

Whole Systems Working

A GUIDE and DISCUSSION PAPER



What is the Integrated Care Network?

The Integrated Care Network (ICN) provides information and support to frontline NHS and Local Government organisations seeking to improve the quality of provision to users, patients and carers by integrating the planning and delivery of services.

Key to the role of the ICN is the facilitation of communication between frontline organisations and central government, so that policy and practice inform each other effectively.

The ICN is part of the The Care Services Improvement Partnership (CSIP).

What do we do?

The ICN seeks to impact on the five pillars that underpin our work:

- Access to care
- Reshaping services to improve wellbeing
- Greater engagement with local communities and those experiencing social exclusion
- Reshaping financial and other resource flows
- Developing and redesigning workforce patterns

The resources the ICN provides include:


- Consultation, facilitation and brokerage
- Leadership in partnership development
- Evaluation and sharing of good practice
- National conferences
- Regional workshop series
- Interactive website
- Publications and online advisory notes
- Regular e-newsletters
- Applied research and academic links

Care Services Improvement Partnership

The Care Services Improvement Partnership (CSIP) was launched on 1 April 2005 after a formal public consultation. Our main goal is to support positive changes in services and the wellbeing of:

- People with mental health problems
- People with learning disabilities
- People with physical disabilities
- Older people with health and care needs
- Children and families and
- People with health and social care needs in the criminal justice system

The Integrated Care Network offers advice on partnerships and integration that cut across all services in health and social care. It works closely with other networks and programmes across CSIP to ensure synergy in improvements.

Care Services Improvement Partnership 

Integrated Care
Network

Whole Systems Working

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The concept of whole system working is popular but elusive. It entered the mainstream of health and social care discourse in the late 1990s and has been used mainly in the worlds of management and service delivery. Broadly, it refers to the process of involving all stakeholders of a domain in discussion about service change – all parties are encouraged to think about the way the whole service delivery system works, rather than focusing only upon their own service. That said, the concept is still very much in its policy infancy, and this paper aims to develop the discussion as well as make some practical suggestions on whole system development.

This publication builds upon and updates an earlier version published by the ICN in 2004 (Hudson, 2004) which can be downloaded from the ICN website at the following link:

http://icn.csip.org.uk/_library%2FICN%20Discussion%20paper%20-%20whole%20systems.pdf

This new paper is organised into three sections:

- Section 1 examines the factors behind the whole system imperative – why whole systems?
- Section 2 asks the question ‘what is a whole system’?
- Section 3 explores issues in managing a whole system and gives some illustrations of whole system working in practice.

It is important at the outset to emphasise that a proper understanding of whole system working does not involve yet another management fad claiming to reveal the secret of imposing order and rationality on a complex and turbulent world. The reality is that this is not possible. Rather whole system working provides some ways of understanding disorder and apparent irrationality, while still managing to make some progress in addressing complex social problems. Whole system working is not therefore a quick fix; more a guide to the complexity and uncertainty that characterises policy formulation and implementation in the joining up of health and social care.

Section 1:

Why whole systems?

The Limitations of Ad Hoc Partnering

Public services delivery can be seen as having gone through several phases:

- *Separatism*, where each agency and profession plans and delivers its own contribution in isolation from the contribution of others;
- *Competition*, where purchasing is separated from providing, and providers are placed in a competitive relationship to one another;
- *Partnership*, where agencies and professionals participate in specific and ad hoc collaborative relationships.

Elements of these three phases co-exist in a complicated fashion, and can result in only partial and disjointed understandings of, and responses to social problems. The *Better Outcomes for Older People framework* (Scottish Executive, 2005) contains a telling statement from a service user during the consultation exercise:

'It seemed like quite a few people had pieces of the jigsaw but no-one had the picture on the box.' (p2)

Having a clear idea of the picture on the box is crucial for all of those involved with the social policy jigsaw – the policy makers and planners who create the picture, the managers and front-line staff who have to put the pieces together, and the users and carers who expect the whole thing to fit together around their needs. The difficulty is – as the statement suggests – that pieces of the puzzle go missing, but so can the picture on the box. This can become even more challenging if people holding some of the pieces also refuse to allow them to be used. Whole system working is often seen as the answer to this predicament and in particular, to those problems now acknowledged to be 'wicked issues'.

