



Complexity and Public Policy

A new approach to 21st century politics, policy
and society

Robert Geyer and Samir Rihani

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We did NOT set out to...

- Argue the case for complexity.
 - That has already been done well by others.
 - The years of scepticism are behind us.
- Or delve into high mathematics of complexity.
 - That is for specialists and academics to do and has limited applications in policy areas (Edgar Morin's concept of 'restricted complexity').



Current situation as we saw it

- Many elite and non-elite policy actors are aware that they deal with ‘complex’ fields and issues.
 - Such references pepper their reports but without much knowledge of why and how?
- *Stakeholder engagement* is important.
- *Innovation* often happens at the frontline.
- *End-state planning* is not advised in some cases.
- *‘Direction of travel’* is more useful in such cases.



We wanted to simplify and demystify complexity

- To create a bridge between complexity specialists and public policy practitioners.
- And assure decision-makers (at elite and non-elite levels) that they are already using concepts that have links to complexity.
- But we wanted to stress that not all situations are wholly ‘complex’ or wholly ‘orderly’.
 - Many situations cover a range of behaviours



The structure of the book was intentional

- General Introduction
- Concepts
- Tools
- Application of the Tools
- (a bit like a traditional textbook)



The wide list of topics was intentional

- Politics
 - Health
 - International arena
 - Development
 - Iraq war
 - Terrorism
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- The topics were a means to an end: to describe how tools of complexity could be deployed to achieve more sustainable public policy outcomes. (a whole range of other policy areas were equally viable).



The hopeful outcome

- Readers would be:
 - Engaged and excited by the potential of complexity,
 - Feel that it was ‘commonsensical’,
 - Could see that it was relevant to their policy area
 - Would try to integrate the concepts and tools into their particular areas.



As always: the book's hidden agenda

- An age of discontent marked by a propensity for 'experts' to find new ways to take the wrong decisions on too many occasions.
- The refrain "so that this could never happen again" is now an irritant that does not assure.
- Basically, life is becoming too complex for the tried and tested old prescriptions.
- In a small way, we did hope to help the 21st century avoid some of the policy disasters of the 20th.



Where do we go from here?

- The big picture
- Particular projects and questions
- Down to the local level
- Comparative directions



The big picture

- Chang is the new (old) mantra
- How would you proceed to abandon or retain bits and pieces of the status quo sustainably?
 - The role of and rewards for elites?
 - Social contract between rulers and citizens?
 - What of age old norms, rules and regulations?

Informs our continued work, in particular articles on www.globalcomplexity.org



Particular projects (articles/papers)

- Citizens or Consumers? The politics of EU health policy and the case of direct-to-consumer advertising for prescription drugs.' *Journal of Common Market Studies*. (under review).
- Integrating complexity into the policy world: the power of 'fractal' visual metaphors and the case of the complexity cascade. *Political Studies* (under review)
- The Strengths and Limits of New Forms of EU Governance: the Cases of Mainstreaming and Impact Assessment in EU Public Health and Sustainable Development Policy' *Journal of European Integration*. 2010
- Complexity and International Relations, *Cambridge Review of International Affairs* (June 2010)
- European Science Foundation seminar, What can complexity do for European Health. 23 September 2009.
- 'What can Complexity Do for Diabetes Management: Linking Theory to Practice', *Journal of Complexity and Health*. 2009
- **OK, BUT HOW TO MOVE IT INTO THE MAINSTREAM MEDIA???**



Particular projects (local/national)

- Blackburn and Darwen Council
 - Child and Family policy
- Liverpool
 - Health policy and Social Organisations (Alison Holbourn and Hope Street Centre)
- Newcastle
 - University of Northumbria (Petia Sice)
- National policy linkages
 - Presentation (Eve Mitleton-Kelly) at the IPPR 15 July



Key policy actor questions at this level

- How does it help me to do more with less in a context of budget restraints?
- How do I integrate complexity into my policy area when I am surrounded (both above and below) with orderly demands and structures?
- How can I prove that it works?



Current strategy

- Find/nurture policy actor ‘converts’
- Work with them to teach complexity thinking, concepts and tools to policy actors in given policy area.
- Qualitative feedback from policy actors provides evidence for utility and revision.
- In time, quantitative indicators may improve and provide more evidence of usefulness.



