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Emergent Strategic Management and Planning Mechanisms in Complex Adaptive Systems

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Abstract

Complexity theory demonstrates that there are fundamental conceptual difficulties in the concepts of 'planning' in any open system which contains a significant level of decentralization of decision making. This paper presents a revised conceptual framework for strategic management in the public domain, consistent with the restrictions on 'system predictability' inherent in complex adaptive systems – a strategic shaping and 'meta-planning' role, rather than strategic planning. The article illustrates how this reconceptualized role can be applied in a case study of Best Value (BV) in local government in the UK from 1997 onwards. It shows how the behaviours and strategies of agents owed at least as much to emergent complex interactions within the policy system as to the cognitive processes occurring in any one agency. This underlines the weaknesses of over-elaborate analysis of single agency interventions into public policy, strategy or governance within policy systems whose interactions are only partially understood.

Key words

Complexity, emergent strategy, meta-planning, strategic shaping

EMERGENT STRATEGIC MANAGEMENT AND PLANNING MECHANISMS IN COMPLEX ADAPTIVE SYSTEMS

The case of the UK Best Value initiative

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INTRODUCTION

Recent applications of the theory of complex adaptive systems (CAS) to organizations have opened up major theoretical questions about the role of strategic management and governance. Complexity theory demonstrates that there are fundamental conceptual difficulties in the concepts of 'planning' in any open system which contains a significant level of decentralization of decision making.

This article suggests a revised conceptual framework for strategic management in the public domain, consistent with the restrictions on 'system predictability' inherent in CAS – a strategic shaping and 'meta-planning' role, rather than strategic planning. The article then illustrates how this reconceptualized role can be applied in a case study of Best Value (BV) in local government in the UK from 1997 onwards.

THE PROMISE AND LIMITATIONS OF COMPLEXITY THEORY

Interest in complexity theory and CAS within public administration has arisen largely because of extrapolation to the social sphere of phenomena and behaviours in biology. The characteristics of CAS in the biological sphere which have particularly attracted social scientists have included:

- The existence of self-organizing activity, apparently without any form of central direction or control, resulting in system-wide behaviours which bring positive benefits to system members.
- The apparent generation of functional group behaviour from simple shared rules, rather than cognitive decision making.
- The existence in complex adaptive systems of 'strange attractors', or underlying and unchanging regularities in system behaviour which mean that the non-repeating (and often apparently chaotic) behaviour of the system conforms nevertheless to some level of predictability.
- The appearance in complex adaptive systems 'phase transitions', in which rapid system transformations occur.
- The appearance in complex adaptive systems of 'emergent properties' which are not predictable from the other characteristics of the system and which make its future behaviour more homogeneous.

The over-riding attraction of complexity theory, however, to which each of these characteristics contributes to some degree, is that it holds out the promise of insights into those dynamic processes of change in organizations which until now have only been imperfectly mapped and modelled in social systems.

Of course, these potential benefits can only be inferred from the physical and biological systems in which they were first observed. Traps lying in wait for

over-enthusiastic applications of models from one scientific realm to another include:

- The lack of fit of key building blocks of the model to the circumstances in the new realm.
- The assumption that human behaviour can have parallels with the behaviour of natural objects or other species.
- The assumption that because some human and social behaviour can be predicted successfully from a certain model, in specific circumstances, that *all* human or social behaviour will conform to the model's predictions.
- The assumption that the relationships in a mathematical model embody the same causative relationships which motivate human and social behaviour.
- The assumption that those parts of human or social behaviour which can be predicted successfully from a model are *important*, and deserve to be studied more carefully than other behaviours which cannot be so modelled.

Given these traps, it is important to ensure that the normal tests of conceptual validity and theoretical relevance are not relaxed in dealing with complexity theory in the field of public administration.

THE DYNAMICS OF SELF-ORGANIZATION

The idea of self-organization in social systems can be traced to the city states of Greece, with their concepts of direct and highly interactive (although incomplete) democracy. In modern times, it has been associated more commonly with utopian socialists (like Robert Owen) and anarchists (such as Proudhon). However, in the literature on complexity theory applied to social systems, 'self-organization' has a more specific meaning, for example, 'a process in which the components of a system in effect spontaneously communicate with each other and abruptly cooperate in co-ordinated and concerted common behaviour' (Stacey 1993: 240).

In this perspective, the emergent properties of systems 'on the point of chaos' are interpreted as the dynamic interaction of agents in a system which simultaneously react to and create their environment. This environment is therefore not a 'given' but rather a co-created 'fitness landscape', in which the agents most likely to flourish are those who can most readily adapt to changing circumstances and influence the behaviour of others.

Some forms of self-organization are more advanced – some organizations or networks have the characteristics of *complex adaptive systems*, which Waldrop (1994: 145–7) has specified as follows: a network of many agents acting in parallel, where control is highly dispersed, where coherent behaviour in the system arises from competition and co-operation among the agents themselves, where there are many

levels of organization, with agents at one level serving as the building blocks for agents at a higher level, where there is constant revising and rearranging of their building blocks as they gain experience, where the implicit or explicit assumptions about the environment are constantly tested by the agents and where there are many niches, each one of which can be exploited by an agent adapted to fill that niche.