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The Emergence of ‘Wicked Issues’

The growing enthusiasm within the UK for whole system working has come from recognition that many of the problems that public services now deal with are too complex to be addressed by one agency acting in isolation – they are ‘wicked’ problems. Cross-cutting problems like health inequalities and social exclusion are frequently cited examples, but issues like reducing unplanned hospital admissions and delayed hospital discharges would also be included. The concept was originally proposed by Rittel and Webber [1973] in a seminal treatise on social planning, and has since been developed by other writers. Conklin and Weil [1997], for example, suggest that a wicked problem meets the following criteria:

- The problem is an evolving set of interlocking issues and constraints – indeed there is no definitive statement of the problem;
- There are many stakeholders and this makes the problem solving process fundamentally complex – getting the right answer may not be as important as having the stakeholders accept whatever solution emerges;
- Constraints on the solution, such as limited resources and political ramifications, change over time;
- Since there is no definitive problem there is no definitive solution – the problem-solving process ends when resources are depleted, rather than when some perfect solution emerges.

This constitutes a description of the reality of policy formulation and implementation that will strike a chord with many people grappling with the difficulties of public service delivery.

The New Policy Imperative

The idea that service delivery must be underpinned by a whole system approach is now widespread in public services discourse, and especially across health and local government. In the case of services for older people, a study by the Audit Commission (2002) exhorted the use of whole systems working, suggesting that this requires three key elements:

- a shared vision rooted in the views of older people
- a comprehensive range of services delivered by flexible, multi-professional teams;
- a way of guiding older people through the system to make sure they receive what they need, when they need it.

In similar vein, the CSIP Older People Team (formerly Change Agent Team) (2003) has argued that:

‘The Whole System is not simply a collection of organisations which need to work together, but a mix of different people, professions, services and buildings which have patients and users as their unifying concern, and deliver a range of services in a variety of settings to provide the right care, in the right place at the right time.’ (p1)

The cathartic event precipitating a major shift towards the objective of whole systems working in children’s services was Lord Laming’s inquiry into the death of Victoria Climbié [Laming 2003], which highlighted the comprehensive failure of co-ordinated working amongst the key agencies concerned. The subsequent Green Paper, Every Child Matters (Department for Education and Skills, 2003) noted that children’s needs are complex and rarely fit neatly within one set of organisational boundaries, and that the categories around which services are organised are overlapping, fluid and in some cases blurred.

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The solution – a whole system approach – has been pictorially depicted by the ‘onion’ diagram that underpins the Every Child Matters reforms (Department for Education and Skills, 2004) shown below.



Whole system working is also being exhorted to address unplanned hospital admissions. In *Transforming Emergency Care* (Department of Health, 2004) it is said that: ‘many lessons have been learned...improvements must not be limited to the A&E department but made across the whole hospital and whole health and social care community’ (p20). Subsequent policy pledges reiterate this whole system aspiration. In the recent Community Services White Paper ‘Our health, Our Care, Our Say’, for example, the Government talks of the need to encourage:

‘all health partners to work together in a system-wide approach to developing urgent care services including better care for patients with long-term conditions, shifting care from acute hospitals to the community, promoting better public health, integration with social care and improving access to GPs in-hours.’ (Department of Health, 2006, p90.)

The message of Section 1, then, is that past and present approaches to problem solving are limited, that our understanding of the nature of social problems needs to be more sophisticated, and that politicians now anticipate – indeed require – something called a ‘whole system’ approach. It is not, however, evident that the concept of a ‘whole system’ is agreed and understood.

section 2

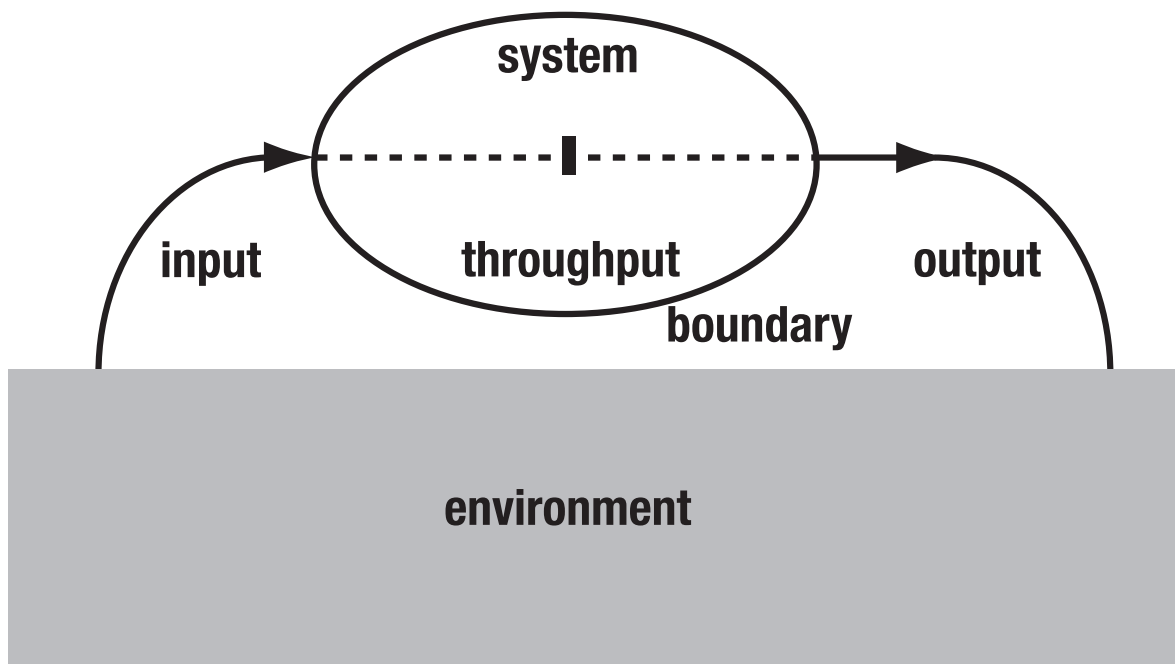
But what is a ‘whole system’?

