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Understanding Policy Implementation Processes as Self-Organizing Systems

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Abstract

Implementation studies and related research in organizational theory can be enhanced by drawing on the field of complex systems to understand better and, as a consequence, more successfully manage change. This article reinterprets data previously published in the *British Journal of Management* to reveal a new contribution, that policy implementation processes should be understood as a self-organizing system in which adaptive abilities are extremely important for stakeholders. In other words, national policy is reinterpreted at the local level, with each local organization uniquely mixing elements of national policy with their own requirements making policy implementation unpredictable and more sketchy. The original article explained different paces and directions of change in terms of traditional management processes: leadership, politics, implementation and vision. By reinterpreting the data, it is possible to reveal that deeper level processes, which are more emergent, are also at work influencing change, which the authors label possibility space. Implications for theory, policy and practice are identified.

Key words

Complexity, change management, policy implementation, receptivity, self-organizing systems

UNDERSTANDING POLICY IMPLEMENTATION PROCESSES AS SELF-ORGANIZING SYSTEMS

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Old experience teaches
 The thread of consequence cannot be broken.
 Listen to my warning.

(Ted Hughes 1997 *Tales from Ovid – Arachne*)

INTRODUCTION

The word ‘complex’ regularly appears in discussions of strategy and policy implementation. This is especially true in policy implementation because there have been successive waves of reform. Both within the UK and internationally, governments are seeking the holy grail of achieving high performing public services, delivered at the lowest price, while maximizing participation. In this context, complex is used to refer to implementation as a dynamic system, containing many stakeholders, with diverse roles (Jacobs 2000; Dawson and Dargie 2002; Kelly 2003; Koppenjan and Klijn 2004).

In order to understand better and, as a consequence, more successfully manage the complexity of policy implementation, the field of organizational theory is increasingly drawing on the field of complex systems. There are still, however, few organizational examples of how complex systems is applied in practice (Brown and Eisenhardt 1997; Shaw 1997; Pascale 1999; Stacey 2000; Brown and Liddle 2005; Houchin and MacLean 2005; Wagenaar 2007). Indeed, Houchin and MacLean (2005) critiqued complex systems by arguing that organizations are recursive, not adaptive. In other words, organizations going through change will default to stability and replicate former patterns of behaviour and retreat from novelty and implementing new patterns. Nevertheless, complex systems has specifically researched how dynamic systems operate. Such research findings may develop a more sophisticated richness to existing notions of policy implementation.

This article reinterprets data previously published in the *British Journal of Management* which focuses on the continuing diffusion of new public management (NPM) in English local government (Butler 2003). It does this in order to reveal a new contribution, that policy implementation processes should be understood as a self-organizing system in which adaptive abilities are extremely important for stakeholders. Policy implementation is self-organizing because national policy is reinterpreted at the local level, with each local organization uniquely mixing elements of national policy with their own requirements. Policy implementation at the local level becomes unpredictable and compliance with national policy more sketchy. This analysis is achieved by drawing on complex systems and linking it to the notion of receptivity for organizational change.

By solely drawing on receptivity, the original article explained different paces and directions of change in terms of traditional management processes: leadership, politics, implementation and vision. By taking a complexity perspective, it is possible to reveal that there are also emergent processes, which the authors have termed possibility space.

The new findings suggest that there are two levels of change within an organization which continuously interact, one more mechanistic and surface level, while the other level is more organic and deeper. Unless both sets of processes are considered during policy implementation, the management of change might fail.

The article will begin by highlighting existing insights about complexity from the policy implementation literature which reveals that local self-organization and the adaptive abilities of stakeholders are crucial variables in implementation processes. It will then discuss overlapping concepts in organizational theory, notably the role of the notion of receptivity for organizational change in strategy processes. By drawing on complex systems, it is possible to overcome some of the limitations of the implementation studies and existing work on receptivity. Having done this, there will be an evaluation of the new receptivity factor possibility space. Case study work will be used to demonstrate the dynamics of receptivity in action. The article will finish by identifying implications for theory, policy and practice.

POLICY IMPLEMENTATION AND COMPLEXITY

Policy implementation has recently been revisited as an important issue for public services. A special issue in *Public Administration* (2004) brought together papers from a series of five ESRC seminars called 'Implementing Public Policy: Learning from Each Other'. The benefits of an implementation perspective are that they allow the policy analyst to transcend the distinction between politics and administration in a time when the British government is emphasizing policy delivery (Schofield and Sausman 2004).

Schofield and Sausman (2004) note in their introduction to the special issue that much more attention has been given to the study of variables than processes in implementation studies. The focus in this article is on the operational end of the policy process, where national policy meets professional and managerial skill and decision-making ability. Schofield and Sausman (2004) also note that many of the studies reveal the role of discretion at the local level, taking the form of street level bureaucracy. In other words, they highlight the role of complexity, local self-organization and the adaptive abilities of stakeholders in implementation processes.

The first wave of implementation studies focused on top-down approaches. Pressman and Wildavsky (1973), for example, reasoned that the policy maker incorporated a theory of cause and effect, which argues that if the policy fails, it may be the underlying theory that is at fault rather than the execution of the policy.

In the second wave of studies, which focused on bottom-up approaches, the factors contributing to implementation complexity were more clearly identified. Hjern and Porter (1981) note that despite authority relationships (professional status, co-ordinative competence, potential and real power and resource control), there is a great deal of local discretion. Importantly for the argument in this article, national organizations may attempt to influence discretion, but there is no single implementation structure at the

local level, but a collection of localized implementation structures. Each of these structures in turn has a variety of goals and motives, authority relationships and local discretion.

More recently, implementation studies has taken a variety of turns, all exposing more types of implementation complexity. The Dutch School of policy networks and network management, for instance, has analysed horizontal multi-party relations in public policy (Kooiman 1993). At the turn of the new century, this analysis has been further extended. Koppenjan and Klijn (2004) highlight the challenges facing contemporary organizations: public organizations need to take the lead in solving societal problems, while private organizations need to conduct their business in a socially responsible manner and both are co-dependent if they are to achieve their objectives.

