Coping with complexity: Systems thinking, complex responsive processes, and systems intelligence

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A persistent interest in systemic perspectives

- ...on coping with complexity within and across organizations (SD, SSM, CST etc.)

- Recently: Complex Responsive Processes (CRP) of Stacey et al. (2000, 2006) and Systems Intelligence (SI) of Hämäläinen and Saarinen (2004, 2007)

- Stacey et al. advocate CRP as an alternative to "Systems Thinking" (ST)

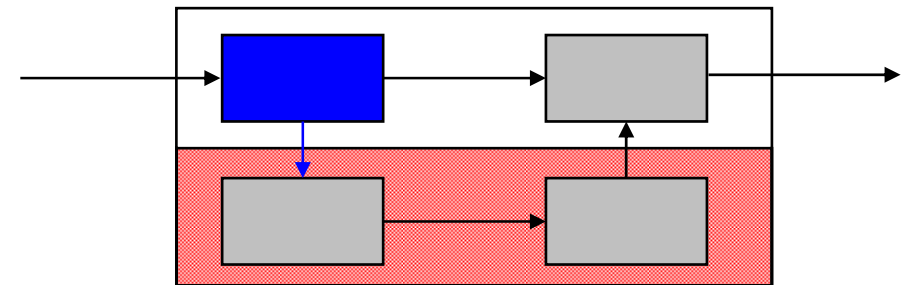- SI provides a new approach to thinking and acting *within* systems

Thesis: Towards an integration of ST and CRP with Systems Intelligence
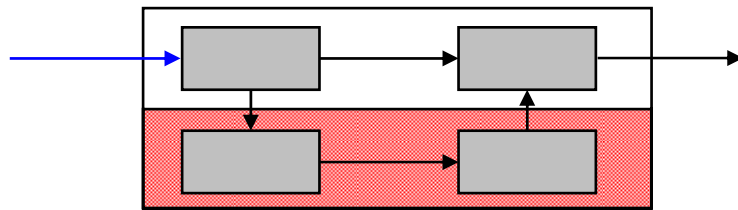
- **Systems Thinking**
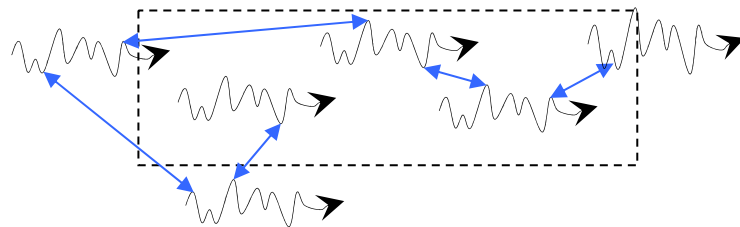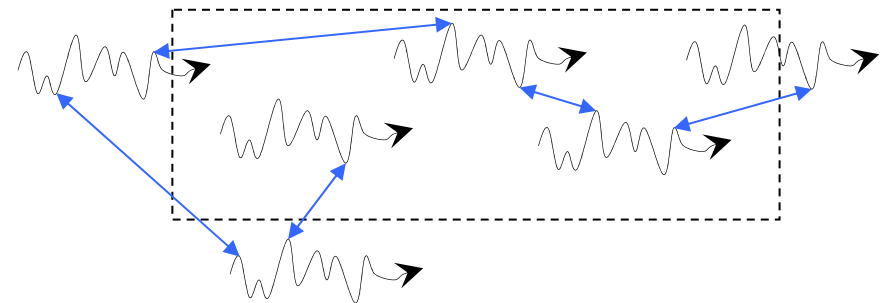
- **Complex Responsive Processes**

- **Systems Intelligence**
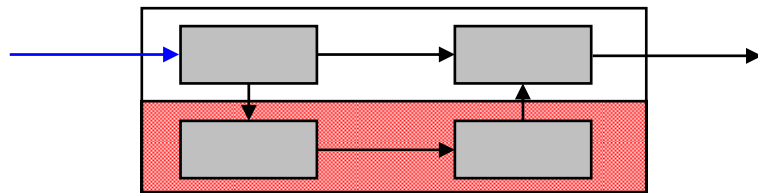
# Complex Responsive Processes - an alternative to Systems Thinking?

