Realising the Potential of Systems Thinking

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- The nature of complexity

- The development of applied systems thinking

- CST and theoretical critique : the case of project management

- CST as practical critique : the case of systems thinking in housing
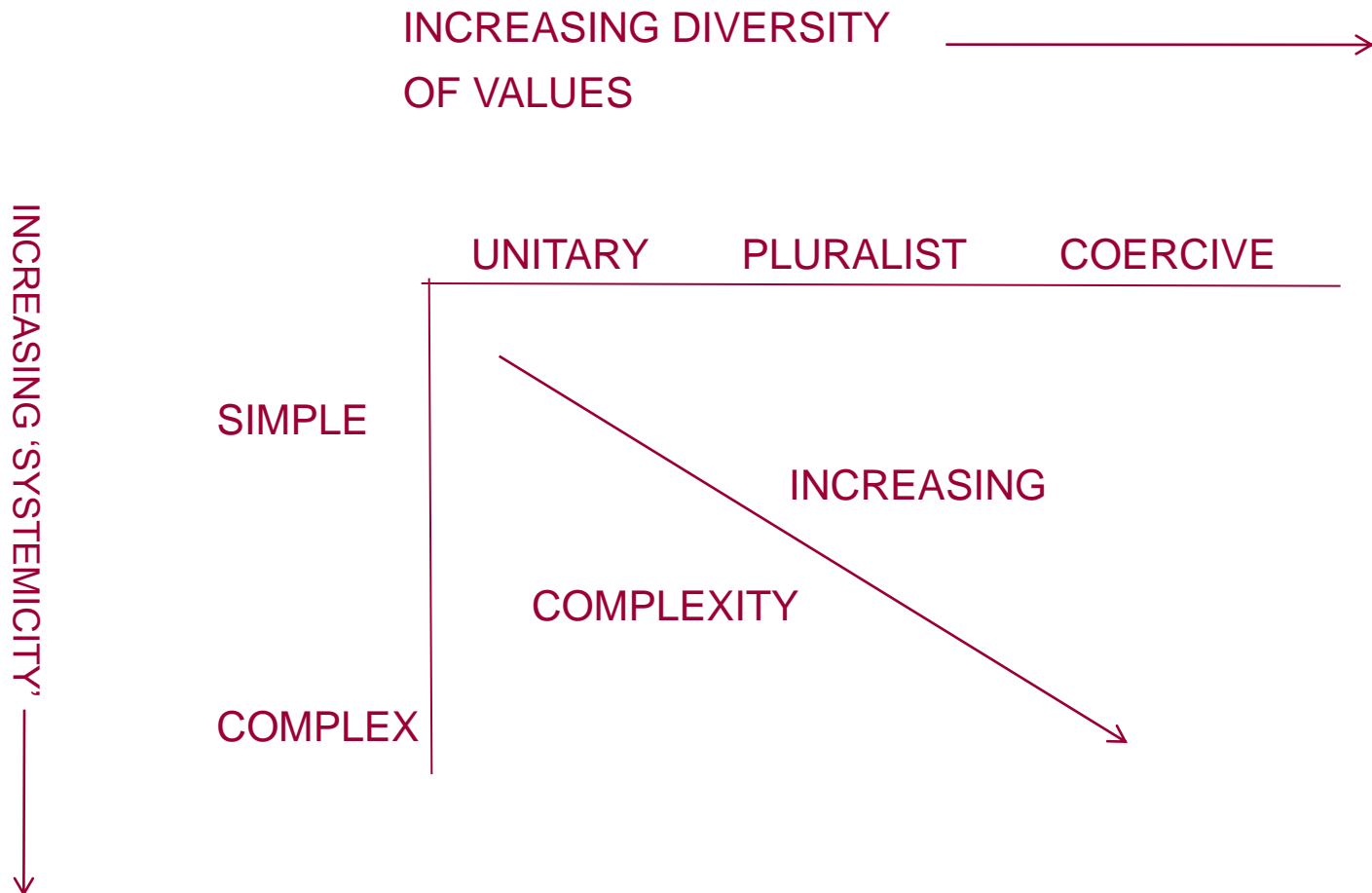
- What can creative holism contribute?