Clearly, the running themes through the variety of implementation studies highlighted above are not only complexity, but the importance of context and the utility of theoretical models of implementation (Schofield and Sausman 2004). The themes are related. Research in a different context reveals evidence for the development of a different conceptual framework, adding to a complex range of ideas produced and consumed by scholars and practitioners.

Despite the existing insights about complexity from the policy implementation literature, policy formulators and public service managers have a reflex towards the reduction of complexity in implementation through increasing intervention (Ferlie *et al.* 1996). In the NHS, this has been achieved by joining closer together macro- and micro-levels of implementation over a sustained five-year period of time as one piece of policy has been linked to a following piece, but in a process which has essentially been led from the top. The strategy is sophisticated in that complexity has been acknowledged, there are different paces and directions of change as less receptive contexts resist reforms, but a clear project management function has been adopted to drive through the reform programme within the localities. Ferlie *et al.* (1996) have added novel findings by their focus on case detail, on organizational theory and on the role of receptivity.

The notion of receptivity for organizational change offers a more traditional view of strategy. Receptivity attempts to reveal the factors which contribute to organizations being either low-change, non-receptive contexts or high-change, receptive contexts (Pettigrew and Whipp 1991, 1992; Pettigrew *et al.* 1992; Butler 2003). Despite receptivity having been introduced as a notion about fifteen years ago, it is still only an emerging and undeveloped idea. It was first applied in the private sector to eight firms from four sectors (Pettigrew and Whipp 1991, 1992) and then in the public sector to the NHS (Pettigrew *et al.* 1992). Now, it is being re-applied in the public sector to English local government (Butler 2003).

The rest of the article explores the new contribution that receptivity is making to implementation studies, which emerges from receptivity's link to complex systems. The article summarizes the changing context of English social housing policy. This is

followed by a brief review of Butler's (2003) research findings, which capture the first level of change within an organization and explain different paces and directions of change in terms of traditional management processes: leadership, politics, implementation and vision. The second level of change is then analysed in detail. Complex systems is defined by focusing on recent work taking place in the private sector, which establishes the analytical categories used at this level. Change is explained in terms of novel management processes – possibility space, comprising: no universal Best Practice, organizational play, path dependency and choice.

SOCIAL HOUSING AND ITS MANAGEMENT

In the post-war period, local authority housing was the usual tenure for working people, but during the 1980s, with the rise of NPM, home ownership was promoted. Since the Housing Act 1980, council and Registered Social Landlords (housing associations) tenants have had the Right to Buy their home at a subsidized price (Flynn 1997).

Among a range of other privatization measures, government policy has also encouraged public sector organizations to downsize and outsource their services (Hood 1991, 1995a, 1995b). In the English local government context, outsourcing was made possible, initially, through the introduction of Compulsory Competitive Tendering (CCT) (for example, Local Government Act 1992), which has been replaced by Best Value (Local Government Act 1999).

Despite the use of legislation to ensure the introduction of CCT and Best Value at the national level, there has been variation in the use of contractors at the local level. The data reported here specifically refer to two local housing authorities: Trafford and Westminster. In Trafford, CCT implementation culminated in the awarding of five contracts to five in-house contractors on 13 November 1996 – trading began on 1 April 1997. In contrast to Trafford, in Westminster by December 1998, CCT implementation culminated in there being three types of contractor (instead of one – the in-house contractor). The contractors are: the in-house contractor (WMS), an external quasi private sector contractor (Paddington Churches Housing Association) and an external private sector contractor (Pinnacle). Paddington Churches is a quasi private sector contractor because the Housing Act 1988 redefined housing associations (now RSLs) as private not-for-profit institutions. To emphasize the point – Westminster has lost six out of seventeen contracts: three to Pinnacle, two to Paddington Churches and one to a Tenant Management Organization.

The article now turns to explaining the success of the two contrasting outsourcing strategies, in other words, why Trafford is a low-change non-receptive context for CCT and why Westminster is a high-change receptive context. Before doing that, it is important to note that with the current shortage of affordable housing in the UK, government policy is changing, most notably in building patterns. The Department for

Communities and Local Government (2007) is committed to building at least 45,000 new social homes a year by 2010–11 – a 50 per cent increase in social housing in three years, more than doubling new provision since 2004–5.

FIRST LEVEL CHANGE – FOUR RECEPTIVITY FACTORS

Given that this article reinterprets the data from Trafford and Westminster (Butler 2003), this article will briefly review the research findings of the original article (Figure 1).

Beginning at the organization level of change, Figure 1 uses ‘continuous’ two-way arrows to emphasize that at that level the receptivity factors are interconnected. Leading change locates decision making and analyses the actions of the decision-makers.

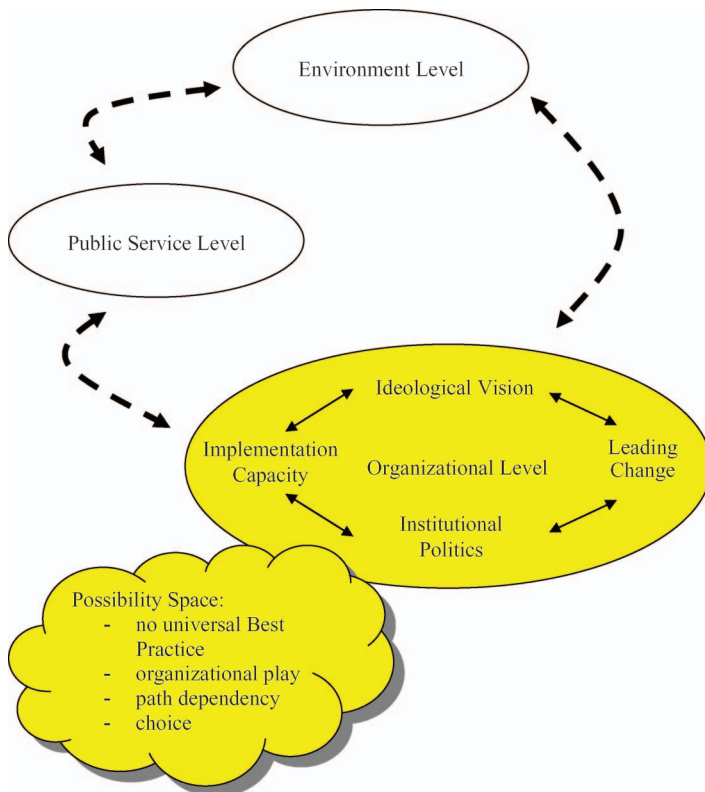


Figure 1: Framework for managing the complexity of implementation

Key: Shaded=Possibility Space.