Comparative dimension (at local, national and international level)

- Fractal nature of complexity concepts and tools
- Concepts, tools and evidence are relevant from one policy area to another and from one level to another.
- Obviously, does not just apply to the UK
 - National and international comparisons
 - Though particularly apt and ‘radical’ in UK



Thank you for your attention



Concepts of physical complex systems

- Limited compressibility and irreversibility.
- Attractors.
- Local interactions, connectivity, and simple rules.
- Local variety and global stability.



Concepts of biotic complex systems

- Adaptation, survival, variety and ‘good enough’.
- Evolution.
- Punctuated equilibrium, gateway events and frozen accidents.
- Arrow of time and depth.



Concepts of conscious complex systems

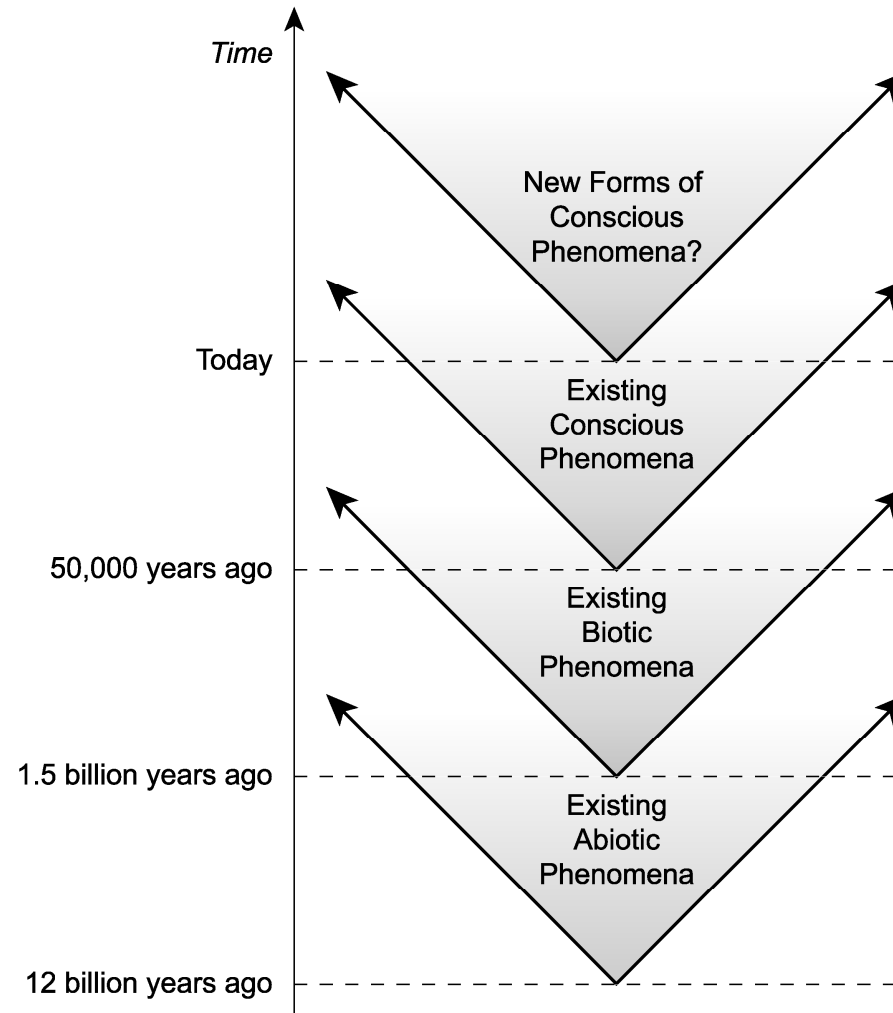
- Bounded freedom and diversity.
- Evolving social framework.
- Emergence and unpredictability.
- Limits of knowledge and importance of learning.



Tools of complexity

- Cascade of complexity.
- Balance and range of outcomes.
- Complexity mapping.
- Fitness landscape.
- Stacey diagram.
- Stakeholder engagement and soft systems methodology.