Complexity

- many parts
- interconnectivity
- multiple causality
- non-linear relationships
- fractal/recursive
- emergent properties
- co-evolve with turbulent environments
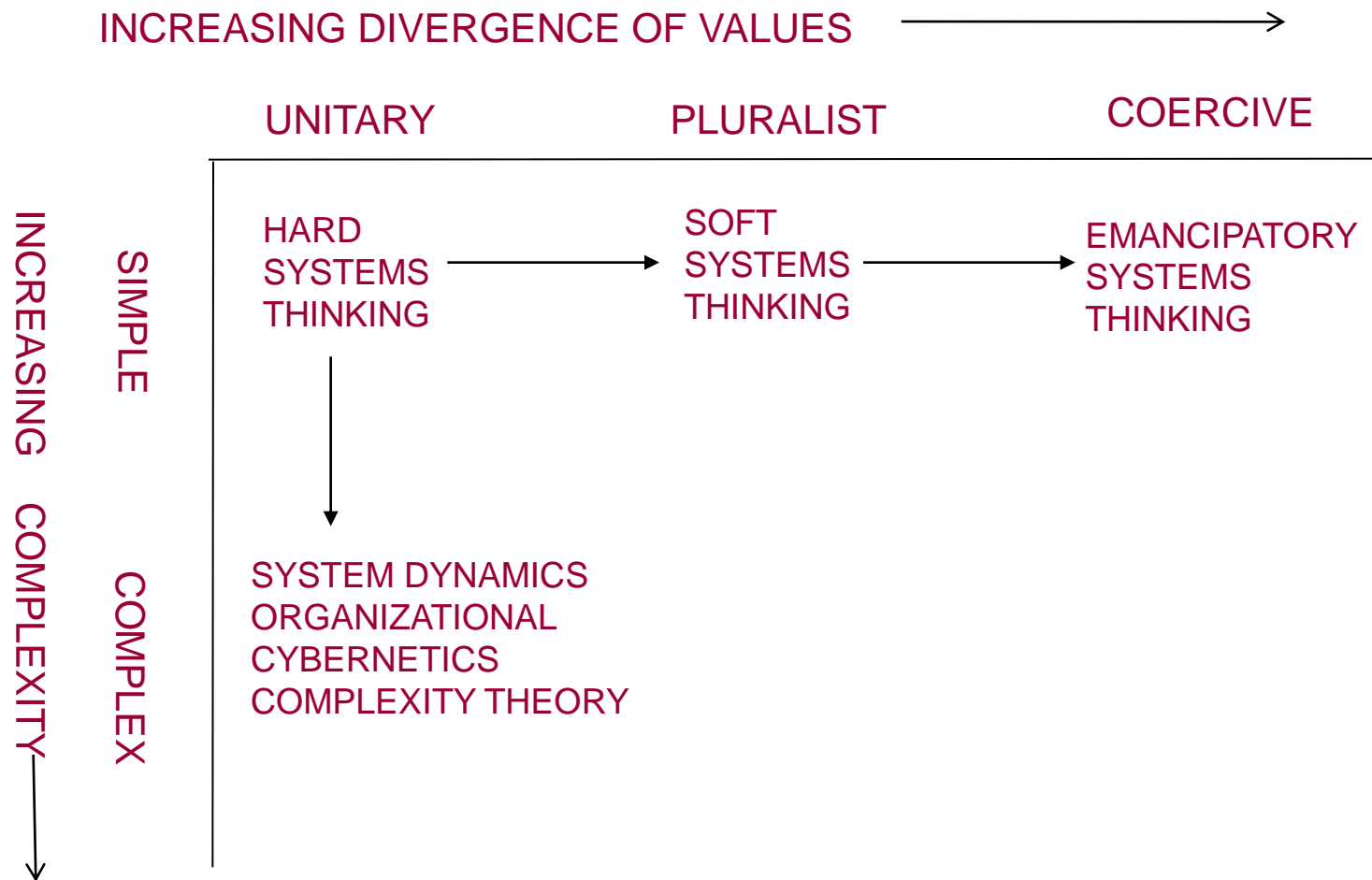- multiple purposes
- conflict
- power

Increasing Complexity

INCREASING DIVERSITY
OF VALUES

INCREASING 'SYSTEMICITY'