It is the promise of an insight into system dynamics which is especially interesting in this concept of CAS. Because of the non-linear relationships guiding behaviours of agents in a CAS, all trajectories may eventually lead to phase transitions (as long as energy continues to be injected into the system). However, these non-linear rules simultaneously mean that the approach to these points is unpredictable, albeit conforming to the 'strange attractors' which provide outer limits to system behaviour. Knowledge of what these 'strange attractors' look like would be especially valuable, given that they are the only form of predictability available for CAS.

Repeated behaviours form a special case. Here, Axelrod's (1984) principles of co-operation are applicable – co-operation can get started by even a small cluster of players who are prepared to reciprocate, can thrive even in a world where no one else will co-operate and can protect itself once established – so long as the co-operation is based on reciprocity and the shadow of the future is important enough to make this reciprocity stable. This provides a powerful template for positive outcomes from non-linear rules of behaviour. The case study in this article provides an opportunity to explore its relevance.

CONTINUOUS IMPROVEMENT, STEP CHANGE AND PUNCTUATED EQUILIBRIUM

One of the long-observed paradoxes of management in all organizational contexts is the seeming appearance of incremental change over quite long periods, even where step change is apparently needed, followed by rapid radical change, even though no significant change in the external environment can subsequently be detected to 'explain' it (Davis *et al.* 1966). Consequently, at least in the public sector, it is difficult to 'typify' strategic change processes. For long periods, logical (or even 'disjointed') incrementalism seems a good descriptor. However, with hindsight, large-scale changes can usually be seen to have taken place, although often not in line with 'planned' changes. Mintzberg explored this phenomenon through his concept of 'emergent strategies' (Mintzberg 1994).

A second paradox can also be observed. Even after large-scale changes, much of the policy and implementation landscape emerges relatively unchanged. Thus for many actors the statement that large-scale change has occurred is contestable – they believe that the heart of their work is much as before.

This double paradox of 'contestable levels of change within contestable levels of continuity' produces considerable frustration for innovative practitioners. It means that change efforts are often derided as largely unsuccessful, although the change agents are

confident they are getting somewhere. Simultaneously, they are accused of ‘*initiativitis*’, the compulsive need to introduce new initiatives when the previous approach does not seem to be yet working.

True *et al.* (1999) use a punctuated-equilibrium framework to suggest that the structure and context of governance systems sets a general context which favours policy stasis. Major policy changes can only occur when policy subsystem processing breaks down and policy problems come to the attention of macro-political institutions. This analysis aligns with the approach of Kingdon (1984), who identifies ‘policy windows’, or configurations of circumstances which make policy change much easier to achieve. Neither approach, however, explains what factors give rise to the punctuations in policy equilibrium (Blomquist 1999).

The patterns characteristic of ‘punctuated equilibrium’ can be interpreted through the lens of complexity theory. Bak and Kan (1991) argue that, when complex adaptive systems reach a state of ‘self-organizing criticality’, then the system changes which occur are likely to follow a power law. This stems from the degree of interconnectedness within the system, which in turn leads to its non-linear behaviour (Ball 2005). The practical implication is that there tends to be a very large number of relatively small changes in the system and quite a large number of moderate-scale changes, but there will also be some large-scale changes – more than would be predicted if the changes occurred by chance alone in an independent population of agents (where the distribution of changes would follow a Gaussian ‘normal’ curve). The time pattern of change in ‘punctuated equilibrium’ is therefore characterized by periods of near stasis and incremental change, punctuated by large-scale change episodes. The challenge posed by complexity theory is to find the mechanisms which produce the degree of connectedness which results in the power law distribution of change events.

IMPLICATIONS OF COMPLEXITY THEORY FOR POLICY MAKING AND GOVERNANCE

The importance of complexity theory for policy makers and their partners in public governance lies essentially in the implications of these predictions for the understanding of system dynamics and, in particular, the sources and patterns of environmental change. Within the complexity theory framework, what is definitely *not* available to planners and evaluators is a clear picture of the counterfactual – what would happen in the case of non-intervention. The workings of complex adaptive systems simply do not allow knowledge of the non-repeating pathways and spontaneously generated behaviours of self-organizing systems. At best, planners and strategists can hope only to join the game, as players themselves, or to take part in the setting of very outline ‘meta-rules’ within which the game will be played.

In such a context, we need to conceptualize strategic management as very different from the kind of ‘strategic planning’ traditionally found in the public management and

governance literature, that is, responding with clearly stated intentions to identified changes in the environment. Rather, strategic management becomes the set of reactions of an agent by means of which it hopes both to make the most of perceived changes in its environment and also to change the longer-term 'rules of the game' which shape how its environment evolves.

If policy makers, strategists and governance partners choose to work as part of the self-organizing system – swimming in the flow of events along with other actors – this will give them the chance to use their 'shaping' abilities to help themselves (and others) to make tactical changes and learn from their experiences – what Teisman and Klijn (2007) call 'dissipative' or 'adoptive' behaviour. However, this is very much about shaping short-term, small-scale responses. Planners and strategists will have lost their claim to 'superman' powers, which give them a pre-eminent role in guiding the local community towards the strategic high ground, the 'optimum' of economic and management fable. This approach deliberately eschews 'cause-and-effect' analysis, as it accepts that the agent is unlikely to be able to uncover the mainsprings of collective change within its own system.