■ Primary focus is upon the *actual interactive processes* between people which give rise to

– What ST calls systems, and

– To the understanding of those systems

■ Focus *more* upon the "living present"

■ From organization as a system to... ■ ...organization as interrelated interactive processes between people

Wholes and their transformation in CRP
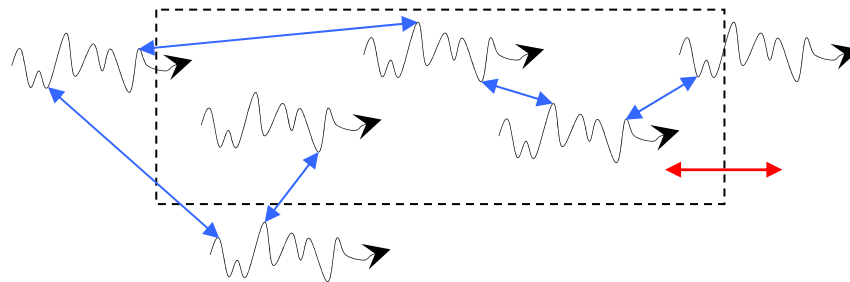
- Organizations as wholes are "imaginative constructs", conceptions of "population-wide tendencies" to respond to particular actions in specific ways

- Transformation of local interaction is potentially amplified into a population-wide transformation in subsequent interaction

Systems Intelligence

- Intelligent behaviour in the context of complex systems involving interaction, dynamics and feedback

- A subject acting with Systems Intelligence engages successfully and productively with the holistic feedback mechanisms of her environment

- She perceives herself as part of a whole, the influence of the whole upon herself as well as her own influence upon the whole

- By observing her own interdependence in the feedback intensive environment, she is able to act intelligently

Comparisons between ST, CRP, and SI

	ST according to Stacey et al.	CRP of Stacey et al.	Systems view of SI
Organization as a whole	A reified and thing-like whole	An imaginative construct	A system with human and nonhuman elements - a construct → re-frameable
Novelty and change in organizations	Re-designing and re-organizing systems as objects	Amplification of differences in local interactions	Interventions from within systems and re-framings of those systems → capacity to change is an intrinsic characteristic of systems
Choices with respect to wholes	Ignores choices as an ongoing characteristic of all human action	Choices are forming, and being formed by, values and norms, "ideology"	Choices people make are enabled and constrained by as well as constituents of systems → an emphasis on the possibility of choice

Towards integrating the insights of ST and CRP

- Stacey et al. criticize what we call "objectifying systems thinking" with regard to which, they do have an important point

- We *do not* see "systems" to be in conflict with the CRP perspective

- The concept of a "system" *does* capture important perceptual and habitual aspects of the *interactive processes* between people

The way forward with Systems Intelligence
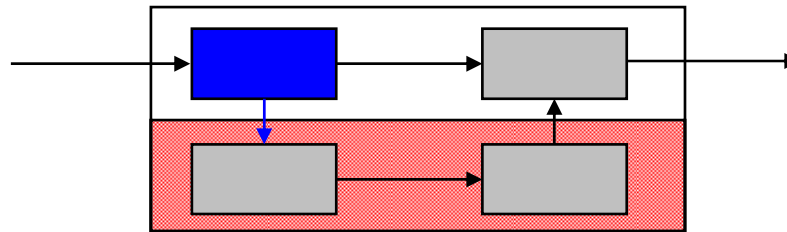
- Builds upon the systemic insights of ST, i.e. understanding human action as something that people together generate as systems

- Emphasis on one's continual influence upon wholes (as in CRP), from within wholes, also in the context of one's local interactions in the unfolding present moment

- Extends descriptive and prescriptive systems approches with its suggestive and empowering aspects

Summary

- The systems vocabulary and approach to human interaction need not and should not be discarded

- The emphasis of CRP on everyday action and conceptual development of the "living present" extends systems thinking

- Systems Intelligence builds upon Systems Thinking with a similar emphasis to that of Complex Responsive Processes

References

- Hämäläinen, R. P., Saarinen, E., eds. (2004). *Systems intelligence: Discovering a hidden competence in human action and organizational life*, Helsinki University of Technology, Systems Analysis Laboratory, Research Reports A88, October 2004.

- Hämäläinen, R. P., Saarinen E., eds. (2007). *Systems intelligence in leadership and everyday life*, Systems Analysis Laboratory, Helsinki University of Technology, Espoo.

- Luoma, J., Hämäläinen, R. P., Saarinen, E. (2007) Coping with complexity: Systems thinking, complex responsive processes, and systems intelligence, Manuscript 5 October 2007. http://www.systemsintelligence.tkk.fi/publications.html

- Midgley, G., ed. (2003). *Systems thinking*, Volume I-IV, Sage Publications, London

- Shaw, P., Stacey R. D., eds. (2006). *Experiencing risk, spontaneity and improvisation in organizational change: Working live*, Routledge, New York.

- Stacey, R. D. (2007). *Strategic management and organizational dynamics: The challenge of complexity* (5th edition), FT Prentice Hall, Harlow.

- Stacey R. D., Griffin, D., Shaw, P. (2000). *Complexity and management: Fad or radical challenge to systems thinking?*, Routledge, London.