Source: Adapted from Butler (2003: S52).

Institutional politics explains the location of decision making. Implementation capacity explains the location of decision making in greater detail by going beyond structural relationships to explore critical incidents. Ideological vision critically reflects on the strategic decisions being made by evaluating their purpose.

Each of the four receptivity factors has a set of specific key elements. Leading change locates decision making at the top of the hierarchy. In Trafford, decision making was located with the Director, while in Westminster it was located with the Conservative local councillors. In Trafford, the Director adopted a resistant strategy to outsourcing, while, in contrast, in Westminster, the Conservative local councillors adopted an accelerated strategy. Clearly, Westminster is an early adopter of change, while Trafford is a follower. At the time of the data collection, Westminster was seen as an exemplar of outsourcing because of its media reputation for supporting outsourcing initiatives.

Institutional politics uses both formal and informal network structures. In Trafford, an informal structure was used – passivity was in part generated by the Director's management style. In contrast, in Westminster, formal structures were used: the Conservative local councillors used their recruitment procedure to appoint a Director who would accelerate outsourcing and Churchill Gardens' residents were able to demand high levels of service delivery because they were assigned a key role during contract negotiations.

Implementation capacity is associated with locale – local actors attempted to influence outsourcing implementation and, in turn, their actions were reversed by top-down interventions. In Trafford, the Area Housing Manager (North) used the opportunity of looser managerial–staff relations, the Management Assistant Director's (1995–7) secondment, to set up initiatives to reduce the number of empty properties in her Area – the Director, though, was still aware of local operations and resisted the Area Housing Manager's initiatives. In contrast, in Westminster, the Paddington Green residents decided to reappoint WMS, the in-house public sector contractor – the Conservative local councillors, through the Contracts Committee, overruled the Paddington Green residents' decision by appointing Pinnacle, the external private sector contractor.

Ideological vision is the quality and coherence of policy in the sense that the Director in Trafford and the Conservative local councillors in Westminster have developed strategic agendas which guide action in their departments. The strategic agendas are associated with a characteristic set of managerial beliefs. In Trafford, management by influence (outsourcing) is superimposed over management by command and control (the existing form of organization and management) (Kickert 1997; Marnoch 1997). In contrast, in Westminster, management by contract is not superimposed over, but co-exists with, and was implemented through, management by command and control.

Turning to interconnecting the organization, public service and environment levels of change, Figure 1 uses 'dotted' two-way arrows to connect the different levels. The

arrows are dotted to differentiate them from those used at the organization level of change.

The environment level is the motor of change for the organization level by providing downward pressure to outsource, in this case through legislation. The four receptivity factors at the organization level influence how the motors of change from the environment level are responded to. The receptivity factors at the organization level also create institutional patterns at the public service level. Some organizations will be able to slow or increase the pace of change. The Government driving legislative change may react to the institutional patterns, not liking the different paces of change. Further legislation could be imposed to improve compliance.

One of the contributions of this article is to reveal that deeper level factors influence change. This can be achieved by adding a missing perspective in implementation studies, complex systems. Organizational theory is increasingly drawing on complex systems (for a comprehensive review see Maguire *et al.* 2006).

COMPLEX SYSTEMS – ESTABLISHING ANALYTICAL CATEGORIES

Complex systems offers a radical view of organizational change, attempting to reveal why mechanistic representations of organizations are incorrect. Organizations and change are associated with biological processes, an evolutionary view of structure and organization. Change concerns the structural evolution of an organization as a result of its on-going dialogue with possible innovations, various contingencies and stresses that occur. Either the existing structure resists an innovation or it changes, and the ease with which that happens depends on the receptivity of the organization to the particular change presented. Clearly, this involves a complex interaction between the internal nature of an entity, its possible variability and the environment that it inhabits (Allen 1997, 2001a, 2001b).

Complex systems and receptivity contrast with systems thinking. Within systems thinking the rational improvement of organizational structures supposes that the system has a purpose and that known measures of performance can indicate the direction of improvements.

An illustration of the receptive processes is manufacturing organizations in the automobile sector. McCarthy *et al.* (1997) identify fifty-three characteristics of manufacturing organizations (Figure 2). They are engineers who identified the characteristics by examining annual reports and descriptions of organizational changes made by many different companies over the whole history of automobile manufacture. Baldwin *et al.* (2005) then constructed a matrix of pair interactions between the characteristics in order to examine how they can combine to create emergent organizational forms. The matrix is derived from a survey of manufacturers. The matrix was used to develop an evolutionary simulation model, in which a manufacturing firm attempts to incorporate successive new characteristics at a given rate selected by the user of the simulation.

Standardisation of Parts	1	TQM sourcing	27
Assembly Time Standards	2	100% inspection sampling	28
Assembly line layout	3	U-Shape layout	29
Reduction of Craft Skills	4	Preventive Maintenance	30
Automation (Machine paced shops)	5	Individual error correction	31
Pull Production System	6	Sequential dependency of workers	32
Reduction of Lot size	7	Line balancing	33
Pull procurement planning	8	Team Policy	34
Operator based machine maintenance	9	Toyota verification of assembly line	35
Quality circles	10	Groups vs. teams	36
Employee innovation prizes	11	Job enrichment	37
job rotation	12	Manufacturing cells	38
large volume production	13	Concurrent engineering	39
mass sub-contracting by sub-bidding	14	ABC Costing	40
exchange of workers with suppliers	15	Excess capacity	41
Training through socialisation	16	Flexible automation of product versions	42
Proactive training programmes	17	Agile automation for different products	43
Product range reduction	18	In-Sourcing	44
Automation	19	Immigrant workforce	45
Multiple sub-contracting	20	Dedicated automation	46
Quality Systems	21	Division of Labour	47
Quality Philosophy	22	Employees are system tools	48
Open Book Policy with Suppliers	23	employees are system developers	49
Flexible Multifunctional workforce	24	product focus	50
set-up time reduction	25	Parallel processing	51
Kaizen change management	26	Dependence on written rules	52
		Further intensification of labour	53

Figure 2: Fifty-three characteristics of manufacturing organizations

Source: McCarthy *et al.* (1997).