Tools: cascade of complexity





Tools: range of outcomes

Order	Stifling order	Creative complexity	Destructive disorder	Disorder
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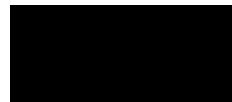
Survival is difficult in Order and Disorder zones.

Stifling order and Destructive disorder are common.

Creative complexity is the most productive zone for human activity systems.

Tools: complexity mapping

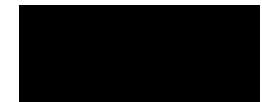
DISORDER ————— **ORDER**



**Conscious
Complexity**

**Biotic
Complexity**

**Abiotic
Complexity**



Range of non-linear dynamic systems

- | Random events
- | Dreams
- | The unconscious

- | Norms
- | Values
- | Language interpretation

- | Group dynamics
- | Institutional processes

- | Crowd dynamics
- | Electoral outcomes
- | Economic laws

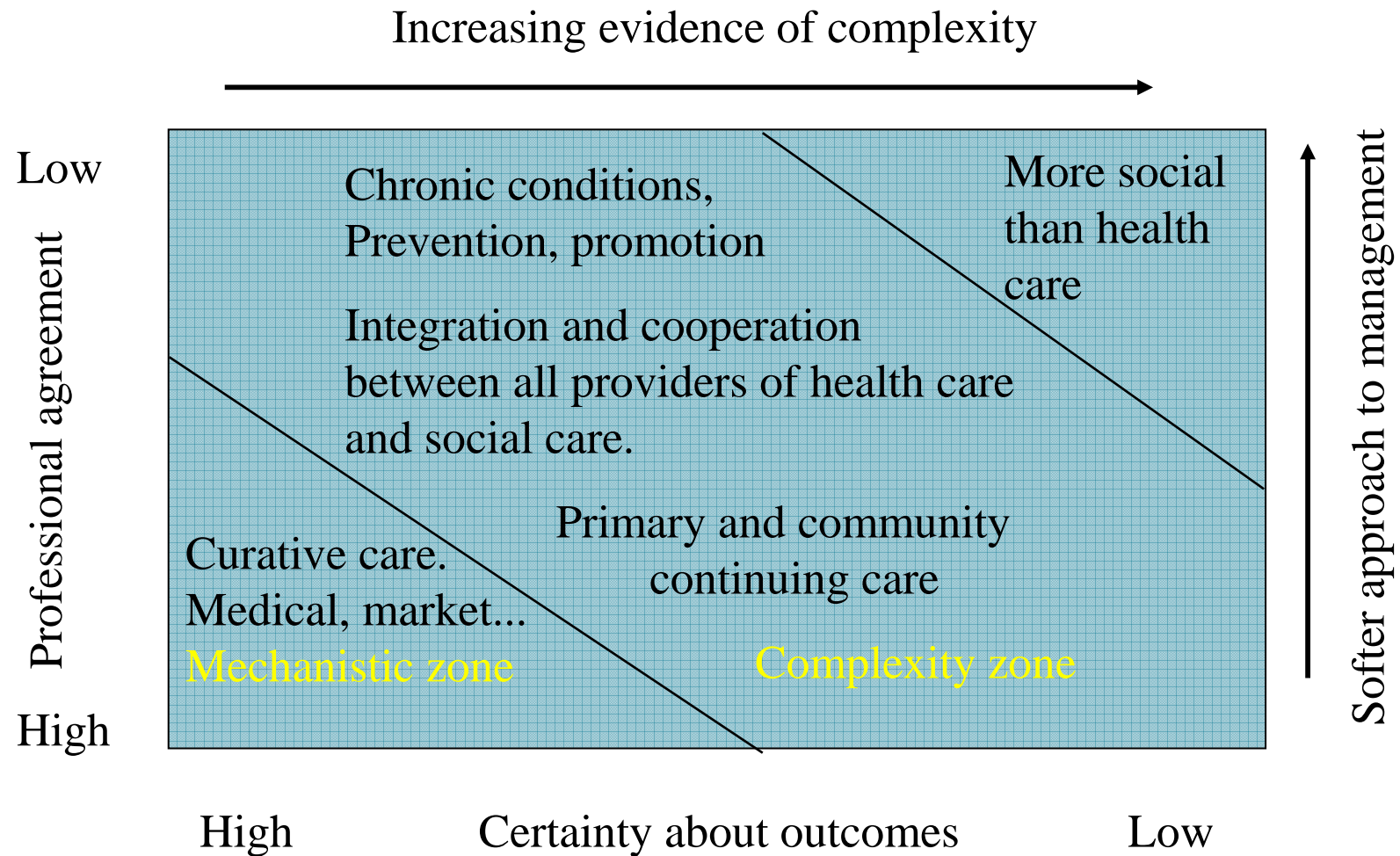
- | Basic physiological functions
- | Life/death