However, not all is lost, even in this case. Glass has suggested that:

once managers have grasped the basic logic behind events, it is less difficult to anticipate and benefit from the new chaotic environment. By moving towards double loop learning, working to reach new attractor points and trying to create our own self-reinforcing virtuous spirals, we can achieve the kind of results which would be considered impossible in a more stable environment. (1996: 105)

Moreover, as changes in a CAS are path-dependent, any agent which succeeds in triggering changes in line with its own needs and priorities may be able to achieve system-wide changes particularly favourable to its own purposes.

In seeking to create these self-reinforcing spirals, change is a friend of the organization and of the policy maker – and the enemy is that old touchstone of economists, equilibrium. As Stacey suggests, 'successful companies are those that avoid stable equilibrium and operate in a state of contradiction and creative tension' (1993: 244). He justifies this by examining how creative and innovative processes require destabilization, symmetry-breaking behaviour and the use of the informal organization – 'loose networks of informal contacts, established in a self-organising manner' (1993: 337) – in order to circumvent the central hierarchy and to create new knowledge.

Furthermore, these models from complexity theory back up that strand of the social psychology literature which emphasizes the role of self-fulfilling prophecies in unlocking and speeding up organizational change (Weick 2001). Of course, there may be limits to how much chaos is considered ideal: the ability to refreeze organizations with a new set of more productive organizational behaviours – 'organizational lock-in' as a parallel to 'technological lock-in' (Arthur 1989) – could be highly attractive.

On the other hand, policy making and public governance can also, more ambitiously, involve 'planning the rules of the game', so as to influence the ways in which CAS

operate, and thereby the range of outcomes which are likely. In this case, they have to be able to command some confidence that they are based on a solid understanding of the basic rules behind the emerging patterns – and that the interventions chosen will be successful in changing these rules.

Of course, we are still far from a clear understanding of the general ‘rules of the game’ in the behaviours underlying most public policy systems, never mind the determinants of local diversity in these behaviours. What makes it even more difficult is that we only observe the ‘punctuated equilibria’, which mean that particular ‘causes’ are related only weakly to eventual ‘effects’ in the cause-and-effect chain relating agency interventions to system changes.

This has led writers such as Parker and Stacey (1994), writing about economic planning, to suggest that chaos and complexity theory remove the possibility that longer-term economic futures can be usefully planned, except at the most general levels. They suggest that organizations should concentrate on building structures and institutions which expedite self-transformation, and governments should concentrate on creating the ‘conditions for change by designing systems that are capable of self-organising evolution’ (1994: 93). This approach is very much in line with the resource-based view of strategy which has been prominent in the private sector for over twenty years (Barney 2001) and is now coming to prominence in the public sector (Bryson *et al.* 2007).

Can a role for the planning function, which attempts to influence system outcomes, still be defended, in the light of complexity theory? Of course, not all policy systems are complex adaptive systems. CAS are less likely to be found in ‘command-and-control’ environments. Yet this is not a reassuring argument, when an increasing proportion of resource allocation appears to be passing from such hierarchies to networks.

Where organizations seek to exercise a ‘meta-planning’ function, they have to recognize that this role is part of the co-creation of the fitness landscape in the CAS – a genuinely interactive activity, played by many (if not all) of the actors in the system. Since co-creation is a source of major non-linearities in the collective behaviours of the system agents, the prediction of its consequences is highly fraught, even in the longer term where the ‘strange attractors’ which characterize system behaviour might be discovered.

This analysis is certainly intriguing but it must still be regarded as a set of unproven (indeed largely untested) assumptions, with a health warning attached. The purpose of the case study in this article is to show how these putative lessons from complexity theory might apply to the management of policy networks within local public policy systems.

CHARACTERISTIC BEHAVIOURS IN COMPLEX ADAPTIVE POLICY SYSTEMS

The theoretical analysis in the preceding sections suggests a number of characteristics which we might predict to obtain in any empirically observed complex adaptive policy

system. In particular, the following predictions (separated into 'within-system' and 'system-changing' elements) are important for the analysis which follows in this article.

Predictions on 'within-system' behaviour

- In a highly interactive system in which non-linear relationships determine outcomes, system interactions are likely to be highly unpredictable.
- In a fast-changing CAS, agents in the system are typically unable to exercise much control over the flow of events.
- Highly interconnected systems are more likely to operate as CAS.
- For a CAS to develop, these multiple connectivities must give rise to non-linear effects.
- Emergent processes stemming from a CAS are often revealed by the way in which small changes (and counter-actions to them) have system-wide effects.