There is an incredible range of possible organizational forms that can emerge. But, each time a new characteristic is adopted within an organization, it changes the receptivity of the organization for any new innovations in the future. This is an example of the path dependent evolution that characterizes organizational change. Successful evolution is about the discovery or creation of highly synergetic structures of interacting practices.

Figure 3 is a snap-shot of the simulation at work – it reveals one frozen moment in time. The spectrum of possible practices are displayed from the lower left to lower right, going from one to fifty-three, as defined in Figure 2. Remember that only fifty-three are available. The model starts with practice 1 and then a random number generator is used to choose what to try out. The model starts off from a craft structure and at each moment in time the organization chooses randomly from the practices available at that time, and its overall performance is a function of the synergy of the practices that are tried successfully. A bar signals that a practice has been adopted, a circle that it has been tried and failed and a space that a practice has not yet been tried. In the snap-shot, practice 4 is tried several times and simply cannot invade. However, practice 9 is tried early on and fails, but does successfully invade at a later date. The box in the top right hand corner of Figure 2 indicates that overall performance has improved over time, but the landscape of interaction indicates that the improvement is not

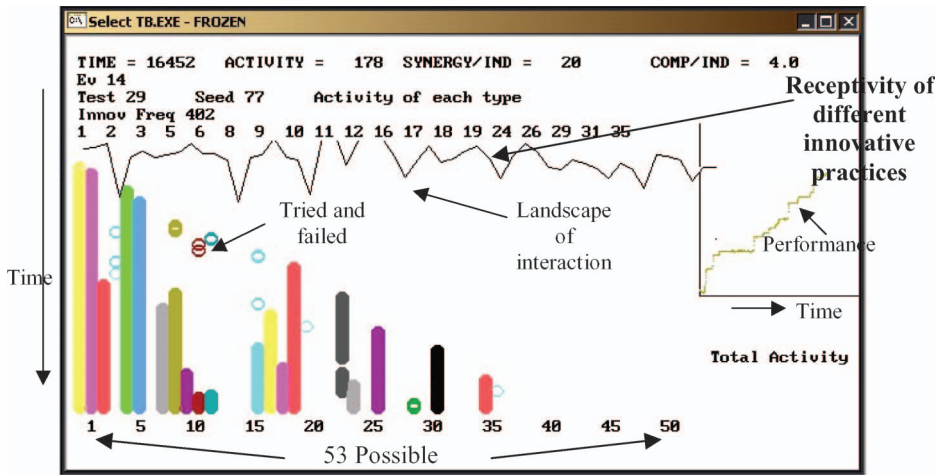


Figure 3: Simulation of the introduction of the fifty-three manufacturing characteristics

smooth – there are peaks when a practice is adopted and troughs when one is rejected. In other words, if the receptivity created by existing practices within the organization is low, the new behaviour declines and disappears. But, when receptivity is high it grows and becomes part of the formal structure which in turn changes the receptivity for future innovations.

The simulation demonstrates four key ideas in complex thinking (Allen *et al.* 2005): no universal organizational Best Practice, path dependency, choice and constituency. The ideas define the process of adaptation in an organization. They correspond to Houchin and MacLean's (2005; see also Stacey 1995) four complexity-theory concepts: sensitivity to initial conditions, negative and positive feedback processes, disequilibrium and emergent order. The concepts, they argue, are common to all approaches to complexity theory.

The first idea is no universal organizational Best Practice – there may be no simple, single recipe for improving organizations since they differ in their receptivity. This is because the simulation reveals that an organization may be made up of different practices and as these practices change over time organizational performance strengthens and weakens. No Best Practice corresponds to Houchin and MacLean's (2005) disequilibrium in that new practices will continuously be available to an organization seeking organization change for competitive success.

The second idea is path dependency – innovative practices must interact with existing practices and that this interaction will produce emergent attributes and capabilities. This is because the simulation reveals that the actual success that a new practice meets with is pre-determined by the practices already present. The future evolutionary pathway is affected by that of the past. Path dependency corresponds to

sensitivity to initial conditions because the new practices must interact with existing practices (Houchin and MacLean 2005).

The third idea is choice – different simulations lead to different structures. This is because the simulation reveals that when it is re-run, a different pattern of interactions between the practices emerges. It is impossible to predict what will be adopted which gives the system choice. Choice corresponds to Houchin and MacLean's (2005) emergent order as it is impossible to predict what will be adopted.

The fourth idea is constituency – that organizations possess individual practices, capabilities and performance levels which they operate within. This is because the simulation reveals that when it is run and re-run, preferred organizational modes of operation begin to appear. Going back to McCarthy *et al.*'s (1997) data, different companies over the whole history of automobile manufacture develop different organizational identities or modes of operation, ranging from craft to more sophisticated manufacturing processes. The quotation at the head of this article refers to constituency, Arachne warns us that old experience teaches that the thread of consequence cannot be broken. Constituency corresponds to negative and positive feedback processes since having a preferred organizational mode of operation dictates how well the new practice will be received (Houchin and MacLean 2005).

SECOND LEVEL OF CHANGE – THE NEW AND FIFTH RECEPTIVITY FACTOR OF POSSIBILITY SPACE

Having established the four analytical categories, they will be applied to Trafford and Westminster. Path dependency has been combined with constituency because of the similarity of the ideas. Constituency stresses that organizations possess individual practices, capabilities and performance levels and these affect the success of an innovative practice, in other words, the path of an innovative practice is dependent on existing practices.

The second level of change is explained in terms of novel management processes grouped under the label possibility space: no universal Best Practice, organizational play, path dependency and choice. The processes are novel because they have not been previously linked together as a framework in the existing literature.

The processes are grouped under the label 'possibility space' because it captures creativity in organizational processes (Allen 1998). Creativity here is defined as the adaptation of existing behaviours or the emergence of new behaviours. Adaptation and emergence occur through micro-diversity. Within a macroscopic system, there are dynamics which throw up various possible behaviours and which may then become selected for various reasons.

