

Responses to Complexity: Systems thinking and politics

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Overview

My presentation provides an analysis of complexity that provides hope – it will demonstrate that we do not have to give up when faced with our increasing knowledge of the complexity of the world. I will show that systems thinking (ST) can be seen as a response to complexity and will take a very broad view of the encounter of ST and politics. I will demonstrate that ST has tools and approaches that can assist with understanding in most areas of politics. The visual presentation will include examples of diagrams, summaries and processes in the ST toolkit. The encounter of ST with politics should and will change ST also and these points for growth are also identified.

In this panel there is a focus on ‘environmental’ questions . I put ‘environmental’ in quotes as I want to problematise the discursive and organisational enclosure of ‘environment’ as something that is separate from humans and their well-being. My discussion employs the ‘sustainability’ concept – as an umbrella under which questions are raised about the human/environment/nature relationship. My argument here is that systems thinking is one essential component that is needed in order to help progress these questions and then goes on to consider the implications for politics. This discussion inevitably intertwines with issues of the interdisciplinarity that is needed to understand and address issues in our complex world. This outline paper is in note form as it takes an holistic view of a topic area more suited to a short book.

What account of Systems Thinking?

There are many traditions with a wide variety of tools and perspectives.

Systems thinking and tools are a response to complexity – including the need for Interdisciplinary (ID) approaches to major problems:

‘ the world has problems – the academy has disciplines’

ID not necessarily taken up in ST to the extent we might like – some try to make ST a discipline in its own right/ an enabling discipline

Questions of the philosophy and methodology of ST – it can be both an ontology (the world is composed of interconnecting elements in systemic relations – in process over time) but also it is a set of tools and perspectives that can be applied without necessarily buying into the ontology.....instrumental use of part of the systems toolbox is widespread.

For sustainability we need the ontology I argue (Parker 2013). If the living world is not really composed of interactive, dynamic, interdependent organisms and processes – then why should we worry about messing up these life-constituting processes?

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Further – how can we design effective solutions – enabling regeneration and improved relations with human structures.....if we do not have a sense of the basis of life on Earth? Cultural and society factors are hugely important we should not reduce biophysical factors to cultural constructs.

The Systems focus on Sustainability

Schumacher Institute for Sustainable Systems – our orientation

This focus stresses the following:

- Relational and interactive dynamic processes over time
- Scales – geographical nested scales and time scales
- Open and closed qualities of systems
- Interdisciplinarity – why this is needed and how a systems approach helps with ID
- Complexity – ‘wicked problems’ and systems tools to address these
- Cyber-systemic Understanding – including the capacities of high computing power for modelling and pattern recognition across vast data sets
- Reflexivity – critical attention to where we are in a system and the impacts of our interventions

What account of Politics?

This conference invites us to reconsider ‘politics’ as a subject and discipline and discuss how we might need to evolve the conceptions and practices that are seen under the conceptual umbrella of ‘politics’.

Firstly ‘politics’ covers stuff that happens that is categorised as ‘political’ but also ‘political structures’ such as nations and political parties. However, we also know that what is considered to be ‘political’ is political itself – if we consider politics to be as, about AND as involved in power.

The discipline of politics as represented in the PSA includes:

- studying events and tendencies for example the standing analysis of the American elections rather ominously stopped before the Trump election;
- political theory – for example ‘how is democracy defined?’ and – even more centrally for politics itself – ‘what is ‘power’?’ ;
- normative political theory which takes an ethical position – for example ‘how **should** human rights be conceptualised?’
- studying groups of political actors and their characteristics – e.g. different social movements such as the ‘Black Lives Matter’ movement – or political parties such as Forza Italia;
- Studying different political agendas and strategies: for example party manifestos;
- Issues of security, war and violence: for example the US/UK war in Iraq; but also structural issues e.g. the war economy; armaments industries etc
- Diplomacy, negotiation and mediation: for example the South African Truth and Justice Commission;
- Scales: Global, Regional, National, Local – intersect the thematic studies

