How systems thinking enhances systems leadership

Catherine Hobbs and Gerald Midgley, Centre for Systems Studies, University of Hull

- Systems leadership is only part of what is needed to deal with cross-cutting issues.
- Leaders need to be allowed to step back from the system they are in, think about what they are trying to achieve in relation to the bigger picture, and collaborate with a broad range of stakeholders.
- Doing this effectively requires *systems thinking*, which enhances systems leadership. This paper outlines some of the most useful systems thinking approaches.

Systems leadership + systems thinking = *systemic* leadership

Systems leadership views organisations as composed of interrelated parts, and it focuses on coordination of these parts to achieve a given purpose. When the issue being addressed is too complex for a single organisation to deal with alone, multiple organisations can become involved. Nevertheless, the idea is the same: constituent parts of an existing system must be 'joined up' into a greater whole.

However, joining up an existing system (whether this is one organisation or several) means there is a risk that many of the boundaries, perspectives and relationships already associated with that system will be taken as given, so opportunities for transformation are missed.

Systems thinking helps leaders reduce this risk by encouraging them to *question* the existing system - the boundaries, perspectives and relationships that could be relevant to addressing a complex issue.[1]

Through systems thinking, leaders can generate deeper insights, guard against unintended consequences and co-ordinate action more effectively. Various systems thinking approaches exist. They can help guide (but not dictate) processes of deliberation to improve complex situations and develop more desirable futures.

Although each individual systems thinking approach has its own strengths and weaknesses[2], the true power of systems thinking comes from exploring the unique context at hand and designing a bespoke programme that draws on the best of many approaches. Principles and methods may be borrowed from one or more of the available approaches and creatively combined.[3] A selection of systems thinking approaches is discussed below. All these have been tested in practice. More approaches are available to those wanting to follow them up in further reading.[4]

How to question assumptions

Decision-making is inevitably based on underlying assumptions about the boundary of the issue at hand, and therefore what purposes should be pursued and what values are relevant. Systems thinking can be used to surface these

[1] Cabrera, D. and Cabrera, L. (2015). *Systems Thinking Made Simple*. Odyssean Press, Ithaca NY.
[2] Jackson, M.C. (2019). *Critical Systems Thinking and the Management of Complexity*. Chichester, Wiley.
[3] Midgley, G. (2000). *Systemic Intervention*. New York, Kluwer/Plenum.
[4] Midgley, G. (2003). *Systems Thinking*. London, Sage.

NATIONAL LEADERSHIP CENTRE

assumptions and consider alternatives. A number of approaches address this, including:

- Boundary Critique[3], or who and what should count? By asking who and what should count early in a project, conflict and marginalisation (of both people and issues) can be identified and addressed. Understanding power relationships helps people decide which subsequent systems approaches are going to be most appropriate for policy or service design.

- Critical Systems Heuristics[5], which offers twelve boundary questions. Questions such as: 'who or what should benefit from the service, and how?' and 'what should count as expertise?' help guide reflection on what the system currently *is*, and what it *ought* to be. They support people in thinking about motivation, decision-making power, sources of knowledge, and legitimation. The questions can be phrased in plain English[6], and can therefore be answered by 'ordinary' citizens as well as policy makers. They are particularly useful in multi-agency settings when there is a need to rethink governance, policies and services.

How to explore wider contexts

Although it can seem overwhelming to explore wider contexts, there are

established approaches that help with mapping the bigger picture and thinking about strategic responses:

- The Strategic Choice Approach[7] for joined up decision making and handling uncertainty. There are four phases of strategic choice: *shape* people's understandings of the multi-dimensional problem; *design* several packages of possible policy responses; *compare* these packages; and *choose* between them. This helps people think about uncertainties and contingencies. It also offers a tool to visualise multiple interacting areas of policy, the options available, and how compatible they are with one another. Thus, policy packages can be assembled that address a range of economic, social and environmental challenges, and the best one can be chosen.