Predictions on 'system-changing' behaviours

- In attempting to alter 'the rules of the game' in a CAS, emergent strategic management approaches are more likely to be successful than traditional strategic planning.
- In a system with punctuated equilibria, the time pattern of change is characterized by periods of near stasis and incremental change, punctuated by large-scale change episodes, although the changes often do not correspond to those planned changes sought by those involved in 'meta-planning'.
- System agents can respond to top-down attempts to shape system behaviour by also trying to shape the flow of events, at local level, although how this is done may differ in different parts of the system. It is the interplay between these top-down and bottom-up behaviours which shapes the emerging properties of the system.
- Steering of the overall system involves the encouragement of experimentation and an acceptance that top-down prescription is usually inappropriate or even unworkable.

These predictions will be tested in the case study which follows.

CASE STUDY: BEST VALUE AUTHORITIES AND THE CONTEST WITH AUDIT AND INSPECTION

In the rest of this article, we explore how this reconceptualized role of policy making and governance in self-organizing systems can be applied in a case study of UK local government. The system analysed consists of all English local authorities and the

central government departments which set policy for the services provided by them. The case study examines the attempt by central government to control the performance of local authorities by means of auditing and inspection processes within the Best Value regime from 1997 onwards. This organizational field is therefore particularly suitable for examining the interaction of a large number of similar system agents (local authorities), while also allowing exploration of attempts to control the overall system, both from the side of central government and by groups of politically motivated local authorities.

This article draws upon data gathered in a series of evaluations undertaken as part of the Evaluation Partnership for the Local Government Modernization Agenda (LGMA) from 2002 to the present (Bovaird and Martin 2003), including the meta-evaluation of the LGMA (Martin and Bovaird 2005) and from case studies undertaken by the author (Bovaird and Downe 2006). The meta-evaluation undertook major surveys of local government officers in 2004 (1,500 respondents) and 2006 (1,000 respondents), local government politicians in 2004 (500) and 2006 (250), as well as 12 case studies over 2004–6. All case studies involved interviews and focus groups with a range of local politicians, managers and staff from different levels of the local authority, and managers from partner organizations (as well as citizen groups in some cases).

Origins of the Best Value regime

The concept of Best Value (BV) was originally developed in the mid-1990s by an informal group of ‘friends of local government’, primarily as a replacement for the much-hated Compulsory Competitive Tendering (CCT) regime. After the 1997 election, it became a central plank in the New Labour government’s platform for dealing with local government.

From the outset, the concept of ‘Best Value’ was vague – the Government (DETR 1998) simply stated that BV was a duty which local authorities owed to local communities and which they would have to demonstrate to those communities, with the implication that it would be a matter for local negotiation. This early optimistic period of reframing central local relations lasted up to 1999, fuelled by positive results from the early pilots of the BV approach.

Best Value as a statutory regime

From 1999 onwards, there was a rapid movement towards a more directive approach from Whitehall. Legislation and government guidance (particularly DETR Circular 10/99), laid down how Best Value Reviews (BVRs) should be undertaken (incorporating the ‘four Cs’ of challenge, consultation, comparison and competition) and detailed the required content of Best Value Performance Plans (BVPPs). It also outlined a new and much more extensive role for the new Best Value Inspectorate (BVIS).

The Local Government Act 1999 appeared to pin down BV more clearly: ‘the duty upon best value authorities to make arrangements to secure continuous improvement in the way in which they exercise their functions, having regard to a combination of economy, efficiency and effectiveness’. Local authorities, particularly in the BV pilot authorities up to 2000, continued to believe that ‘Best Value’ should still be locally defined and worked together with their local communities and other stakeholders, often through imaginative mechanisms, to seek a common view on what would be ‘Best Value’ in specific services. Service professionals, meanwhile, were active in benchmarking exercises, to establish what was seen as ‘Best Value’ elsewhere. However, BVIS was also able to use the Act to push for its (rather different) perception of what BV entailed.

Role and impact of the Best Value Inspectorate

In practice, it was the new BVIS which became the major driver of BV from 2000 onwards. In doing so, it developed a reputation for mechanistic and damaging behaviour, undermining the early consensus in the system and giving rise to accusations such as:

- Judgements made were not sufficiently related to the BVRs.
- The inspectors were not interested enough in ‘compare’ and ‘consult’, overdoing ‘compete’ and ‘challenge’ in the BVRs.
- Inspections used a ‘tick-box’ checklist approach, enforcing a ‘one-size fits all’ approach.
- The checklists used by inspectors were more appropriate for judging ‘poor performing services’ than for judging excellent services.
- Inspections were not open to interesting experimentation and innovation in relation to ways of achieving BV.
- Inspections were only interested in national Best Value Performance Indicators, not local Performance Indicators.
- ‘Reality checks’ were, in reality, an amateur approach to customer research.
- Inspections put too much weight on ‘track record’ and not enough on recent improvement.
- Inspectors were too reluctant to give good scores.
- Inspectors had to be challenged in order to start a dialogue, giving relationships an unnecessarily confrontational edge.
- Many inspectors were ‘green’, so that they needed a storybook background to stop them making embarrassing misjudgements.