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- Studying the relationship of certain topic areas to politics – expressed in the thematic groups of the PSA – for example, Religion and Politics; Political Economy
- Includes regional and national specialisms – for example European politics or Russian politics
- History and continuing effects of colonialism – post colonial and decolonial studies

All these areas more or less intersect, themes/analyses are cross-cutting, all offer necessary parts

Thus the area of 'politics' represents a huge resource of knowledge and reflexive analysis and critique about human affairs on our limited planet. It is a constant source of amazement to me that other disciplines – including often systems thinking – do not avail themselves of the resources represented by the discipline. This links to the efforts by members of the PSA to engage society more widely in accessing and utilising these resources.

What does Systems Thinking have to offer Politics?

1. Concepts of transition – futures thinking and system strategies
2. Critical systems heuristics – ways to critically examine the system boundaries of any focus chosen for analysis or action
3. Identifying new actors – a systems analysis/mapping of topics for example
4. Identifying new strategies and alliances – a wider systemic analysis of any political issue/situation can point to new forms of alliance that are not visible from a limited focus
5. Patterns of strategy – regular or identifiable repeated patterns analysed in terms of dynamic relational tools – e.g. Causal Loop diagramming
6. New participatory techniques using systems mapping (but also often used in other areas of good practice)
7. Wider, dynamic notion of political structures supported by ID systems study – what sustains them and what they, in turn, enable
8. Understanding of capacities of software to recognise patterns and algorithmic possibilities for influencing voters and movements
9. New contributions to the study of political legitimacy – if the world is interconnected what kind of knowledge is required in order to take effective action?
10. Attention to the cultural dimensions - ID systems thinking can help to understand the Theatre of Politics – along with a whole other raft of techniques and approaches from cultural studies for example
11. Scales and how they interact – systems tools can help manage these interlinkages moving away from dysfunctional arguments about which scale is most significant
12. Essential contributions to what kinds of knowledge we need for functioning democracies in a complex world
13. Interdisciplinary (ID) tools for improving dialogue and understanding
14. Multiple accounts and views can all be 'right' – i.e. show part of the picture....suggesting complementary strategies - as opposed to one rigid line of right action.....
15. Systems approaches and ways to frame ID and transdisciplinary (TD) work and practices

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Putting Existing Political questions into Systems Terms.....

1. Brexit – ‘what does sovereignty mean in an interdependent world?’
2. Rise of populism challenges us to consider wider aspects of the Human System.....e.g. include psychology and neuro-psychology – to help us understand the tactics that autocrats and would-be autocrats use to help control people – create framing chaos to disorient people by pushing out conflicting and frightening messages. Create confusion so that no-one knows what to believe.
3. Digital tech and democracy – systemic ID understandings can help us to work through the crucial questions of what is appropriate technology for democracy and what contributes to undermining democracy – consistent with conditions of human freedom.
4. Issues of identity; belonging; meaning.....localisation and globalisation interacting processes at different scales
5. Different concepts of democracy – systems approaches can help us see democracy as multi-dimensional and indicates a mix of different kinds of democratic tools for different times and purposes - horses for courses.
 - Representative
 - Direct
 - Participatory
 - DeliberativeParticularly appropriate in considering the ‘originalism’ of the Brexit camp in focusing on one vote under certain conditions of mis-information and lack of information.....
6. Using appropriate scientific information – in a way that is not positivistic – ie claiming certain knowledge – working towards the 2nd generation of evidence-based policy.....
7. How to work with the systems scienceskey question of politics for sustainability
8. The socio-ecological system and how to understand and work with that.....
9. Analysing technocracy and the implications of technology for human being and consciousness.....
10. Decolonisation: recognising the systems knowledge of indigenous peoples in closed loop agriculture and livelihoods that support living systems on which they depend. New forms of dialogical expertise

New questions that systems suggest....

