

Integrated Governance: A Complex Systems Approach

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Introduction

This presentation explores the use of complex systems theory to understand the challenges facing government and governance arrangements in recent decades. The presentation attempts to conclude about what has been learnt and offers an overview of what the resulting issues are for managing public services.

The application of complex systems methodology to public policy and administration takes its roots from scientific studies, such as meteorology – where very precise weather forecasting beyond a few days is impossible. This is due to a high level of instability and dynamic feedback within the system. We can contrast this with highly predictable physical science system like the tides.

Clearly many human systems are extremely difficult to predict, control and forecast – due to their unstable, dynamic elements. The public policy environment as a complex system is unpredictable, unstable and dynamic. This creates difficulties when implementing traditional control based top down management approaches.

I first became interested in complexity based approaches to public service work while working with substance misusers in the UK. It was difficult to choose treatments on the basis of historic lessons of cause and effect. Instead different therapeutic and treatment approaches had to be matched to service users on the basis of individuality, case patterns and the trial and error of different approaches.

It was at this time while working as a probation officer and social worker that I had my first experienced of the integration of government services in UK in the 1980s.

With the rapid growth in drug misuse, the government decided to bring professional services together in new forms of organisation with the focus on encouraging different specialists like doctors, social worker, counsellors and housing officers to work more closely together to solve complex problems. The focus was on more integrated case management. Integration could change cultures and bring people together to innovate and share difficult decisions and responsibilities.

While many of these approaches worked well, it was also clear that some attempts to integrate services could bring added process complexity and at worst create very complex management structures that confused responsibility and decision making.

Integration should offer opportunities to share responsibilities for difficult aspects of public sector work, but there is a need to be careful that attempts at integration do not create new bureaucracies and management structures that make shared responsibility and decision making more difficult to offer.

Understanding complex policy systems

Complex systems approaches recognise the existence of levels and overlapping sub systems.

For example, we can identify three major levels in the policy process: the environment, the organisations and the people. There is no consistent linking between these levels. The relationships and communications are dynamic.

Some behavioural feedbacks between these levels reach tipping point at one level and start to affect other parts of the system as they spill over.

Some human interactions and feedbacks get 'scaled up' quickly and have stronger and greater impacts than others. It is not easy to predict the rate at which different behaviours will get reproduced and scaled up. Examples are:

- Credit loan expansion prior to the financial crisis
- Contagion of disease spread, like Ebola or influenza
- Migrant movements, as migrants seek employment and a better life.
- Consumption patterns: the consumption of food and household goods
- Changing employment patterns in relation to new industries and services

Feedback, as the reproduction and copying of behaviour, occurs at the individual level, but is also fundamentally a social activity.

Policy systems and their integration

There are some key issues with regard to considering integration of the public policy system. These can be summarised as: dependencies, interdependencies and independence.

Public organisations often face dependencies. These are external pressures like political and ideological change or financial contexts like government austerity. The global economic crisis and the political response to it resulted in austerity cuts to public services in many countries because public organisations are dependent on government funding. A public organisation within the policy system can also be dependent upon another. For example, a non-government organisation depends on a monetary grant from local government to provide a service.

In recent decades, the managerial focus for collaboration and integration has increasingly been on interdependencies. This promotes a focus on the boundaries between traditional services, or particular policy events that happen on these boundaries.

Examples of interdependencies include the following. At the time of hospital discharge a person leaves medical treatment and goes home to recover but they still need community support and rehabilitation. The Justice system reaches a decision about the penalty for the offender, but then they pass the management of the offender to another agency for rehabilitation. A child attends school and then progresses to University, but after graduation they seek to enter the labour market and want to find employment. Integration focuses a lot on these 'interdependencies'.

If we go back much further into the history of developed welfare states and public administration we find a time period 40-50 years ago when there was much more emphasis on service independence.

At that time the focus was on the independence of separate professional specialisation, with the separation of control for very specific services.

Integration has seen a shift from focus on separated systems and rigid specialisation by discrete professionalisation to a contemporary focus on interdependencies, and the driving political and economic dependencies.