Allen (1998) gives the example of any single organizational behaviour can only grow until it reaches the limits set either by its input requirements, or for an economic activity, by the market limit for any particular product. After this, it is the

'error-makers' that grow more successfully than the 'average type', as they are less in competition with the others, and the population identity becomes unstable. Organizational systems, unlike simulations, evolve in discontinuous steps of instability, separated by periods of taxonomic stability. So, there are times when the system structure can suppress the instabilities caused by the innovative exploration of its inhabitants, and there are other times when it cannot suppress them, and a new population emerges.

Local authority housing is viewed as a macroscopic system. The Government, through national policy, would like taxonomic stability throughout the system or the widespread take-up of outsourcing. Yet, at the local level, there is instability in the sub-system dynamics as different local housing authorities vary in their compliance with the policy. At the sub-system level, there is self-organization and co-evolution. Co-evolution usually deals with the circumstances in which complex systems evolve without a central planner who directs the system to a preconceived goal. In this context, there is a central planner, the State, and co-evolution is at the local level, with the local housing authorities.

It is suggested from this research that staff accept that there is no universal Best Practice for outsourcing in local authority housing. This means that the stakeholders within Trafford and Westminster need to decide on the future strategy for their organizations and this is the role of organizational play, which demands reflection. Organizational play weighs up two factors: learning from the past (path dependency) and anticipating the future (choice).

No universal Best Practice acknowledges that there may be no simple, single recipe for improving organizations since they differ in their receptivity. Some organizations, though, may have a synergy with central government policy initiatives and these organizations will be early adopters of change. They are likely to be referred to as exemplars of Best Practice by central government. Other organizations, however, may develop synergy, depending on the experience of the early adopters. Conversely, they are likely to be referred to as laggards by central government. Local history and circumstances shape ideological beliefs, both political and managerial, that will underlie the actual bureaucratic processes of the organization. Central government can either tolerate local variation or find enforcement techniques to achieve conformity – in our case studies, local variation was tolerated. This could be interpreted as a policy failure. More accurately, it is an example of the limits of government to implement policy in the context of increasing complexity in different societal sectors (Dryzek 1990; Beck 1999).

Given there is no universal Best Practice, the stakeholders within Trafford and Westminster need to decide on the future strategy for their organizations. This is the role of organizational play – the need for spare capacity for public service organizations to pursue developmental work (Schofield and Sausman 2004). Pursuing developmental work would mimic the micro-diversity of biological processes, involving the tentative trials of novel concepts and activities, which will lead to emergent forms of structure

and organization. This is an important process because although it may be possible to identify the variables for an optimal performance, like receptivity factors, it is not possible to predict what should be done with them to achieve the optimal performance.

Schofield and Sausman's (2004) argument is part of a broader agenda which advocates a revitalized role for knowledge, learning and capacity – reinforcing the current policy-making movements for turning evaluation- and evidence-based data into action. They warn against traditional top-down decision-making processes, citing Exworthy and Powell's (2004) work about Good Practice, which revealed that despite improved access to specialized knowledge about how to deal with health inequalities, there was no discernable direct improvement in the health status of the populations under observation. Instead, one of their foci is on the operational end of the policy process: discretion and street level bureaucracy. Schofield (2004) is proposing a model of learned implementation, which includes actors needing to learn how to solve a series of technical problems that add detail to ambiguous policy instructions.

Schofield and Sausman's (2004) argument is part of an even broader agenda, reflected in current work on organizational learning (Reynolds and Vince 2004; Butler 2008) and one practical application is the introduction of Team-Based Working (TBW) (Butler and West 2008). TBW shows that organizational innovation benefits from team-working and is based on two processes (Butler and West 2008). First, people organized in teams have different experiences and attitudes in comparison with people in traditional structures, both of which amplify creativity. Second, the implementation of team-working is associated with higher organizational flexibility and adaptability (Mohrman *et al.* 1995). When an organization implements self-directed team-working, much of the traditional organization, which is characterized by hierarchical decision making, goal setting and rule making, needs to be given up. Furthermore, the flow of information and knowledge is increased because teams provide the vertical linkages relevant to this (Mohrman *et al.* 1995; Cohen and Bailey 1997).

Neither the Director in Trafford nor the Conservative local councillors in Westminster are right or wrong in the strategic agendas that they have developed. Instead of imposing Good Practice, in this case the Government has deemed outsourcing to be a preferred activity, public service organizations may need to be allowed to experiment with different practices – the exploratory learning organizational play.

Organizational play weighs up two factors: learning from the past (path dependency) and anticipating the future (choice). Focusing on path dependency, innovative practices must interact with existing practices and this interaction will produce emergent attributes and capabilities. A further complication is that the emergent attributes and capabilities will, in turn, adapt to encounters at the other levels of change – the public service and environment levels. The innovative practices of reducing empty properties and reappointing WMS, the in-house public sector contractor, were unsuccessfully launched in Trafford and Westminster, suggesting that they had their own preferred modes of operation.

Nevertheless, turning to choice, nothing is fixed. Despite laws, regulations and institutional inertia, governments have limits. Processes like co-evolution turn complex systems into adaptive complex systems. Another way of expressing this is to acknowledge that there is a very large number of possible futures. There may have been a different future if the innovative practices in Trafford and Westminster had been successfully launched.

Trafford and Westminster's modes of operation should not necessarily be perceived as negative. They are utilizing their dynamic capabilities to achieve their intended strategic agendas (Wang and Ahmed 2007). In particular, they are using two levels of change within an organization which continuously interact through possibility space in order to negotiate the fit between existing and new organizational practices. Nevertheless, dynamic capabilities emphasizes renewal to address environmental change. Given Trafford and Westminster's unsuccessful launch of innovative practices, achieving dynamic capability is compromised.

IMPLICATIONS

Theory development

The new findings have implications for theory, policy and practice. In terms of theory development, the research findings reveal that complex systems is linked to receptivity. After making the links explicit, it is proposed that receptivity is a special type of self-organization.