Can We Define a Whole System?

Simply defined, a system is a complex whole, the functioning of which depends on its parts and the interaction between those parts. Traditional analyses have concentrated on separating individual parts of the system and improving them, often without reference to one another, whereas system thinking focuses on the relationship between the various parts of the system. It is this relationship between the parts that is essential, for systems are seen as more than the sum of the parts – an outcome that has been termed the ‘emergent properties’. A heap consisting of the parts of a bicycle, for example, does not have vehicular potential, but if the parts are linked together to make the bicycle as a whole then it has the potential to get someone from A to B – this is the ‘emergent property’ of the bicycle.

There is, however, a limit to how far definitions like this can take us in understanding and changing system behaviour in the public services. What is noticeable about the whole system debate in the UK is the complete absence of any theoretical underpinning. Indeed, the idea tends to be treated as conceptually self-evident and readily available for operational use. This can be a source of frustration to those charged with putting into effect the whole system edict, and can end up with ideas about ‘the system’ being no different to traditional approaches to joint working. In fact, there is a big difference between being in some way ‘joined up’ and engaging with a ‘whole system’, and to understand this difference involves an appreciation of some theoretical underpinnings from both systems theory and complexity theory.

Understanding and applying insights from systems and complexity theory to inter-organisational settings is neither a simple task, nor a well developed activity. This discussion paper is not the place for a full examination of theory. Jackson (2003) and Byrne (1998) provide excellent overviews of systems and complexity theory respectively. However, it is important to extract from both literatures some of the key ideas that might help to make a whole system approach work in practice. A good starting point is to consider a basic model of a system in interaction with its environment as shown below. Inputs enter a ‘system’ where the throughput process results in an output that has taken effect within a bounded area which is, in turn, affected by the wider environment within which it exists:



The idea of inputs and outputs is one shared with other models, though it is important to stress that in UK public services the focus on outputs is now being superseded by an emphasis on outcomes in the lives of people who make use of service outputs. Of more relevance to whole system thinking is the other parts of the diagram – system throughput, boundary and environment.

System Throughput

In systems working, it is not always necessary to be aware of all throughput components since it is possible to look at total input and total output without worrying unduly about what goes on inside the box. In the case of air quality, for example, it is possible – and useful – to measure the total amount of fuel consumed (input) and the total amount of pollution generated [output], without knowing who is responsible for what part of the pollution. In this concept, the system is called a *'black box'* – something that takes in input and produces output without us being able to see what happens in between. This may not be satisfying, but in some cases may be the best that can be obtained. In complex public service issues, however, the way things are done is a crucial dimension of change, and we need to gain some understanding of how the internal process works – a *'white box'* that is visible or can in some way be modelled and replicated. The research identifies several important throughput considerations:

Valid Different Perspectives

A recurring theme in relation to 'wicked issues' is the difficulty of establishing the 'facts' of the situation – there will be valid different perspectives on problems, which will result in different interpretations of information. These different perspectives arise as a result of the different contexts, cultures, histories, aspirations and allegiances used by stakeholders to make sense of their worlds. This will hardly be news to anyone who has engaged in the politics of partnership bartering, yet it does not lie easily with the usual emphasis upon consensus as the rational basis for effective partnerships. Rather than acknowledging legitimate difference there is a tendency to assume that purposes have already been agreed; alternatively the objectives of the most powerful