Marketisation and privatisation as forms of coordination have not solved the problem of integration and boundary management, but they have moved the agenda. Market boundaries occur on the basis of a financial contract between the purchaser and provider, rather than the specialist professional domain.

The Challenge of managing and integrating complex systems

The major challenge of working in complex systems is that they are interactive and relational and this is what makes them so unpredictable. The organisations and policy environments that public managers and professionals work in are highly interactive. They are dynamic not static, and therefore unpredictable. The resulting dynamic comes from feedback, interaction and relationships. The use of management controls often seems to result in problems elsewhere in the system.

Feedback is the copying of behaviours that get rapidly reproduced. Key social changes that result from such feedback include:

- Increases in personal debt
- Increases in women in employment – increased supply of skilled labour, loss of voluntary unpaid care.
- Increases in young adults attending higher education
- Increases in consumptions, certain food products, or illegal drugs.

Some of these changes are rapid and governments have to make difficult, politicised, value based decisions about their 'public value'. Should they support a feedback trend or check it and intervene, to either slow it, or even reverse it. Much policy is about checking feedback patterns.

Self-organisation

The emergence of social behaviour and human interaction from the bottom of social systems upwards (bottom up) is one reason why policy systems are unpredictable.

Self-organisation is a key concept in complex systems approaches. This is about people's micro feedback and interaction in the system.

Some self-organisation conserves behaviour. It seeks to maintain things as they are. This can be resisting change from the external environment. Trades Unions and Professional Bodies sometimes act to conserve policy organisation and behaviour. They may do this to protect aspects which they see as of high value.

Dissipative self-organisation is innovative and seeks to adjust to changes in the external environment. People in very difficult circumstances are extraordinary innovative, in terms of how they adapt to survive. In the local area where I work, the Brighton Energy Cooperative and the West Sussex Credit Union are to such examples. The Brighton Energy Cooperative organises solar power in public spaces and on public or civic buildings. Local people and small civic organisations can choose to invest in the scheme and to share the benefits. This can help civic organisations to reduce their energy costs. The West Sussex Credit Union seeks to offer low interest loans to the poor while taking savings from the local community. This helps to protect the poor from the high interest rates offered by commercial companies or illegal and criminal lenders.

Simplifying public policy processes

If we return to considering the policy system in its simplest management form, that is: inputs, activities and outputs it is clear that in many countries the government and public management focus in the last two decades was on outputs. Market processes tried to improve the efficiency of inputs to outputs. Governments wanted more outputs for the money they allocated and spent. But marketisation has brought its own processing complexities around the bureaucracy of contracting.

One strong argument at present in the systems literature is a concern that organisations need to guard against process complexity that undermines responsibility, accountability and decision making. There is a new interest in simplifying processes to manage complex problems better. Solving complex problems does not necessarily come from a complexity of process. Collinson and Jay's (2011) recent work: *From Complexity to Simplicity* is interesting about this topic.

Public Values

If we are going to simplify process we need clarity of public values in order to help us to be clear about what is important. It can be argued that the 'Higgs Boson' (or unseen particle effect) of public policy complex systems is public values.

At the core of our public services there needs to be values of:

- Care
- Co-existence through human relationships, close partnerships and families
- Collective support in neighbourhoods and communities
- Environmental sustainability and protection
- Knowledge acquisition for human benefit.

These public values largely defy pure monetary value and they are difficult to replicate through organisational forms of marketization and monetary competition.

Personal systems, decision making and integration

An exciting addition to policy systems approaches to public management are the relatively new ideas from social psychology and behavioural economics, given its growing influence on management practices. An example is the writings of the Noble Prize Winner, Daniel Kahneman. His theoretical insights show the weaknesses and lack of rationality in human thinking and decision making. It is all too easy for managers to draw on their 'system 1' thinking. System 1 is fast and instinctive and depends much on personal history and associated feelings and emotions. In contrast, System 2 thinking is slow, reflective, and rational and involves more conscious calculation and comparison. Public management needs to promote space and methods for encouraging more system 2 thinking and decision making.