- The Viable System Model[8] for assessing the responsiveness of an organisation or multi-agency system to a changing world. An organisation or multi-agency system has an environment, comprised of all the changing economic, social and ecological needs, demands, opportunities and threats that the organisation might have to respond to. The Viable System Model looks at how an organisation or multi-agency system responds to its environment in terms of operations (e.g. service provision), coordination, management, intelligence about the future, and

[5] Ulrich, W. (1994). *Critical Heuristics of Social Planning.* Chichester, Wiley.
[6] Midgley, G. (2017). Critical Back-Casting. *Integration and Implementation Insights*, https://i2insights.org/2017/02/09/critical-back-casting/

[7] Friend, J. and Hickling, A. (2005). *Planning under Pressure*. 3rd ed. London, Routledge.
[8] Beer, S. (1985). *Diagnosing the System for Organisations*. Chichester, Wiley.

strategic oversight. The model can be used at multiple scales, so relationships between local, regional, national and international policy systems can be visualised. It can be used to diagnose problems in existing organisations and systems, or to design new ones. Although the visual representation of the model can look complex at first, it is widely applicable and can yield powerful new insights.

How to engage people

Systems thinkers need to welcome a variety of stakeholder and citizen viewpoints, and account for them in designing new policies. Common approaches include:

- Soft Systems Methodology[9], offers visual techniques for exploring different stakeholder perspectives. This involves four main activities: 'rich picture' building, to get a visual 'map' of people's perceptions of a complex problem[10]; identifying possible transformations to pursue from different stakeholder perspectives, and visualising the required actions; reflecting on the options and asking what kind of transformational approach is best; and finding accommodations between stakeholders to agree the most desirable and feasible way forward. Soft Systems Methodology helps stakeholders learn collaboratively about complex situations and generate better mutual understanding of their

different viewpoints on desirable and feasible change.

- Community Operational Research[11] for citizen-engaged transformations. Community Operational Research is about working participatively with local communities. It draws on several systems thinking approaches, including those discussed above. The focus is on *meaningful* community engagement in setting agendas for transformation and acting on those agendas. This work resists the top-down design and implementation of policy in favour of co-design and co-production with multiple stakeholders, communities and citizens.

Implications for the future of the public sector

All of the above are *design-led* approaches. They can aid us in thinking and acting more systemically, and they generate 'on the ground' insights by cultivating collective intelligence. Most of the approaches can be used in workshops, either bringing stakeholders together, or working with separate groups when power relationships make that more appropriate.

If informed by these kinds of systems thinking approaches, the public sector of the future could be more exploratory, design-led, participative, facilitative, and adaptive - addressing complex priorities, rather than focusing only on leading organisational delivery within narrow 'silos'.

---

[9] Checkland, P. and Poulter, J. (2006). *Learning for Action.* New York, Wiley.
[10] An example of these kinds of rich pictures is here: https://www.youtube.com/watch?v=DzzauPb2O34.

[11] Midgley, G. and Ochoa-Arias, A.E. (eds.) (2004). *Community Operational Research.* New York, Kluwer/Plenum.

NATIONAL LEADERSHIP CENTRE

Research to make a difference

The above approaches have been used in many public sector and community settings, linking well with an OECD recommendation to adopt problem-based approaches to systems thinking and design, through synthesising different approaches.[12] There is scope for a progressive research agenda to address the following questions:

- Which of the many systems thinking approaches, beyond those already mentioned, are most useful for public service design? How should they be adapted for changing needs, opportunities and constraints?

- How can a variety of systems thinking approaches be embedded in everyday government routines to enhance systems leadership?

Catherine Hobbs is a social scientist who worked in local government for three decades, with practical experience of facilitating multi-agency strategies in transport and health. She has conducted a national attitude survey and is a Visiting Fellow at Northumbria University. She was awarded her PhD in Systems Science by the University of Hull in 2016, and is the author of *Systemic Leadership for Local Governance: Tapping the Resource Within* (2019).

Gerald Midgley is Professor of Systems Thinking in the Centre for Systems Studies, University of Hull, UK. He also has visiting professorships in Sweden, Australia and New Zealand. He has held research leadership roles in both government and academia, and has worked on numerous public sector, community development, technology foresight and resource management projects. His *Systemic Intervention* book is widely regarded as a classic text on systems thinking.

---

[12] Observatory of Public Sector Innovation. (2017). Working with Change: Systems Approaches to Public Sector Challenges. Paris, OECD.

NATIONAL LEADERSHIP CENTRE