UNITARY   PLURALIST   COERCIVE

SIMPLE

INCREASING

COMPLEXITY

COMPLEX

The development of applied systems thinking I

INCREASING DIVERGENCE OF VALUES →

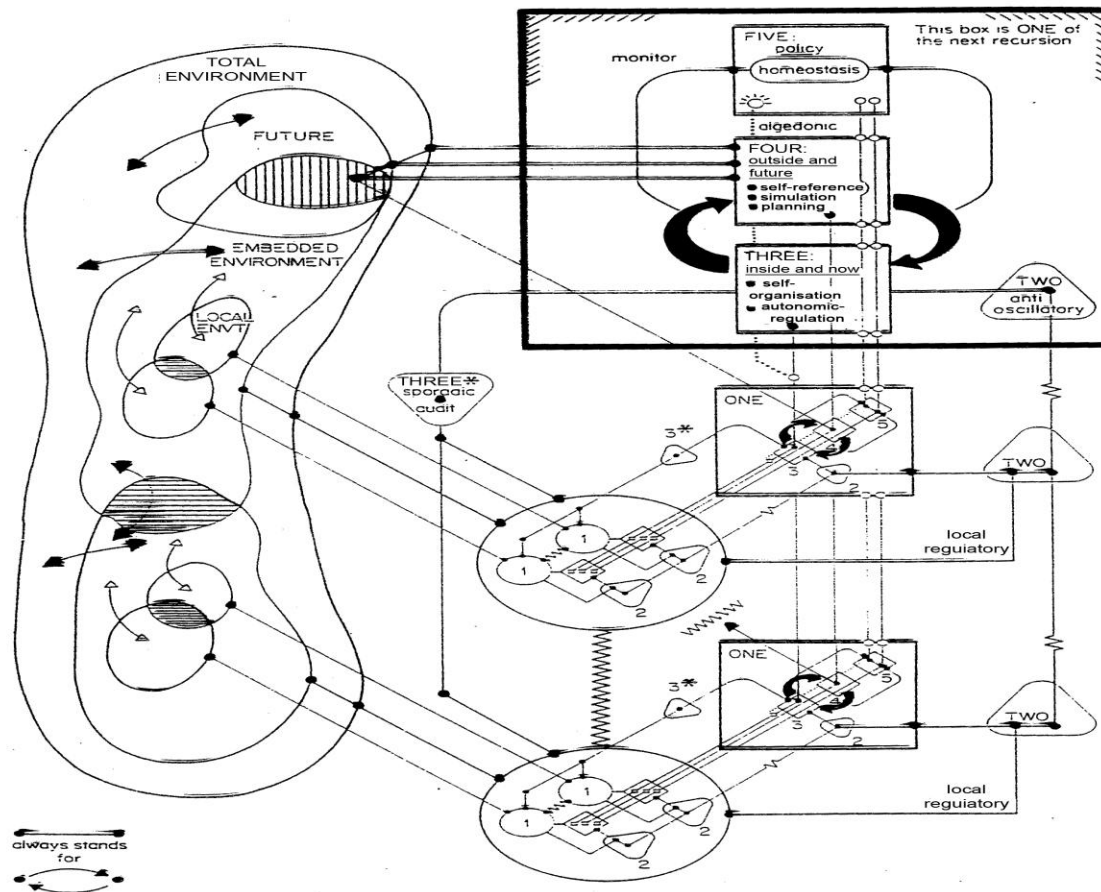|	UNITARY	PLURALIST	COERCIVE
SIMPLE	HARD SYSTEMS THINKING →	SOFT SYSTEMS THINKING →	EMANCIPATORY SYSTEMS THINKING
COMPLEX	SYSTEM DYNAMICS ORGANIZATIONAL CYBERNETICS COMPLEXITY THEORY		