Examples

Tools: fitness landscape

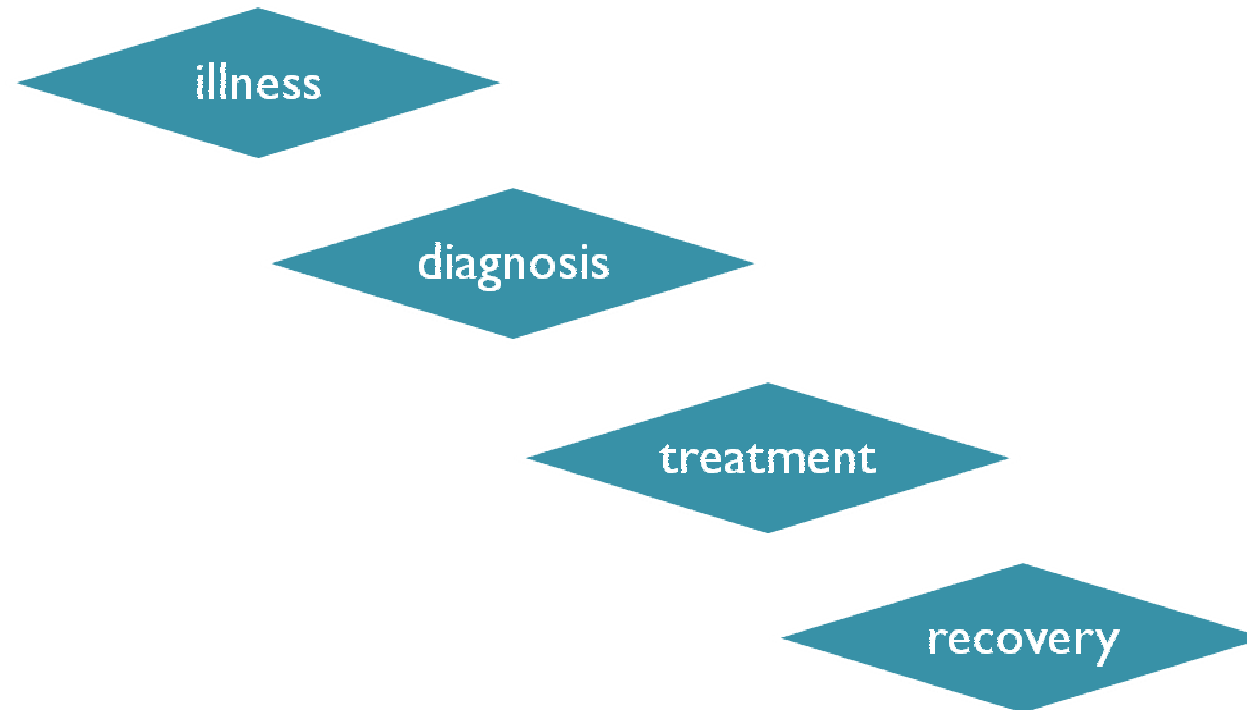


Tools: Stacey diagram



'Tame' systems management: waterfall

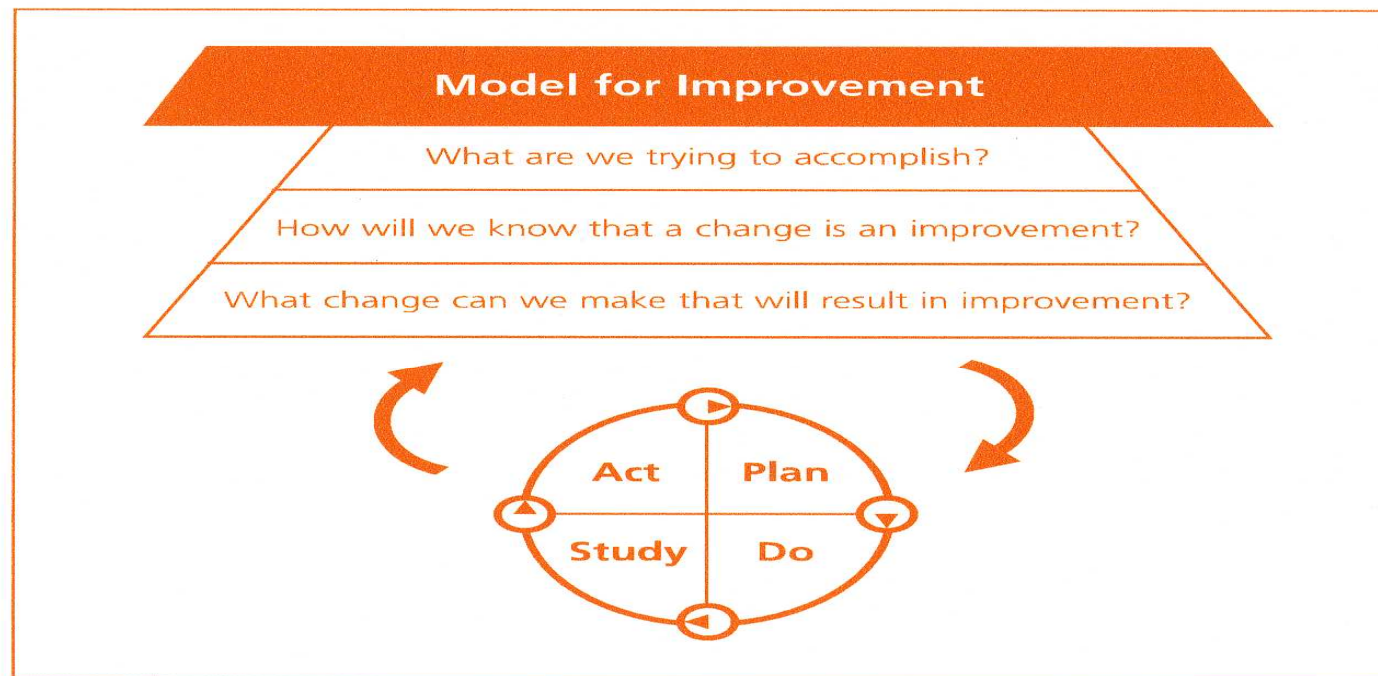
START



END

Tools: soft systems management

Softer management style: working towards a chosen direction of travel



Reference: Langley G, Nolan K, Nolan T, Norman C, Provost L, (1996), *The improvement guide: a practical approach to enhancing organisational performance*, Jossey Bass Publishers, San Francisco

(Modernisation Agency, *Working with Systems: 29*)

