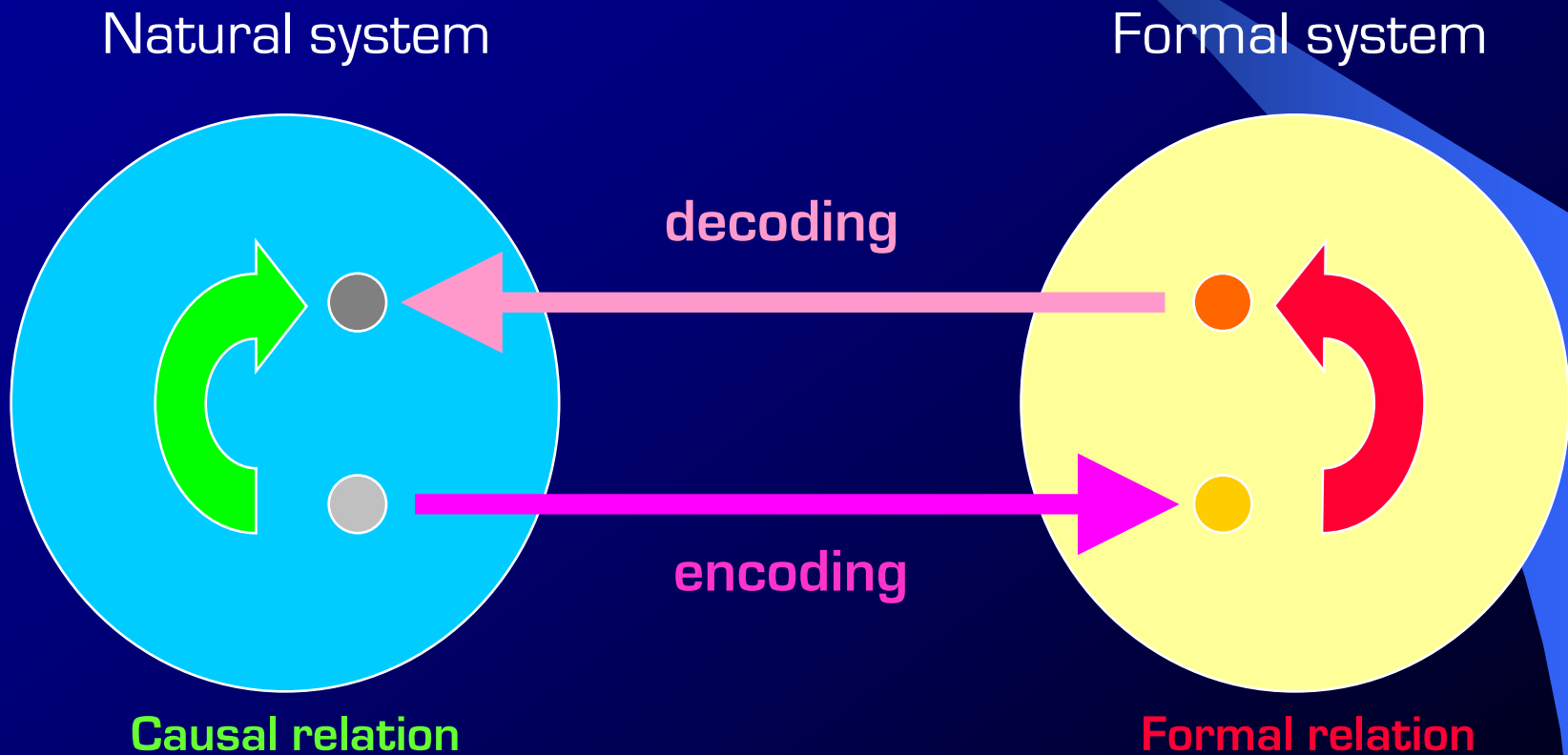
⌘ ... and this hampers dialogue in cultures where mistakes are unthinkable – such as many East Asian cultures

And yet:

The great potential for cross-disciplinary discussion to truly enhance knowledge, or:

Why analogies work

R. Rosen's modeling relation



Adapted from Robert Rosen (1991): Life itself

The modeling relation extended: Why analogies work