During 2001, the Government (influenced by accumulating BVIS reports) became concerned that the BV regime was not achieving the ‘step change’ it had expected. It therefore toyed for a year with an alternative process, Local Public Service Agreements (LPSA), whereby the council committed to deliver ambitious improvements, while the

Government committed to grant each council some relevant freedoms and flexibilities and also to pay monetary rewards for target achievement. The original LPSA pilots were started in 2000 and were quite open-ended, even imaginative. However, the rollout of LPSAs in 2001 and 2002 was carried out to a tight timetable, which entailed standardizing both contents and negotiation processes. Very soon, the whole approach was seen by both central and local government as cumbersome and mechanistic, although some stretch targets undoubtedly speeded up service improvement.

Move to Comprehensive Performance Assessment

The Government and Audit Commission eventually introduced an approach from 2002 onwards to aggregate the results of service inspections and ‘corporate assessments’ for individual local authorities – the Comprehensive Performance Assessment (CPA), which classified every local authority into one of five performance categories and four different improvement trajectories. In spite of the conceptual objections to the search for a ‘bottom line’ in the public sector, and many practical flaws and hiccups in the new system, the CPA proved popular with councils, partly because it gave a much lower profile to individual service inspection reports.

In 2006 it was announced that the CPA will, from 2009 onwards, be replaced by a Comprehensive Area Assessment (CAA). This will involve a judgement by the Audit Commission on the performance of all services in each area, based at least partly on achievements against the Local Area Agreement (LAA) negotiated by central government and the local actors in Local Strategic Partnerships (LSPs). This approach involves a more holistic assessment of the cost-effectiveness of local services and is therefore expected to drive LSPs to join up their services more coherently.

‘SWIMMING IN THE FLOW OF EVENTS’ – EMERGING PROPERTIES OF CENTRAL–LOCAL RELATIONSHIPS WITHIN THE BEST VALUE REGIME

In this section, we explore the extent to which the predictions set out in the section ‘Implications of complexity theory for policy making and governance’ are illustrated by the BV case study.

In a highly interactive system in which non-linear relationships determine outcomes, system interactions are likely to be highly unpredictable

The system of central–local relationships described in the case study above appears to fulfil most, if not all, of the conditions which Waldrop (1994) posited for complex adaptive systems:

- *A network of many agents acting in parallel* – in this case, 388 local authorities (plus local police and fire authorities), as well as central government departments and agencies.
- *Control is highly dispersed* – each local authority has some (albeit constrained) discretion in its activities.
- *Coherent behaviour in the system arising from competition and co-operation among the agents themselves* – competition in this case arises partly from the desire to score well in the Audit Commission's performance 'league tables' of BVPIs, and co-operation arises partly through resistance to the new regime.
- *Many levels of organization, with agents at one level serving as the building blocks for agents at a higher level* – in this case, street level services act as the building blocks for departmental services (the original focus of BVRs and the BVIS), which act as the building blocks for corporate programmes (the focus of later BVIS inspections and the CPA), which in turn are building blocks for partnership programmes (the focus of the new CAA), which in turn contribute to national programmes.
- *Constant revising and rearranging of their building blocks as they gain experience* – in this case, through both local innovation and centrally encouraged change processes.
- *Constant testing of its implicit or explicit assumptions about the way things are out there* – in this case, given particular emphasis through the major programme of BVRs which each local authority had to undertake under BV.
- *Exploitation of the many niches in the system by agents adapted to fill those niches* – in this case, the opportunity for each local authority service to develop expertise in specific areas and provide some services for groups of local authorities.

It is therefore not surprising that the system interactions unleashed by the BV legislation turned out to be highly unpredictable. The twists and turns of the contest around BVIS often led the system up blind alleys, followed by reversals – for example, the rapid sequence of BVIS decisions to inspect a sample of BVRs, then all BVRs, then all services and some cross-cutting issues (instead of BVRs). This is exactly what one would expect from a highly interactive system in which non-linear relationships determine outcomes.

In a fast-changing CAS, agents in the system are typically unable to exercise much control over the flow of events

In this fast-changing system, both local authorities and central government (including its auditors and inspectors) were 'swimming in a flow of events', over which they were unable to exercise as much control as they hoped. In particular, the strategic planning mechanisms adopted by New Labour when it took up the reins of government were ill-suited to achieve the results it expected. New planning systems were imposed on local

authorities in respect of the social care system, the land-use planning system, and many other services at local level. The most publicly visible expression of this new strategic planning impetus was the BVPP for every local authority, ostensibly aimed at informing local people about the authority's performance and intended performance improvements. Although local people showed little interest in these documents, they took great time to prepare, cost significant amounts to print and distribute (to every household), and were subject to close external audit. Because they were seen as ineffective in improving performance, they were jettisoned in the reforms after 2002.

Highly interconnected systems are more likely to operate as CAS

A range of factors, some stemming from government policy, increased the interconnectivity of the local government system, which was already quite high:

- Intensive lobbying and information sharing aimed at mobilizing support for greater local authority autonomy, co-ordinated by the Local Government Association (LGA) and by the Improvement and Development Agency.
- Fast exchange of information on how to cope with the 'less attractive' aspects of the new regime, facilitated by advisory networks (e.g. the Inter Authorities Group).
- Information and advice from professional bodies to their members on the implications of the new regime for their working practices – and how to resist those features seen as inimical to professional interests.
- Greater stakeholder involvement with local authority professionals, particularly the networks of voluntary organizations and groups representing service users.
- Personal networking by individuals within local authorities, allowing them quickly to circulate information on lessons from audits and inspections.
- Greater emphasis by central government itself on the transference of practice within the local government world, for example through the Beacon Council scheme.
- Rapid spread of e-government initiatives at local level (partly through central government encouragement), allowing the above processes to occur more quickly than previously possible.