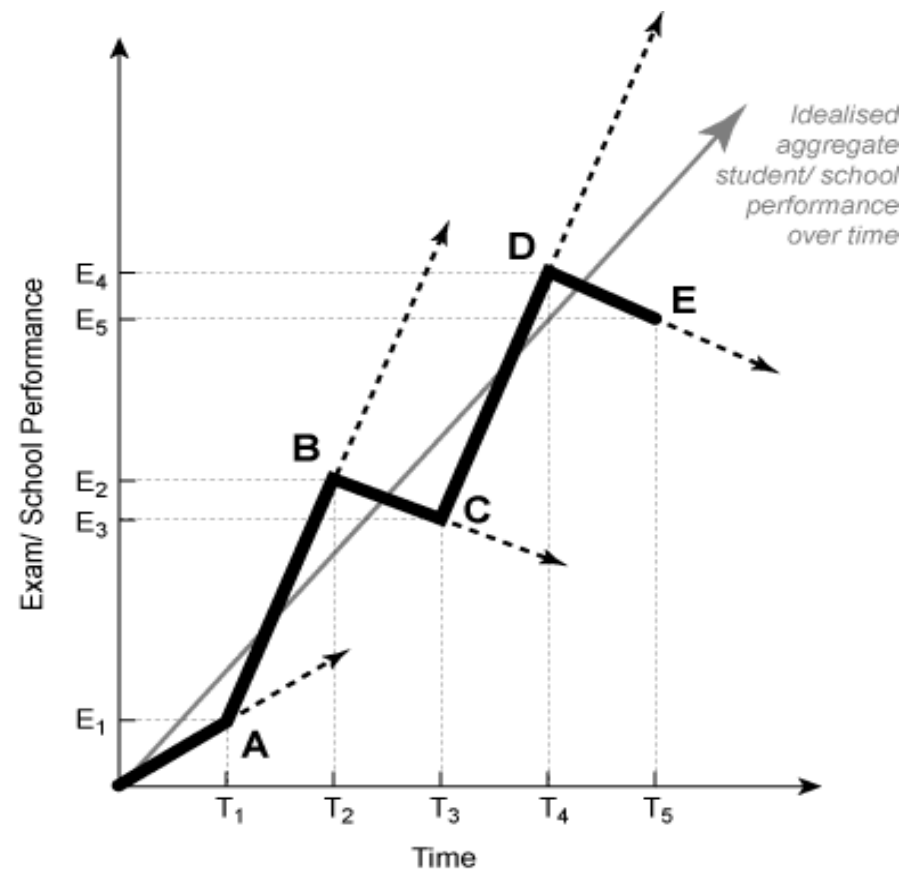


How does complexity relate to specific public policies?

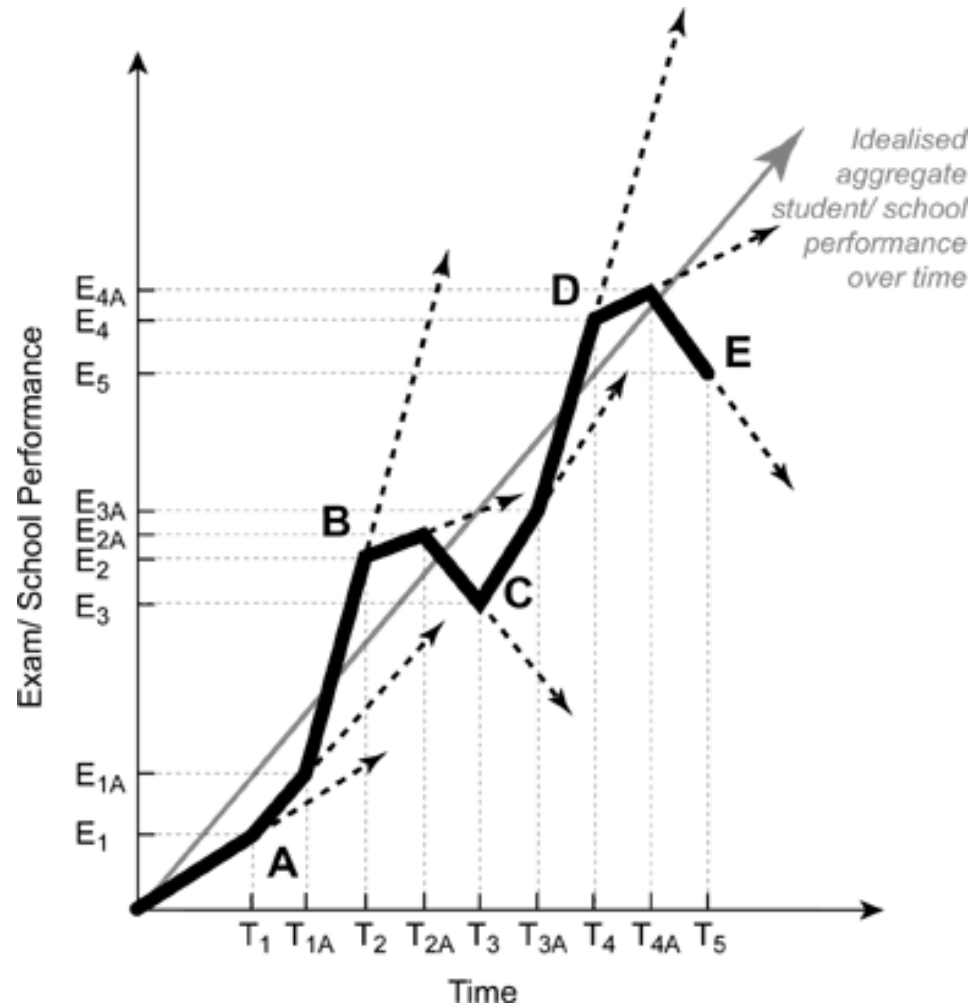
- The linear child and education.
- Complexity and health.