1. Can we have leaders (and followers) who can sometimes sit with uncertainty – and understand when it might appropriateor not?
2. Transitional strategies – societal learning loops and new models of informed democracy and political legitimacy
3. New forms of dialogical peace and consensus building needed to take us to a new social contract for sustainability
4. The linked roles of learning in civil society – creating and supporting systems that help make this happen
5. The power and limits of modelling.....the extension of the decision space that opens up in the judgement calls about trade offs between different kinds of outcomes and goods in systemic ID analysis

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6. The differences between soft and hard laws (of science or understanding)

New capacities for solving questions – expanded conception of politics

1. Gaming – Infinite and finite games.....
2. Modelling.....
3. Ways to dissolve obstructive conflict
4. Aiming for more ambitious joined-up solutions to complex joined-up problems.....

References

Cornell, S, Prentice, I.C, House, J. I, Downy, C.J. (2012) (eds) *Understanding the Earth System: Global Change Science for Application*. Cambridge University Press: Cambridge

Cornell, S. & Parker, J. (2014) 'Rising to the Synthesis Challenge in Big-program Interdisciplinary Science: The QUEST Experience' in O'Rourke et al, (eds) *Enhancing Communication & Collaboration in Interdisciplinary Research*,

CSCP Wuppertal (2012) *Scenarios for Sustainable Lifestyles 2050*. Wuppertal http://www.sustainable-lifestyles.eu/fileadmin/images/content/D4.1_FourFutureScenarios.pdf

Ford, L. & Kuetting, G. (2017) 'Global environmental governance in the Anthropocene: breaking out of the enclosures?'. *System Change*, [S.l.], v. 1, n. 1, July 2017. ISSN 2396-7293. Available at: <https://systemchange.online/index.php/systemchange/article/view/15>. Date accessed: 05 Sep. 2017.

Girardet (2013) *Towards the Regenerative City*, Report for World Futures Council
http://www.worldfuturecouncil.org/fileadmin/user_upload/PDF/Towards_Regenerative_Cities_web.pdf

Hilder, T. (1995) *The Viable System Model*, Cavendish Software Ltd.

Koca, D. & Svedrup, H. and the CONVERGE team (2013) Working Methodology: report of developed principles for CONVERGE, ...including a methodology report for group models. http://convergence-alliance.org/download/converge/wp3/WP3_D20.pdf

McIntyre-Mills, J. (2014) *Systemic Ethics and Non-Anthropocentric Stewardship: Implications for Transdisciplinarity and Cosmopolitan Politics*. Springer

Meadows, D. (2009) *Thinking in Systems: A Primer*. Earthscan: London

Parker, J. (2000), 'Indigenous and Local Knowledge in an Era of Rapid Globalisation', *New Era in Education*

Parker, J. (2001). Social Movements and Science: the question of plural knowledge systems. In Lopez J. & Potter G. (Eds) *After Postmodernism: An Introduction to Critical Realism*. London: Athlone Press.

Parker, J. (2013a) *Critiquing Sustainability, Changing Philosophy*, Routledge: London

Parker, J. (2013b) 'Transdisciplinary systems approach to paradigm change in sustainable economy'. *The Systemist*: Volume 34 No. 3 WINTER

Redo, S. (2015) Religion and the Sustainable Development Goals, <https://www.upf.org/resources/speeches-and-articles/6644-s-redo-religion-and-the-sustainable-development-goals>

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Roderick, I. (2017) 'Should Systems Thinking be a Core Discipline in Education?' *International Journal of Systems and Society* Volume 4 • Issue 1 • January-June 2017, IGI Global

Schumacher, E. F. (2011) *Small is Beautiful: A study of economics as if people mattered*. Random House: London

Sterling, S. (2003) *Whole systems thinking as a basis for paradigm change in education*. Doctoral thesis <http://www.bath.ac.uk/cree/sterling/sterlingthesis.pdf>