Though they use different discourses, both viewpoints acknowledge that organizations are dynamic systems – complexity uses the language of temporary, emergent structures, while receptivity uses the language of low-change, non-receptive contexts or high-change, receptive contexts. Both viewpoints search for multi-factor explanations of organizational change – complexity has four underpinning ideas, while receptivity has receptivity factors. Both viewpoints explain change as an interaction between and within different levels – earlier in this article three levels were identified: the organizational, the public service and the environment.

Receptivity is a special type of self-organization because it offers a hybrid methodological position in which both narrative and mechanical descriptions contribute to understanding complex systems, a position called 'complexity thinking' (Richardson and Cilliers 2001). Complexity thinking is a revised philosophic stance that implies methodological pluralism in which both narrative and mechanical descriptions contribute to understanding complex systems. Neither alone is sufficient. The new receptivity factor (possibility space) sits on the narrative side of complex thinking and modifies the original receptivity factors (leadership, politics, implementation and vision), which sit on the mechanical side.

Possibility space illustrates the emerging tension within complex systems between hard information-processing and postmodern approaches (Maguire and McKelvey 1999). It captures situations without making simplifying assumptions, retaining diverse perceptions in notions of organizational change. More than that, complexity feeds on itself. Each of us is embedded in an evolving network of interactions and our knowledge is necessarily the interpretive framework that we have each developed as a result of our own particular experiences and inherent capacities. Because of the heterogeneity of the world, we therefore cannot 'know' what others know and need to learn what others think and why and to negotiate collective actions. Negotiation creates multiple interpretive frameworks and choices, which in the absence of real predictive determinism, promotes judgement in considering our actions and this openness leads on to further heterogeneity. The source of innovation lies within what is removed in simplifying change to traditional categories – the original four receptivity factors.

There seems to be a parallel with Pollitt and Bouckaert's (2004) 'Model of Public Management Reform'. A key aspect of the Model is that it notes the interaction between narrative and mechanical descriptions contributing to the process of reform. It includes both structural factors and elements of agency. Agents, in the form of political parties and administrative elites, have choices over the design of organizational structures or administrative systems. Choice is constrained by path dependency, once initial policy decisions are made over time it becomes increasingly costly to turn back and take another route entirely.

More research needs to be done to clarify the specific nature of the processes, for example, are the processes individual and cognitive, do they take place at the group and organizational levels or do they take place more dynamically at all levels? Is there a timing issue associated with possibility space, so that deliberations take place prior to action or are the deliberations more iterative, such that there is an on-going interplay between thought, action and reflection?

Policy process

In terms of the policy process, there are implications for policy formulation and policy implementation. At the national level, local variation in the implementation of government policy initiatives poses a problem. Policy implementation is always concerned with the performance of a large population of organizations. Because of this, central government policy initiatives aimed at improving service delivery will consist of attempting to force public service organizations to adopt new practices that are believed to improve their performance.

However, in order to benefit from the self-organizing system of receptivity, central government should limit its role to setting strategic aims and objectives and refrain from imposing Best Practice. To some extent, as Ferlie *et al.* (1996) reveal, this learning has already taken place in the NHS, but it does not seem to have translated to

local government. The consequence of limiting central government activity is to give local public service organizations freedom to manage. In turn, this freedom to manage may encourage innovative public services to grow some spare capacity to pursue developmental work. Local services are best placed to tap into knowledge about local practices, to move available resources around the service base to meet hot spot service demands and to use informal and formal structures to achieve preferred goals. New learning can be disseminated to assist other public services.

The discussion of possibility space, because of its focus on Trafford and Westminster, might suggest that the two local housing authorities are autopoietic systems, that-is-to-say, there is a boundary surrounding each authority (Maturana and Varela 1992). This is not accurate because policy implementation is a process of self-organization, which contains multi-level interconnections, and the adaptive abilities of stakeholders at the local level is extremely important, so that local needs are addressed during the implementation of national policies. Simon's (1962) near decomposability principle captures policy implementation because it argues that complex systems can emerge by modular design, through nearly autonomous subunits, that-is-to-say, units like Trafford and Westminster, which increase complexity and rate of adaptive response.

The framework for managing the complexity of implementation needs to be tested to see if it explains organizational change in other contexts and to explore its limitations. The most obvious test is in more public service organizations, but it could also be tested in private sector and international settings.

Organizational practice

In terms of organizational practice, there are implications for those leading change – they must operate at two levels of change within an organization which continuously interact. Managers are well prepared to operate at the first level. In order to get promoted, they will have demonstrated competence in the traditional management processes of leadership, politics, implementation and vision.

It is unlikely that managers are as well prepared to operate at the second level of change. Nevertheless, the evidence from Trafford and Westminster indicates that both the politicians and the staff intuitively operate at this level. Five preliminary practical steps can be identified which may lead to the flourishing of the possibility space (Figure 4).

First, the possibility space seems to open up when there is a stimulus for action. Trafford and Westminster responded to the outsourcing agenda. It may be, however, that just being aware of the possibility space will stimulate action because inhabitants of that space will then be able to reflect on the space. Second, one aspect of reflexivity is to acknowledge that there is no universal Best Practice, making it essential for managers to re-frame the parameters of their decision making as openly as they need to achieve a given task. Third, organizational play generates ideas so managers need to have a

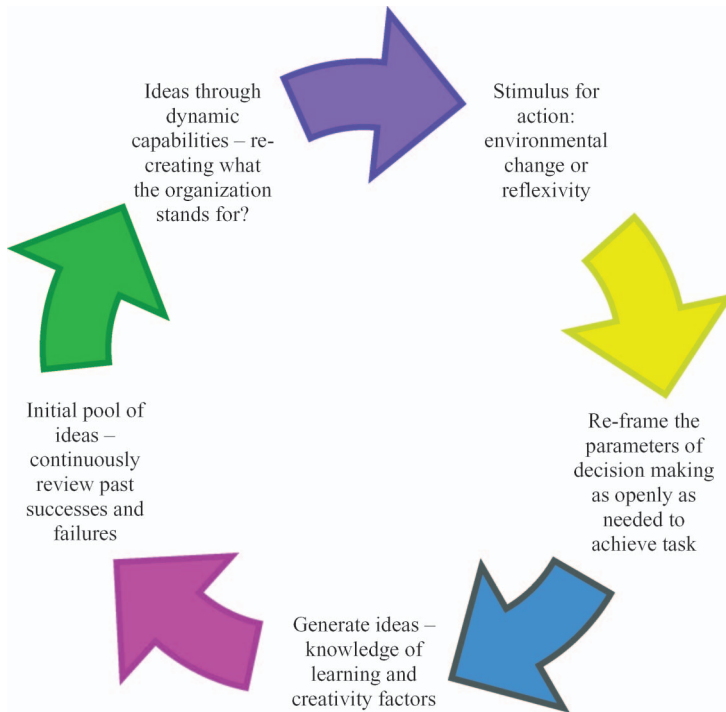


Figure 4: Five practical steps for managers leading to the flourishing of the possibility space