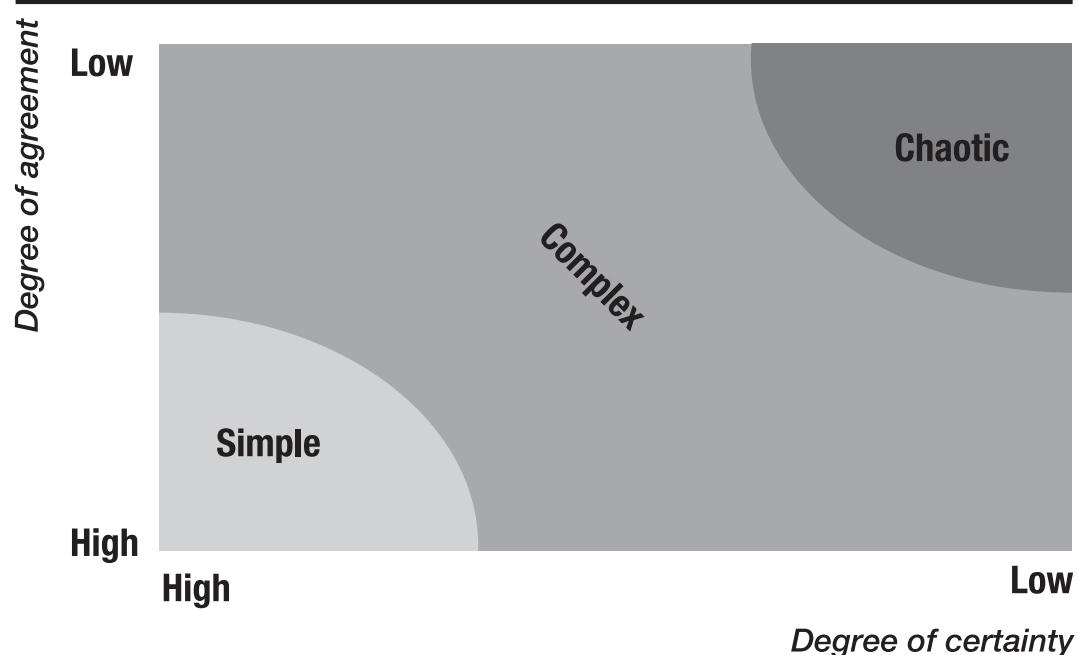
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decision makers may be dominant regardless of the views of less powerful stakeholders. Many partnerships have floundered on the rocks of such heroic assumptions.

To talk about valid different perspectives is to also talk about individual behaviour, yet much of the good practice guidance on partnership working finds it hard to acknowledge the roles of individuals in determining the fate of partnerships. Emphasis tends to be placed upon wider issues such as governance, finance and legality. In reality, what is critical to our understanding of emergent order in organisations is the role of anxiety, and the actions taken to reduce it by individuals and groups. The natural tendency for humans is to seek equilibrium and this can be done through conflict avoidance, taking actions to retain control and minimising the impact of change. Wicked issues are unlikely to be resolved unless different perspectives on the problem are clear and the importance of individual behaviour acknowledged.

Complex Adaptive Systems on the Edge of Chaos

Coping with chaos is a notion that will be familiar to those working in public services, but it has some specific meanings in the literature on system theory and complexity. Complexity theorists see inter-organisational networks as '*complex adaptive systems*' in which change is constant and stakeholders need to be adaptable and flexible – the notion of moving from one stable state to another as a result of planned change is seen as inherently flawed. The set of circumstances that call for adaptive behaviours has been termed '*the edge of chaos*' (Langton, 1989). This is a zone wherein uncertainty and insufficient agreement can obscure the choice of next step, though there is not so much disagreement and uncertainty that the system is thrown into chaos.



Jackson (2003) sees the edge of chaos as a narrow transition zone between order and chaos. In this potentially positive transition zone, systems become capable of taking on new forms of behaviour and innovative activity. And Stacey (1996) notes that all complex adaptive systems can operate in one of three zones:

- a *stable zone* in which they ossify;
- an *unstable zone* in which they disintegrate;
- *the edge of chaos* characterised by spontaneous processes of self-organisation and innovative patterns.

The edge of chaos therefore seems like the best place for organisations to be, but it is difficult to reach and sustain because it requires a balance at the point between the forces promoting stability, and those continuously challenging the status quo. It requires management skills of the highest order, but not necessarily those characterised by command and control.

The Identification of Leverage Points

One of the most important discoveries from chaos theory is that a relatively small but well-timed jolt to a system can throw the entire system into a state of chaos. The issue here is that small changes can produce big and non-linear outcomes, much like the last straw that breaks the camel's back. The latter is a good example – a small addition to load changes the whole status of the camel from standing and functional to broken-backed and down. At times the leverage point may be obvious, but sometimes they will only become apparent through 'sensitivity analysis' – a process where specific changes are made to certain influences within the model, with all other components held constant to determine the impact on other elements of the structure.