Good decision making requires support to managers and the right forum for reflective and supported decision making. This will be spaces of time and place that bring a small group of managers and professionals together to make key decisions. In this sense, social psychology promotes small scale collective decision making to guard against system 1. Such collective methods promote shared system 2 thinking. But with small scale collective decision making, final responsibility must also be clear. This will avoid the organisational drift and the confusion that results from overly complex processes like layers of committees and working groups.

Integrating complex systems: a summary

In order to summarise, at this point, how can we integrate a complex system? Some aspects of management practice are particularly important:

- Understand the system better through attention to its values
- Improve communication and understanding in the system
- Simplify the activity processes
- Intervene in systems in appropriate places by making better decisions.

System Entry

Let us now consider some particular points in the public policy system. If we think about how citizens enter the system it is vital that the point of entry is well managed. People need to be channelled quickly to the right experts and services according to public values and priorities.

The role of generalists who are gatekeepers, like the general practitioner medical officers and social workers, is very important in this respect. These are highly pressurised roles, often dealing with crisis entry.

Generalists at the point of system entry need the benefits of supported decision making. Too often they are isolated, under extraordinary pressure and not given adequate collegiate support and space to make difficult decisions.

The entry point into public services is often a relational experience, where it is important for an assessment that fully understands the needs of the person. It cannot be just a computer generated assessment. The relational aspect is necessary to ensure the citizen gets good professional advice and can be referred to the correct next point in the system.

System through put, activities and integration

Once inside the public policy system there are many activities and system processes. These often evolve towards complexity because there is a tendency to believe that complex processes and activities are necessary to solve complex and wicked problems. Where possible, we should seek simplification and clarity of system processes. Alongside this is the inevitable need for managerial and professional discretion and decision making, recognising that public service work is relational. Such decision making must be collective wherever possible, so that decisions are made in a supported and accountable manner.

System outputs and outcomes

Marketisation has led to a strong focus on hard outputs. Politicians have been asking the question: does the public money used deliver an end result that can be measured as an output? But immediate service outputs are different to longer term outcomes. A medical drug prescription does not necessarily lead by itself to a better quality of life. Public services need to have a holistic view of service outcomes.

For example in the UK, end of life services have just been rated the best in the world. This is because they focus on the quality of life when life is ending. Medical doctors, as a profession, would not normally see death as a positive outcome. The success of the UK hospice movement for end of life care is because of the integration of non-government services that have a very strong bond with their local communities and with professional medical and hospital services. They offer relational care and pain management at end of life.

As we come toward the end of the paper and presentation it is important to remember that the management of wicked problems and complexity is in the yellow area of table 1 (below). Managing the complex is unpredictable because there is a minimal ability to diagnosis cause and effect. Managers therefore have to adapt and work by identifying and understanding the dynamic patterns they observe.

Table 1 Different approaches to public management

Simple	Complicated	Complex	Chaos
Predictable	Analyse to predict	Unpredictable	Unstable change
Clear cause and effect	Hidden cause and effect	Minimal cause and effect	No cause and effect
Use known facts	Discover and use facts	Identify and use patterns	Crisis short term interventions

Source: Snowden and Boone, 2007: 73

In conclusion, the current ideas from complexity approaches to public management suggest what we need to do more to integrate our services.

- Understand the system and its context
- Build resilience (and system stability)
- Clarify priority values
- Promote and support good decision making
- Simplify the policy processes
- Adapt our strategies and plans

Integration is not just about organisational structures and new bureaucracies.

It is also about shared values and small scale collective decision making.

References

Haynes, P. (2015) *Managing Complexity in the Public Services*. 2nd Edition London: Routledge

See <https://www.routledge.com/products/9780415739269>

Collinson, S. & May, J (2012) *From Complexity to Simplicity*. London: Palgrave Macmillan

Appendix One

Brighton Complex Systems Toolkit Framework

The toolkit is freely available from:

<https://www.brighton.ac.uk/pdf/research/ssparc/toolkitframework.pdf>

or

<http://goo.gl/FbNxu7>

It focuses on the following governance and management topics:

- **Resources and their use**
- **Identify types of change**
- **Use of Information**
- **Setting the rules**
- **Empowering Self Organisation**
- **Directions and Purpose**
- **Radical Change: a values paradigm**

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