Orderly approach to children and schools

Current organising principle, linear/mechanistic order based on causality, reductionism, predictability and determinism



Intensified orderly approach

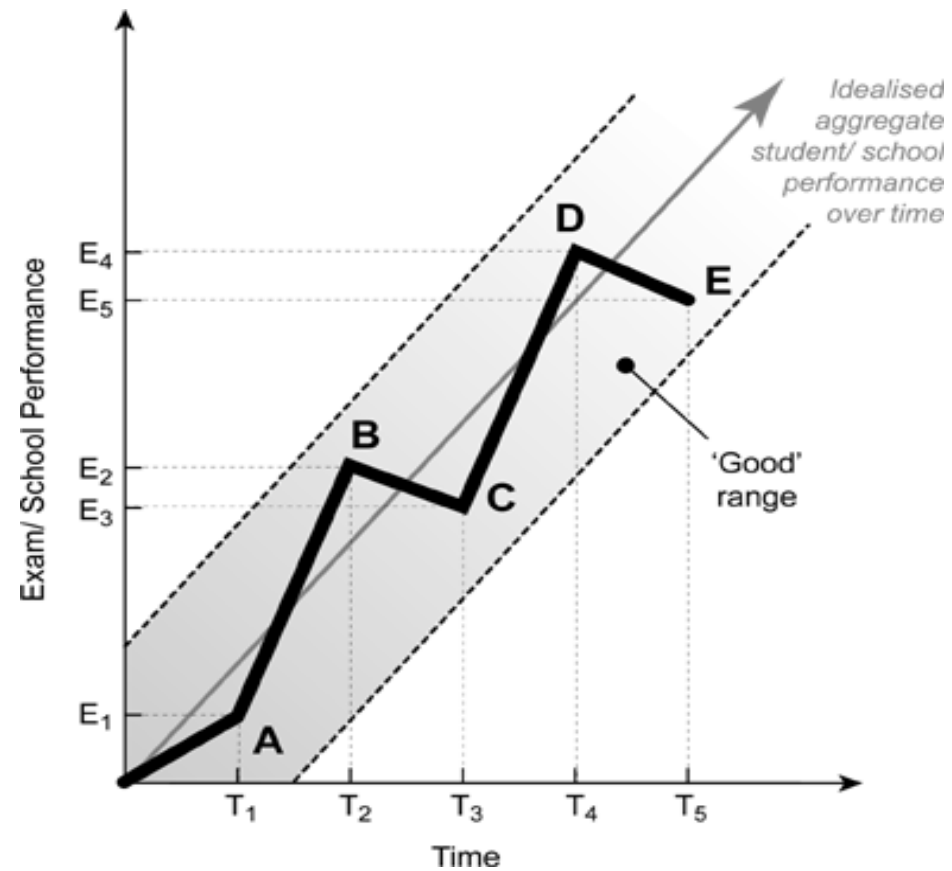




English school system

- 2009 Cambridge Report
- Most evaluated
- Most tested
- Huge cost
- Huge diversion of resources
- Only some improvement

Recognising 'good enough'