knowledge of the factors contributing to learning and creativity, which may be organizationally based. Idea generation is contextualized by path dependency and choice. Fourth, path dependency indicates that managers should continuously review past successes and failures which will establish an initial pool of ideas for the possibility space. Fifth and last, dynamic capabilities suggests that managers exercising choice should go beyond renewing past ideas or reconfiguring organizational structures, and include re-creating how they enact leadership, politics, implementation and vision.

The five steps echo McKelvey's (2001, 2004) notion of 'complexity leadership'. Instead of incentivizing followers to implement the vision of the leader, complexity leadership enables the bottom-up formation of effective emergent structures. The five steps facilitate the formation of emergent structures. This is achieved by linking the steps to principles of emergence, which stress the importance of managing tension in organizations (Andriani and McKelvey 2005). Step one, for example, involves a stimulus for action which corresponds to the principle of adaptive tension – environmentally imposed tensions stimulate adaptive order creation.

The five steps are preliminary practical suggestions for managers. A more detailed review needs to be conducted in order to convert the research findings, and their links

to the findings of other complexity scholars like McKelvey, into material for executive education programmes.

CONCLUDING REMARKS

The contribution of the article is to show that policy implementation processes should be understood as a self-organizing system in which adaptive abilities are extremely important for stakeholders. Policy implementation is self-organizing because national policy, in this case outsourcing, is reinterpreted at the local level, with Trafford and Westminster having different paces and directions of change, awarding different types of CCT contract.

Complexity and receptivity are used to offer a novel view about the process of policy implementation. This is because stakeholders like to reduce the complexity in implementation and because the existing receptivity literature explains change in terms of traditional management processes.

Reinterpreting data previously published from a complex systems perspective, five dynamically interconnecting receptivity factors are identified which seem to explain the success of two contrasting outsourcing strategies: leading change, institutional politics, implementation capacity, ideological vision and possibility space. Possibility space has four characteristics: no universal Best Practice, organizational play, path dependency and choice.

REFERENCES

- Allen, P. M. (1997) *Cities and Regions as Self-Organizing Systems: Models of Complexity*, London: Taylor & Francis.
- (1998) 'Evolving Complexity in Social Science'. in G. Altmann and W. A. Koch (eds) *Systems: New Paradigms for the Human Sciences*, Berlin: Walter de Gruyter GmbH & Co.
- (2001a) A Complex Systems Approach to Learning, Adaptive Networks, *International Journal of Innovation Management*. 5: 2 pp149–80.
- (2001b) What Is the Science of Complexity?, *Emergence*. 3: 1 pp24–42.
- Allen, P. M., Boulton, J., Strathern, M. and Baldwin, J. (2005) 'The Implications of Complexity for Business Process and Strategy' in K. Richardson (ed.) *Managing Organizational Complexity*, Connecticut, CT: Information Age Publishing.
- Andriani, P. and McKelvey, B. (2005) 'If Power Law Phenomena in Organizations: Where Is the Scale-Free Theory?', Working Paper, Durham, Durham Business School, University of Durham.
- Baldwin, J. S., Allen, P. M., Winder, B. and Ridgway, K. (2005) Simulating the Cladistic Evolution of Manufacturing, *Journal of Innovation Management, Policy and Practice*. 5: 2/3 pp144–56.
- Beck, U. (1999) *World Risk Society*, Cambridge: Polity.
- Brown, B. and Liddle, J. (2005) Service Domains – the New Communities: A Case Study of Peterlee Sure Start, UK, *Local Government Studies*. 31: 4 pp449–73.
- Brown, S. L. and Eisenhardt, K. M. (1997) The Art of Continuous Change: Linking Complexity Theory and Time-Paced Evolution in Relentlessly Shifting Organizations, *Administrative Science Quarterly*. 42: 1 pp1–34.