As these mechanisms of interconnectivity grew in number and strength, local government became able to mount an increasing campaign of resistance against the elements of the audit and inspection framework which were regarded as inappropriate, destructive and politically unacceptable, culminating in the Government's admission in 2002 that the system had become unsustainable in its current form. Thus the early years of statutory BV provided a striking example of local government working in concert to defeat a nationally imposed system.

For a CAS to develop these multiple connectivities must give rise to non-linear effects

The strength of this 'policy resistance network' was reinforced by its characteristics as a complex adaptive system. Specifically, the multiple connectivities listed above gave rise to non-linear effects in information dissemination, as each emerging example of resistance could be rapidly digested and (at least partly) emulated by many others – e.g. discontented local authorities were able to use information from other authorities to question the inspectorate's methodology and conclusions. The significant level of such activity in the system encouraged many other local authorities to believe that they could together mount a successful challenge to the way in which BV had been commandeered by BVIS. This contrasts strongly with the much more fragmented, long-drawn-out and destructive battle by local authorities against CCT.

Emergent processes stemming from a CAS are often revealed by the way in which small changes (and counter-actions to them) have system-wide effects

From the point at which BVIS began to threaten councils' discretion in interpreting BV, we can map emerging processes by which local actors became aware of, understood and prepared their defences against the external forces of regulation. Some of these processes complied with the legislation, while others were explicitly meant to resist it. Some produced consequences which the inspectors and auditors found to be valuable in achieving BV, others were seen as undermining BV in the authorities concerned. In Table 1 we set out some examples of behaviours of each these types, illustrating how these behaviours could occur at the individual level, the social level (within a local authority), the collective level (between local authorities) and the political level.

The key feature of the changes during this period suggesting that a complex adaptive system was at work was the way in which small changes rippled out quickly from the actors concerned, then gave rise to counter-actions, which in turn rippled quickly through the system. So, the apparent power of the BVIS at first drove most authorities to comply with its version of what a BVR and BVPP should look like. This learning took place very rapidly throughout the system, bringing an apparent convergence of approaches between local authorities, as illustrated by behaviours summarized in column 1 of Table 1.

However, many authorities became annoyed by the deficiencies of BVIS inspections (detailed above). The typical temptation to engage in gaming (Hood and Bevan 2006) was evident in many local authorities soon after the start of statutory BV (column 2 in Table 1). Just as inspectors came increasingly to assume that their approach represented an uncontested template of 'excellence', local authorities came to assume that

Table 1: The effects of emergent behaviours on BV outcomes

	(1) <i>Legislation compliant, positive outcomes in BV terms</i>	(2) <i>Legislation compliant, negative outcomes in BV terms</i>	(3) <i>Legislation defiant, positive outcomes in BV terms</i>	(4) <i>Legislation defiant, negative outcomes in BV terms</i>
<i>Emergent individual behaviours</i>	Innovations by staff to achieve national targets	Innovations by staff to 'glossify' local achievement of national targets	Innovations by staff to solve local problems which are not national priorities	Innovations by staff to disguise activities as nationally compliant
<i>Emergent social behaviours (within local authorities)</i>	Proportionate BVRs and audit trail	Over-elaborate documentation for all BVRs and inspections	Superficial BVRs where necessary changes have already been identified	Superficial BVRs designed to protect in-house provision
<i>Emergent collective behaviours (across local authorities)</i>	Benchmarking clubs identifying potentially positive changes	Market testing routines designed to justify in-house provision	Challenging use of benchmarking information based on prior political assurances that externalization will not occur	Superficial comparisons designed to protect in-house provision
<i>Emergent political behaviour</i>	Identification and pursuit of matches between local and national priorities	Glossy BVPPs to every local household, fudging conflicts of priorities	Pursuit of local priorities rather than national priorities	Pursuit of local priorities at expense of national priorities

inspectors had to be fed the kind of information they were looking for. Moreover, the increasingly mechanistic and arrogant judgements of the BVIS eventually pushed some local authorities to adopt processes of resistance (what Teisman and Klijn (2007) call 'self-referential or autopoietic self-organization'). Some of these processes are itemized in columns 3 and 4 of Table 1. Most of these local authority behaviours seemed to the actors concerned to be desirable in their local context – yet many of them ended up being dysfunctional in the eyes of either the inspectors/auditors, or the local authorities themselves, or (in the case of column 4) of both parties (albeit for very different reasons).

Of course, gaming and resistance to national policies are normal parts of local government in all countries (although perhaps more openly displayed in the English context than in a typical *Rechtsstaat* environment). What was unusual about this period of English local government was the speed with which the changes swept through the system, probably due to the very high level of interconnectivity in the system at this time. Nevertheless, there was little evidence of stable coalitions between 'resisting' local authorities, as predicted by Axelrod's principles of co-operation – perhaps because the interorganizational costs involved would have outweighed the potential gains from reciprocity between 'resisting' local authorities.