Managers will be keen to identify those areas of the system at which they can direct action in order to achieve maximum payback in terms of their objectives. However, if sensitivity analysis is weak or too complex to use it will not give very accurate predictions and will therefore be of limited usefulness. Using the example of unplanned hospital admissions, Kendrick and Conway (2003) show that there is no simple path from possible causes and effects, to the valid identification of points of leverage. In principle, almost every element in the following continuum of care which may affect rates of emergency admission is associated with a 'node' in the overall pattern of cause and effect, and offers a potential area for intervention.

- At one end of the continuum, measures to promote self care may have potential;
- Should the changes in the social underpinnings of informal care be accepted as inevitable, or is it possible to rebuild social capital?
- There is a general recognition that investment in social care will have positive trade-offs in terms of demands on the health service, but translating this into relevant investment in social care is difficult.
- The dynamics of primary care in relation to emergency admissions are the most crucial and least understood element of the entire system.
- Proactive rather than 'passive' admissions policies can divert a significant proportion of unnecessary admissions.

Determining exactly which node is most likely to offer the best 'system leverage', and persuading key stakeholders to act upon this determination is what the management of whole system working is all about.

Boundaries and Environments

Boundary Determination

The boundary of a machine or organism tends to be clearly defined, but in the case of public services, this is rarely the case. Where the boundary of a service is seen to be will depend on the worldview of the person observing the system, and there is the further matter of who should participate in defining purposes, taking decisions and drawing boundaries. The general view is that the boundary must be drawn so as to include all important interacting components, with the assumption that all significant dynamic behaviour arises from the interactions of components inside the system boundary. There is no simple answer to determining the nature of the relevant

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boundaries of a set of interacting components. One indicator could be communication channels – regular communication between stakeholders indicates that they are part of a system, and if there is no communication during a defined period then they are not part of a system, or at least not part of the same system. The difficulty, of course, is that very often they *should* be part of the same system – one has only to think of a public service system that has poorly established communications with service users and carers, yet this is often the case.

System Environment

An important issue is the nature of the ‘environment’ and the boundaries between a system and the wider environment. Jurkovich (1974) has argued that theorists, in discussing environments, tend to deal in vague terms – although there is consensus on the importance of the environment, there is still much disagreement about which features are most important. He proposed the following framework:

Environmental Movement	Design of Strategies and Tactics
Low change rate/stable	Easily accomplished
Low change rate/unstable	More complex
High change rate/stable	Very complex, characterised by muddling through
High change rate/unstable	Most difficult – problem coping in place of problem solving

The likelihood is that in the current political and policy environment, movement is high change and unstable – policies, processes and structures are in a state of flux. Indeed, it is precisely because the environment is so turbulent that whole system working has become a fashionable response.

System Contours: The Benson Model

One well known attempt to delineate the contours of a ‘whole system’ is by the American sociologist Benson (1975; 1983) with his notion of an ‘inter-organisational network’. The basis of his approach is two-fold:

- to identify eight components that together constitute a ‘holistic’ perspective on any specific problem or ‘domain’;
- to propose that these components are inter-related: changes in one will have effects upon the others.

The components, along with a brief explanation, are shown opposite:

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Component	Description
Domain Consensus	The extent to which there is agreement regarding the role and scope of each partner's contribution to the task
Ideological Consensus	The extent to which there is agreement regarding the nature of the tasks facing the partnership
Positive Evaluation	The extent to which those in one part of the partnership have a positive view of the contribution of those in another
Work Coordination	The extent to which autonomous partners are prepared to align working patterns
Fulfilment of Programme Requirements	The degree of compatibility between the goals of the partnership, and the goals of the individual stakeholders
Maintenance of a Clear Domain of High Social Importance	The extent to which there is support for the objectives of the partnership from the range of affected constituencies
Maintenance of Resource Flows	The extent to which there is adequate funding for the objectives of the partnership
Defence of the Organisational Paradigm	The extent to which stakeholders see themselves as working for the partnership rather than representing their constituency