- Butler, M. J. R. (2003) Managing from the Inside Out: Drawing on 'Receptivity' to Explain Variation in Strategy Implementation, *British Journal of Management*. 14: Special Issue, December ppS47–S60.
- (2008) Inquiring How a Lecturer Keeps Learning about Their Teaching: A Personal Case History on Reflective Imagination, *International Journal of Quality and Standards*. 2: 3 pp1–39.
- Butler, M. J. R. and West, M. A. (2008) 'Team-Based Organisations for Competitive Advantage' in The Aston Centre for Human Resources (ed.) *Strategic Human Resource Management: Building Research-Based Practice*, London: Chartered Institute of Personnel and Development (CIPD) pp263–95.
- Cohen, S. G. and Bailey, D. E. (1997) What Makes Teams Work: Group Effectiveness Research from the Shop Floor to the Executive Suite, *Journal of Management*. 23: 3 pp239–90.
- Dawson, S. and Dargie, C. (2002) 'New Public Management: A Discussion with Special Reference to UK Health' in K. McLaughlin, S. P. Osborne and E. Ferlie (eds) *New Public Management: Current Trends and Future Prospects*, London: Routledge.
- Department for Communities and Local Government (2007) *Homes for the Future: More Affordable, More Sustainable*, July, London: The Stationery Office.
- Dryzek, J. S. (1990) *Discursive Democracy: Politics, Policy, and Political Science*, Cambridge: Cambridge University Press.
- Exworthy, M. and Powell, M. (2004) Big Windows and Little Windows: Implementation in the 'Congested State', *Public Administration*. 82: 2 pp263–81.
- Ferlie, E., Pettigrew, A., Ashburner, L. and Fitzgerald, L. (1996) *The New Public Management in Action*, Oxford: Oxford University Press.
- Flynn, N. (1997) *Public Sector Management* (3rd edn), London: Prentice Hall/Harvester Wheatsheaf.
- Hjern, B. and Porter, D. O. (1981) Implementation Structures: A New Unit of Administration, *Organization Studies*. 2: 3 pp211–27.
- Hood, C. (1991) A New Management for All Seasons?, *Public Administration*. 69: Spring pp3–19.
- (1995a) Contemporary Public Management: A New Global Paradigm?, *Public Policy and Administration*. 10: 2 pp104–17.
- (1995b) The New Public Management in the 1980s: Variations on a Theme, *Accounting Organizations and Society*. 20: 2/3 pp93–109.
- Houchin, K. and MacLean, D. (2005) Complexity Theory and Strategic Change: An Empirically Informed Critique, *British Journal of Management*. 16: 2 pp149–66.
- Hughes, T. (1997) *Tales from Ovid*, London: Faber & Faber.
- Jacobs, B. (2000) 'Partnerships in Pittsburgh: The Evaluation of Complex Local Activities' in S. P. Osborne (ed.) *Public-Private Partnerships: Theory and Practice in International Perspective*, London: Routledge.
- Kelly, J. (2003) The Audit Commission: Guiding, Steering and Regulating Local Government, *Public Administration*. 81: 3 pp459–76.
- Kickert, W. J. M. (1997) Public Governance in the Netherlands: An Alternative to Anglo-American 'Managerialism', *Public Administration*. 75: 4 pp731–52.
- Kooiman, J. ed. (1993) *Modern Governance: New Government-Society Interactions*, London: Sage.
- Koppenjan, J. and Klijn, E.-H. (2004) *Managing Uncertainties in Networks*, London: Routledge.
- Local Government Act (1999) *Part 1: Best Value*, Department of the Environment, Transport and the Regions (DETR) Circular 10/99, 14 December, London: DETR.
- McCarthy, I., Leseure, M., Ridgeway, K. and Fieller, N. (1997) Building a Manufacturing Cladogram, *International Journal of Technology Management*. 13: 3 pp2269–96.
- McKelvey, B. (2001) Energizing Order-Creating Networks of Distributed Intelligence, *International Journal of Innovation Management*. 5: 2 pp181–212.
- (2004) "'Simple Rules'" for Improving Corporate IQ: Basic Decisions from Complexity Science' in P. Andriani and G. Passiante (eds) *Complexity Theory and the Management of Networks: Proceedings of the Workshop on Organisational Networks as Distributed Systems of Knowledge*, London: Imperial College Press.

- Maguire, S. and McKelvey, B. (1999) Complexity and Management: Moving from Fad to Firm Foundations, *Emergence*. 1: 2 pp19–61.
- Maguire, S., McKelvey, B., Mirabeau, L. and Oztas, N. (2006) 'Complexity Science and Organization Studies' in S. R. Clegg, C. Hardy, T. B. Lawrence and W. R. Nord (eds) *The Sage Handbook of Organization Studies*, London: Sage.
- Marnoch, G. (1997) 'Customers and Stakeholders: The Impact of Governance on Organizational Transformation. The National Health Service and the United States Veterans Affairs Health Administration Compared', paper presented at the British Academy of Management Annual Conference, London, 8–10 September.
- Maturana, H. R. and Varela, F. J. (1992) *The Tree of Knowledge: The Biological Roots of Human Understanding*, Boston, MA & London: Shambhala.
- Mohrman, S. A., Cohen, S. G. and Mohrman, A. M. (1995) *Designing Team-Based Organizations*, San Francisco, CA: Jossey-Bass.
- Pascale, R. T. (1999) Surfacing at the Edge of Chaos, *Sloan Management Review*. 40: 3 pp83–94.
- Pettigrew, A. M. and Whipp, R. (1991) *Managing Change for Competitive Success*, Oxford: Blackwell.
- (1992) 'Managing Change and Corporate Performance' in K. Cool, D. J. Neven and I. Walter (eds) *European Industrial Restructuring in the 1990s*, Basingstoke & London: MacMillan Academic and Professional.
- Pettigrew, A. M., Ferlie, E. and McKee, L. (1992) *Shaping Strategic Change – Making Change in Large Organisations: The Case of the National Health Service*, London: Sage.
- Pollitt, C. and Bouckaert, G. (2004) *Public Management Reform: A Comparative Analysis*, Oxford: Oxford University Press.
- Pressman, J. L. and Wildavsky, A. (1973) *Implementation*, Berkeley, CA: University of California Press.
- Public Administration* (2004) Symposium on Implementing Public Policy: Learning from Theory and Practice, *Public Administration*. 82: 2.
- Reynolds, M. and Vince, R. eds (2004) *Organizing Reflection*, Aldershot: Ashgate.
- Richardson, K. and Cilliers, P. (2001) What Is Complexity Science? A View from Different Directions, *Emergence*. 3: 1 pp5–23.
- Schofield, J. (2004) A Model of Learned Implementation, *Public Administration*. 82: 2 pp283–308.
- Schofield, J. and Sausman, C. (2004) Symposium on Implementing Public Policy: Learning from Theory and Practice – Introduction, *Public Administration*. 82: 2 pp235–48.
- Shaw, P. (1997) Interviewing in the Shadow Systems of Organizations: Consulting from a Complexity Perspective, *Journal of Organizational Change Management*. 10: 3 pp235–50.
- Simon, H. A. (1962) The Architecture of Complexity, *Proceedings of the American Philosophical Society*. 106: 6 pp467–82.
- Stacey, R. (1995) The Science of Complexity: An Alternative Perspective for Strategic Change Processes, *Strategic Management Journal*. 16: 6 pp477–95.
- (2000) *Strategic Management and Organisational Dynamics* (3rd edn), Harlow: Pearson Education.
- Wagenaar, H. (2007) Governance, Complexity, and Democratic Participation: How Citizens and Public Officials Harness the Complexities of Neighbourhood Decline, *American Review of Public Administration*. 37: 1 pp17–50.
- Wang, C. L. and Ahmed, P. K. (2007) Dynamic Capabilities: A Review and Research Agenda, *International Journal of Management Reviews*. 9: 1 pp31–51.