In managing strategically within a CAS, emergent approaches are more likely to be successful than traditional strategic planning

On the part of local authorities, there was a struggle between their strategic planning activities (local as well as centrally imposed) and their strategic shaping behaviour during the period of BVIS dominance, as they attempted to improve their position 'swimming in the flow of events'. The strategies adopted by many local authorities to resist the BV regime were time- and place-specific, relying on complex interactions between many different networks. Consequently, they had the paradoxical result that the more imaginative local authorities were often much less driven by their plans during this period than during the previous CCT decade, in spite of strategic planning methodologies imposed upon them.

META-PLANNING: ACCELERATING AND DEALING WITH POLICY TURNING POINTS

We earlier suggested that our understanding of strategic management needs to be reframed as the set of actions by means of which an agent hopes both to make the most of the recent changes in its environment – the subject of the previous section – or by which it attempts to change the longer term 'rules of the game' which shape how its environment evolves. This 'meta-planning' approach is the subject of this section.

In attempting to alter ‘the rules of the game’ in a CAS emergent strategic management approaches are more likely to be successful than traditional strategic planning

The case study demonstrates the importance of emergent strategic management in central local relations, as opposed to the traditional strategic planning approach. On the part of central government, the elaborate BV superstructure developed during 1997–2001 (e.g. BVRs, BVPPs, inspections, targets based on the upper quartile of performances) had largely disappeared by 2007. Clearly this planning-based approach had largely failed. Yet, it is still possible to maintain that the early intentions of the BV system have been successfully realized (Martin *et al.* 2007). This has resulted from central government’s rapid adaptation of its strategies, in the light of the disappointing results from its early interventions. (Indeed, a major danger was that this adaptive process could be too rapid, resulting in over-reaction.)

At local level, in the early days of BV many local authorities, particularly those which successfully applied to be chosen as pilots for the BV initiative, worked energetically to find innovative and potentially fruitful ways of reshaping and implementing the early (quite tentative) design of the approach (Martin *et al.* 2001). At a later stage, individual local authorities worked equally energetically to resist the way in which BV was being driven by BVIS. As the case study shows, some of these attempts were successful, others less so. A good illustration of this comes from Sunderland, which early in 2000 decided to prioritize the rapid e-enablement of all its services for young people, and embedded this in its LPSA, although this was contested by central government, because it was not a national priority. Sunderland succeeded in establishing a national reputation in this area and was eventually given a top rating by the Audit Commission in the first tranche of CPA scores and was highlighted as a template of best practice by central government.

In a system with punctuated equilibria, periods of near stasis and incremental change are punctuated by large-scale change episodes

Of course, changing the ‘rules of the game’ is not an everyday affair. It is only likely to be possible at specific junctures, and in conjunction with other players. The moments at which this is possible – the ‘policy turning points’ within the trajectory of punctuated equilibria – occur only occasionally. If changes in the policy system conform to a power law, as they would in a CAS close to its phase transition point, then the occurrence of these policy turning points cannot be predicted in advance, even though the frequency of policy turning points of given sizes is relatively constant. It can then make sense for some players to anticipate these policy turning points, prepare for them and take rapid action when they appear to be imminent, even though their arrival may be long-delayed.

We can see how these different meta-planning strategies have come into play in relation to the turning points identified in the case study from 1997 to 2002. In the early days of BV, central government took the lead in developing the system, although initially many local authorities also worked enthusiastically to shape the early design of BV. However, central government increasingly sought to drive a faster pace of change. After enactment of the BV legislation in 1999, which was generally welcomed by local government, the Government identified a policy window for raising expectations. At a major policy turning point, it moved to emphasizing the concept of 'step change' (rather than the continuous improvement embedded in the legislation), gave more teeth to the market testing procedures in BV and increased the role of the BVIS.

However, as the BVIS became the dominant force in shaping the system towards a bureaucratic rather than innovative template, and as resistance built up in local government, preparation for a new policy turning point increased. Central government began to explore other policies to encourage faster change (such as LPSAs) and local authorities began to game the system more openly. This preparation, in turn, strengthened the resistance movement and hastened the occurrence of the next turning point.

This framework suggests some insights into the remarkable insouciance of the BVIS to its critics during this period of policy stasis. In spite of the growing resistance to BVIS behaviour, the few changes which took place during this period were often seen by local authorities as adverse to their interests, such as BVIS decisions to widen their remit from inspecting BVRs to inspecting the overall performance of services and adopting the mantra of 'step change, not just continuous improvement'. Nevertheless, there were signs that the 'official' approach was creaking – e.g. some 'light touch' or mainly desk-based inspections were being undertaken in low-risk areas. Again, BVIS itself began to question the usefulness of BVPPs, agreeing informally with widespread criticisms that these plans were little read and too formalistic, and that their certification by the external auditors added little value.