This brief description of Benson's eight components will probably resonate with anyone involved in working across systems, whether at inter-agency or inter-professional level. The practical value of the approach lies in articulating the contours of a 'system', and in proposing that these are inter-related. The framework is more than a static classification – it allows for some understanding of the way the different components relate to one another, and hence of the extent to which an approach 'across the system' is attainable. Further discussion and applications of the Benson model can be found in Hudson (2004) through the following link:

http://icn.csip.org.uk/_library%2FICN%20Discussion%20paper%20-%20whole%20systems.pdf

section three

Managing and working in a whole system setting

Accepting the Unknowable

Working successfully in a whole system manner is easy to say and hard to do. Earlier in this discussion paper, the whole system exhortations of the Audit Commission and CSIP Older People Team were noted, but both reports acknowledged the difficulty of securing real change. In the case of the Audit Commission it was concluded that flexible, well co-ordinated services with a strong focus on promoting independence and rooted in the views of older people remained, in most areas, an aspiration (Audit Commission, 2002). Similarly, CSIP Older People Team (2003) concluded that for most places, a whole system approach is a statement of aspiration rather than a statement of achievement. Indeed, the barriers to whole system working identified by the CSIP Older People Team give an indication of the scale and complexity of the task:

- users and potential users of services are stakeholders in the planning of services, but it is difficult to gather their views coherently and comprehensively across organisations;
- planning becomes very complex because of the different planning processes and timescales of the organisations involved;
- different parts of one organisation may be contributing to different whole systems – such as clinical networks and intermediate care services – which makes planning within an organisation extremely complex;
- while in principle organisations may subscribe to a whole systems approach, under the pressure of allocating limited budgets, they may revert to unilateral action;
- an organisation may not see itself as a partner within a whole system, which can lead to one essential part of the system failing to co-operate.

The literature on complexity theory consistently emphasises the limitations on our ability to predict, plan and control the behaviour of social systems. Long term planning and the rigid structures, precise task definitions and elaborate rules that often accompany it, may be positively dangerous, ‘fixing’ an organisation in pursuit of a particular vision when an uncertain world requires flexible responses. For example, many acute hospitals are currently tied into long-term Private Finance Initiative arrangements that assume a sustainable role, yet the Community

Services White Paper foresees a radical shift of resources from the acute to the community sector.

So where does this leave public services managers who are being told to 'do whole systems'? Perhaps the most important message is the need to accept that the long term future of the organisations that constitute the system is inherently unknowable – especially in the high change/unstable environment that currently characterises the public services landscape. But this still leaves three key areas where interventions can make a difference.

- dealing with resistance to change
- dealing with valid different perspectives
- dealing with performance management requirements

Dealing with Resistance to Change

Atwood et al (2003) argue that it is implementation – rather than vision or strategy – that is the biggest challenge for leaders seeking to bring about change. This is in no small part due to the suspicion with which change is greeted. A survey of local government staff conducted for the Audit Commission (2001) produced the following findings:

- 74% agreed with the statement 'I understand the need for change'
- 55% agreed with 'I support the need for change'
- 52% agreed with 'I look forward to change as a challenge'
- 30% agreed that 'The reasons for change are well communicated to me'
- 22% said 'Change here is well managed'.

From a whole systems perspective, leadership is about creating situations where people themselves start to form new meanings, rather than in top-down pronouncements and restructurings. Atwood et al call for the creation of '*holding frameworks*' - communicating the core purpose, desired identity and values of the organisation and the system of which it is a part, together with the key challenges requiring response. These shared understandings, they suggest, can become fixed points in a sea of change. However, before any such framework can take hold, system stakeholders will need to confront the issue of 'valid different perspectives'.

Dealing with Valid Different Perspectives

The issue of 'valid different perspectives' was raised earlier. The ways in which worldviews can change has become a primary focus for 'soft systems thinking' with the aim of generating a systemic learning process in which the participants come to appreciate more fully alternative worldviews. The hope is that an accommodation, however temporary, becomes possible, with systems practitioners exploring the culture and politics of organisations to see what change is feasible.

It is necessary here to accept that completely different evaluations of social systems, their purposes and performance will inevitably exist, but the only way we can get near to a view of the whole system is to look at it from as many perspectives as possible – subjectivity needs to be embraced rather than ignored by the systems approach. What techniques might be used to achieve this? Mason and Mitroff [1981] highlight four principles underpinning the methodology of what has become known as 'strategic assumption surfacing and testing' [SAST]:

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- *participative*: based on the belief that different stakeholders should be involved because the knowledge and resources required to resolve wicked problems and implement solutions will be spread among different parts and levels in an organisation, and different groups outside the organisation.
- *adversarial*: judgements about how to tackle such problems are best made after full consideration of opposing perspectives.
- *integrative*: different options thrown up by the participative and adversarial principles must eventually be brought together again in a higher order synthesis so that an action plan can be produced and implemented.
- *managerial mind supporting*: managers exposed to different assumptions that highlight the complex nature of wicked problems will gain a deeper insight into the difficulties facing an organisation and appropriate strategies that will enable it to move forward.