INCREASING COMPLEXITY ↓

The development of applied systems thinking II

- machine

- organism

- brain

- culture

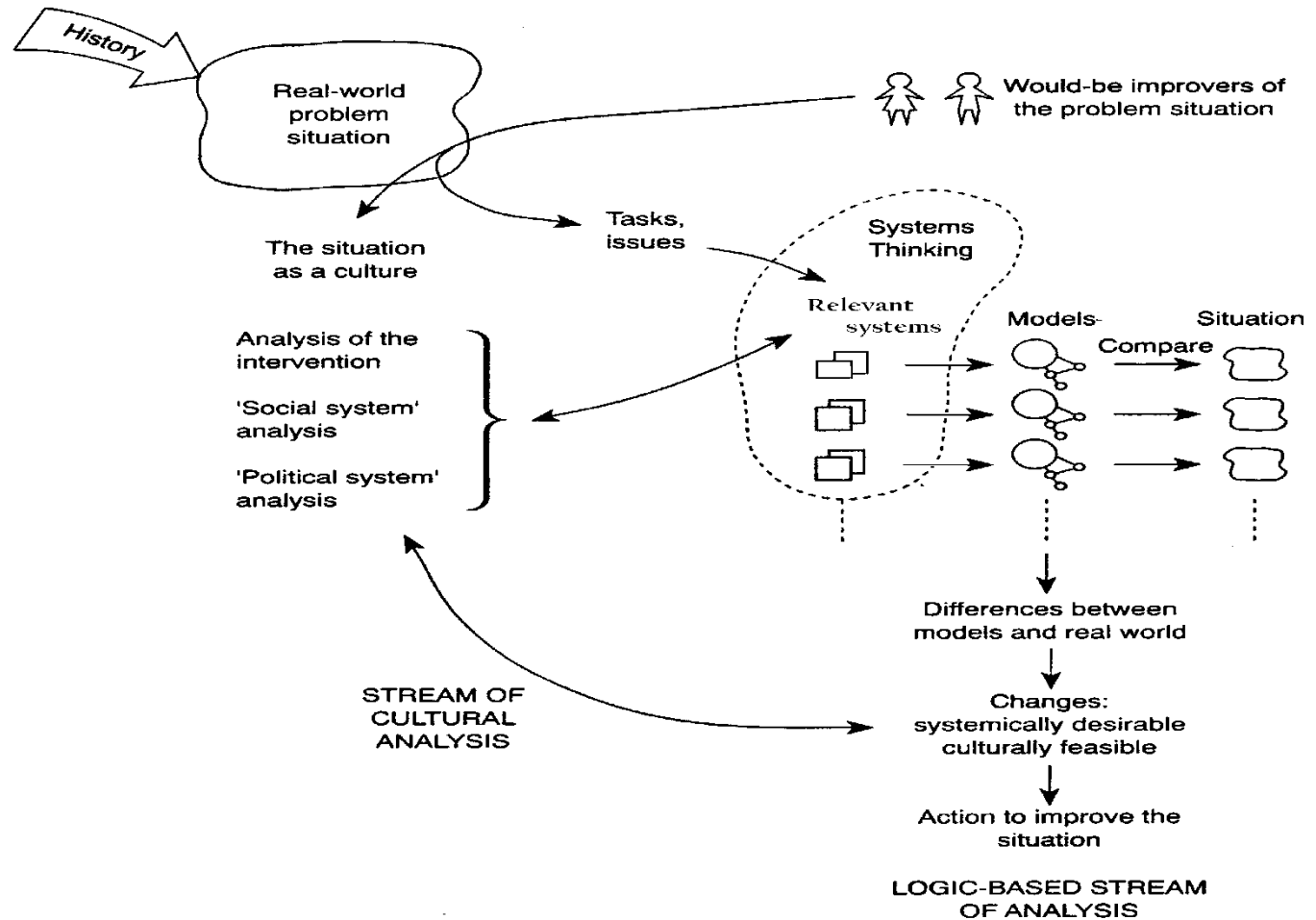- political system

- etc

The Viable System

The Process of SSM

Critical Systems Heuristics

- boundary judgements

- the affected but not involved

- the polemical employment of boundary judgements

Types of project complexity :

- technical complexity

- structural complexity

- temporal complexity

- directional complexity

(after Remington and Pollack)

What has systems thinking to contribute to complex project management?

- clarity about theoretical assumptions

- methodologies for managing 'systems' and 'people' complexity

- identification of strengths and weaknesses

- enriching the field

- pluralist approach to intervention

CST and practical critique : the case of systems thinking in housing

Vanguard's 'Lean Systems'

- whole system (customer) perspective

- interdependence of parts

- design against demand

- minimum 'command and control'

- encourages individual and organizational learning

- evaluates according to whole system performance

Results

Service performance:

- Tees Valley
    - end to end repair times reduced from 46 to 5.9 days on average and sustained
- Leeds
    - average void re-let times reduced from 50 to 25 days, rising again to 34
    - number of empty properties reduced from 240 to 144 to 118
- Preston
    - time taken for first payment to hit account reduced from 34 to 20 days
    - 18% of new tenants fell into debt compared to 43% previously
    - (re-let time rose from 32 to 40 days)

Problems

- Difficulty of sustaining gains

- Sub-optimization:

  - voids at Preston

  - council-wide IT system at Preston

  - 4 out of 5 directorates at Preston

- Pluralism:

  - area offices at Leeds

  - local offices at Preston

CST and practical critique : the case of systems thinking in housing

PARTICIPANTS

		Unitary	Pluralist
S	Simple	Hard Systems	Soft Systems Thinking
Y			
S			
T		Lean Systems	
E			
M	Complex	System Dynamics	
S		Viable System Model	
		Complexity Theory	

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Critical Systems Practice

- Critical Systems Practice is about "the creative use in combination of different ways of being holistic"

- Managers need a good understanding of the different systems approaches and how to use them in a complementary and flexible way

Improving Organizations in Systems Terms

- efficiency

- efficacy

- effectiveness

- elegance

- empowerment

The Process of Critical Systems Practice

- Creativity

- Choice

- Implementation

- Reflection

The holistic doctor

References

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