Just two years after the BV regime became statutory in 2000, the policy turning point arrived in 2002, as Ministers simultaneously lost patience with the speed of change under BV, lost confidence in the ability of BVIS to drive faster change, and became aware of the level of resistance to a system originally based on consensus. The Secretary of State called for a review of the overall BV policy, with a clear indication that the inspection process would be overhauled. Simultaneously, the BVIS itself modified some of its more contested approaches, for example a full inspection of all services. It also 'loosened up' a little in giving favourable scores to well-performing services. By the end of 2002, the focus for local service improvement had moved from BV to the CPA.

Paradoxically, this meant that some local authorities, previously identified as 'non-compliant' by the BVIS (e.g. Sunderland), now emerged as stars under the CPA. This served, in turn, to strengthen the conviction of other local authorities that

meta-planning, or 'rules changing' behaviour, might be a rational strategy, in spite of the risks attached and the apparently unpredictable nature of the overall system, with its punctuated equilibria.

System agents can respond to top-down attempts to shape system behaviour by also trying to shape the flow of events at local level and the interplay between these top-down and bottom-up behaviours shapes the emerging system properties

Whenever players decide to engage in 'meta-planning', others will be similarly engaged and their interactions will involve co-creation of the rules of the game. This co-creation, in turn, is a further source of major non-linearities in the system: for example, under BV, central government encouraged major e-government initiatives by local authorities, which substantially changed their environment and opened up new ways of working together and combatting central government policies.

As local authorities tried to shape the local flow of events, they were driven by local priorities, which differed greatly between areas in their balance of economic, social and environmental issues. It was the interplay between these competing 'meta-planning' behaviours which shaped the emerging properties of the overall system. Some authorities which contested the rules of the game, such as Sunderland, emerged as 'winners' – they achieved their own purposes and were held up by central government as best practice templates, thus replicating their behaviours throughout the system – but others engaged in resistance to the regime were unsuccessful and eventually were forced into compliance with BV procedures and targets which they regarded as inappropriate and damaging.

Steering of the overall system involves the encouragement of experimentation and an acceptance that top-down prescription is usually inappropriate or even unworkable

Local authorities committed to changing the 'rules of the game' were unsure how to achieve this. Some were keen to make the running under their own steam, for example Sunderland on e-government, while others worked through networks, for example on neighbourhood renewal, community empowerment, participatory budgeting, etc. Yet others have seen meta-planning as essentially an LGA function. In each case, they have attempted to influence the overall system through experimentation, designed around their own needs, the success of which carries the possibility that future rolling-out of their approach will embed their own values and priorities in the path-dependent system as a whole. This emphasis on experimentation has been especially necessary, since there is no evidence in the case study that any of the agents in the system were able to predict

the pathways which the system would take (or, in complexity terms, identify the parameters of the 'strange attractors' describing the limits of system change).

Central government, at the outset of BV, encouraged experimentation in a series of policy domains, particularly neighbourhood renewal, waste management and community safety, where it accepted that national prescription only would be inappropriate or inadequate. However, its centralized planning and inspection regimes after 2000 undermined this flexibility. The proposals for the new CAA, which will replace the CPA from 2009, suggest that central government has now learnt this lesson. Instead of imposing the same (100+) targets for each local authority, in new system each LSP will agree thirty-five priority targets with central government, allowing a much more differentiated approach across England, responsive to the diversity of local needs and priorities, while still ensuring that central government's key priorities are met across the country as a whole.

CONCLUSIONS

It is still too early to come to conclusions on the extent to which the concepts of complexity science, self-organizing systems and punctuated equilibrium can explain behaviour and provide guidance for future systems design in the public realm. However, this article has argued that complexity theory has already yielded some important insights, even in its current crude stage of application. The case study of BV in the UK illustrates how the behaviours of agents and the strategies they adopted owed at least as much to emergent complex interactions within the policy system as to the cognitive processes occurring in any one agency. The insights from complexity theory on how emergent strategies arise from interactive behaviour in policy systems cast strong doubt on the relevance of mechanistic approaches to strategic planning in public organizations. However, the case study also illustrates how some actors in the system, particularly the most self-confident local authorities, can try to shape these emergent strategies into a 'meta-planning' approach, albeit within heavily circumscribed parameters.

This 'meta-planning' approach is very different from traditional strategic planning. It does not involve the development of a single, preferred set of strategic actions, with specific targets attached. Rather it entails tracking how emerging situations offer the possibility of changing the 'opportunity map' facing the organization, and developing the capability of the organization to influence the overall system.

However, the article has also highlighted a number of limitations to the use of complexity theory, given our current state of knowledge, which suggest a future research agenda. Key areas for exploration include:

- Which types of policy networks within public policy systems are most likely to display the characteristics of CAS? In particular, there are key issues around how best to measure:

- the degree of interconnectivity between local authorities, and between local government and other partners;
- the degree of non-linearity in decisions made within local authorities, and between local authorities and other partners.
- What determines how well agents can adapt to the changing fitness landscapes within emerging CAS?
- Which types of agents might be most successful in shaping the behaviour of CAS by influencing the ‘rules of the game’?

For now, the most important lesson of complexity theory is that it counsels us against placing too much confidence in deterministic models of economic, social and political behaviour and against over-elaborate analysis of single agency interventions in policy making, strategic management and public governance within policy systems whose interactions are, at best, only partially understood.

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