It may not be obvious that an approach can be both adversarial and integrative, but Jackson (2003) identifies four stages in a facilitative process:

- *Group Formation*: As wide a cross section of individuals as possible who have an interest in the problem or policy should be involved. They will be divided into mixed groups with the aim of maximising a divergence of perspectives. Each group should have or develop a preferred strategy or solution, and each group's viewpoint should be clearly challenged by at least one other group.
- *Assumption Surfacing*: The aim here is to help each group uncover and analyse the key assumptions on which its preferred strategy rests in a supportive environment with good facilitation.
- *Dialectical Debate*: Here the groups are brought together and encouraged to enter into a dialectical debate. A spokesperson for each group will present the best possible case for its preferred strategy, being careful to identify the key assumptions on which it is based. After each group has presented, the dialectical debate will be guided by the following questions:
 - how are the assumptions of the groups different?
 - which stakeholders feature most strongly in giving rise to the significant assumptions made by each group?
 - do groups rate assumptions differently in respect of their importance for the success of a strategy?
 - what assumptions of the other groups does each group find the most troubling with respect to its own proposals?
- *Synthesis*: The aim here is to achieve a compromise on assumptions from which a new, higher level of strategy can be derived. Assumptions continue to be negotiated and modified, and a list of agreed assumptions drawn up. If this list is sufficiently long an implied strategy can be worked out – in effect the 'holding framework' recommended by Attwood et al.

Dealing with Performance Management Requirements

It has been evident for several years that the narrow and fragmented ways in which separate agencies are performance managed, usually by central government, can inhibit joint approaches. In complex adapted systems the pursuit of any single quantified target is likely to distort the operation of the system and thereby reduce its overall effectiveness; a specific target can encapsulate only one element of a complex organisation, and its dominance is likely to undermine other aspects that are crucial to long-term effectiveness. In a recent publication the NHS

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Confederation (2006), for example, has questioned how an increase in the proportion of patients seen within four hours in Accident and Emergency departments (the key centrally determined target) will increase the quality of the experience for an individual patient:

'Improving one part of the system does not cause the whole system to improve. Being moved from A&E after 3 hours 55 minutes may not improve patient experience if it is followed by a long wait for action in another, albeit slightly more comfortable setting. Asking patients about the whole experience will provide a much better measure.' (p5)

The recent Community Services White Paper, *Our Health, Our Care, Our Say* (Department of Health, 2006) acknowledges this difficulty and proposes alignment of the planning and budgeting cycles for the NHS and local government starting in 2007/8. This is a welcome step in the right direction, but further measures will be needed if whole system working and performance management regimes are to be reconciled. Chapman (2002), for example, argues that the policy output should be as non-prescriptive about means as possible – a minimalist specification that:

- establishes the direction of the change required;
- sets boundaries that may not be crossed by any implementation strategy;
- allocates resources but without specifying how they must be deployed, and for a sufficiently long period for a novel approach to be explored;
- grants permissions – explicitly specifies the areas of discretion in which localities can exercise innovation and choice.

The current mood for *outcomes based* policies would seem to be consistent with Chapman's argument. The reforms to children's services arising from the *Every Child Matters* Green Paper, for example, are firmly rooted in five desired outcomes in the lives of children and young people – being healthy, staying safe, enjoying and achieving, making a positive contribution and achieving economic wellbeing. Again, the social care Green Paper, *Independence, Wellbeing and Choice* (Department of Health, 2005) identified seven outcomes in the lives of adults that were to guide future interventions – improved health, improved quality of life, making a positive contribution, exercise of choice and control, freedom from discrimination or harassment, economic well-being and personal dignity. The extent to which the respective changes can deliver on these outcomes will clearly be determined by the extent to which a whole system approach across organisational and professional boundaries can be established.

Logically the need here is for a 'whole system' performance measure – a measure of a system rather than several disparate measures of the organisations that comprise a system. In Scotland there is a 'whole system indicator' relating to services for older people – the Joint Performance Information and Assessment Framework Whole System Indicator (JPIAF 10) – in which local partnerships need to indicate how they are managing the 'balance of care' (Scottish Executive, 2003). Five sets of performance information are identified:

- the number of people receiving Single Shared Assessments – an upward trend is desirable;
- the number of delayed discharges – a downward trend is desirable;
- the number of individuals over 65 admitted to hospital as emergency admissions – a downward trend is desirable;
- the number of individuals being supported long term in accommodation other than in their own home – ideally a long term relative decrease;
- the number of individuals being supported in their own homes through receiving 10+ hours home care per week – an upward trend is desirable.

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The difficult thing here is to demonstrate a relationship *between* these variables. The Scottish Executive is said to be developing a methodology for expressing these relationships and local partnerships will in future be asked to comment on the way that these factors relate to each other locally.