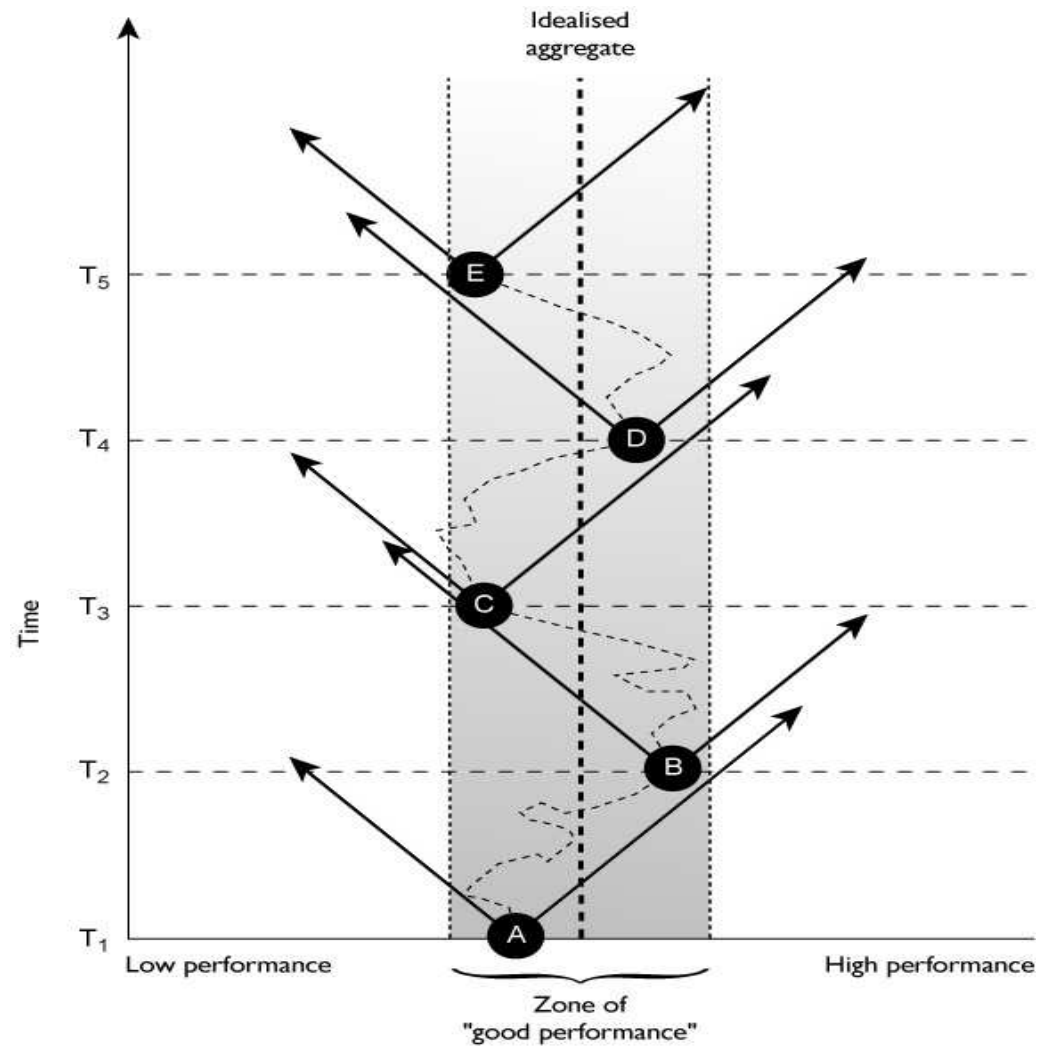




Now, from a complexity perspective...

- Based on partial causality, reductionism and holism, predictability and uncertainty, probability, emergence and interpretation
- Combine with 4 basic concepts, punctuated equilibrium, frozen accidents, regularities and gateway events
- And you get...

A complexity cascade of education





Health policy in an orderly perspective

- Causality (more targets will lead to greater control and efficiency).
- Reductionism (targets can be separated).
- Predictability (add money and health will improve).
- Determinism (we know how to improve health in the long run).



Health policy in a complexity perspective

- Partial Causality (fundamental targets matter, detailed don't)
- Reductionism and Holism (at best, degrees of separation between targets)
- Predictability and Uncertainty (fundamental changes do matter, but so may minor ones)
- Probabilistic (unknown long term impact of all major policies)
- Emergence (policy change creates new strategies which create new policies and so on)
- Interpretation (public opinion shapes health and the health system: democratic not authoritarian)