Case Studies

Attempts to put a whole system approach into practice are few and far between, and where they can be found they vary in purpose, approach and rigour. The examples given below have been selected because of the different contexts and issues they cover, and because they pay more than a passing conceptual nod to what a whole system approach is really about. The accounts are brief and illustrative with details on accessibility given for those wishing to examine the studies more deeply.

Emergency Admissions to Hospital

An analysis of emergency hospital admissions in Scotland by Kendrick and Conway (2003) aimed to identify points of leverage in the system where investment or redesign would have maximum impact in improving the functioning of the whole system. The study encompasses four main perspectives:

- *The Causal System:* From this point of view the whole system of health and social care is a complex network of cause and effect relationships – indeed, ‘a network of causal relationships’ is the simplest definition of a ‘system’. In a system as complex as health and social care, changes in one part of the system will cause ripples of consequence throughout the rest of the system. This paper maps only one segment of the system – that which determines emergency admissions.
- *The Data System:* Scotland has one of the best sets of data in the world on historical patterns of activity in the acute sector of health care – there is comprehensive data on hospital admissions going back over twenty years. But for many of the other important areas of the whole system there is very little data, and until we have a better understanding of what the causal connections in the system actually are, it is difficult to model them.
- *The Organisational Whole System:* This perspective addresses the workings of the whole system in organisational terms, and is the most common context in which a whole systems approach is adopted. The emphasis is on making the various parts of the health and social care system function together as a single system rather than as separate silos at all relevant levels.
- *The Patient Experience of the Whole System:* The whole system comes together in the experience of each individual. It is only by establishing a perspective on the complete patient experience of care that we can fully assess the true significance of aggregate trends.

Full Reference: Kendrick, S. and Conway, M. [2003], *Increasing emergency admissions among older people in Scotland: a whole systems account*. Information and Statistics Division: NHS Scotland.

www.isdscotland.org/wholesystem

A further illustration addressing the need to reduce hospital admissions, but one that uses systems thinking in a less structured way is the account of work led by Kent County Council as part of the Innovation Forum programme. Details at:

www.idea-knowledge.gov.uk/idk/aio/4103576.

Delayed Discharge from Hospital

In *Moving On? A handbook for modelling the whole system for delayed discharge in Tayside*, an attempt is made to develop a whole systems model for Tayside to help tackle its delayed discharges from hospital. This model is based on a 'stocks and flows' approach that has been likened to filling and emptying a bathtub. The bathtub represents the 'stock' of water which can rise or fall due to the 'flow' of water coming in from the taps or released through the plug. The report concludes that by enabling stakeholders to investigate the impact different strategies could have on their system, a number of lessons were learned:

- it is important to provide a balance of strategies if sustained reductions in delayed discharge are to be achieved;
- there is no single/one size fits all solution;
- changes in process are as important as investment in capacity;
- although each of the strategies produced reductions in delayed discharges, without redesign of processes there appears to be a level of delayed discharges below which it would be extremely difficult to go.

Full Reference: Audit Scotland [2005], *Moving On? A handbook for modelling the whole system for delayed discharge in Tayside*.

www.audit-scotland.gov.uk/publications/pubs2005-07-18

Housing Management

This study undertaken for the former Office of the Deputy Prime Minister (ODPM) in 2005 explores the use of 'systems thinking' in a social housing setting, especially the effects on the delivery of housing management and maintenance services. A pilot programme was developed for three housing organisations to learn and use a whole systems methodology termed '*lean systems*' across three service areas – rent collection and debt recovery, voids and re-housing, and responsive repairs. A number of conclusions are drawn:

- systems thinking has the potential to deliver wholesale efficiencies in service delivery;
- each area had significant amounts of waste, and the methodology allowed for that waste to be identified, categorised and removed;
- the reviews were carried out by operational staff to ensure an accurate reflection of what was happening;
- the support of the Chief Executive and senior management team is crucial;
- there are many types of systems thinking; organisations should research the field fully and ensure the product used will work within their own setting.

Full Reference: *A Systematic Approach to Service Improvement: Evaluating Systems Thinking in Housing*. Office of the Deputy Prime Minister, 2005.

www.communities.gov.uk/index.asp?id=1165574.

The Benson Framework

There have been few attempts to apply the Benson framework, but one important exception is an investigation of child protection networks in the UK by Carol Lupton and colleagues (Lupton, 2001). Their focus is more upon the first four of Benson's components – domain consensus, ideological consensus, positive evaluation and work coordination – where there is greater relevance to operational activities. In the case of *domain consensus* they reported considerable confusion about respective roles on the part of social workers and health visitors and concluded

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that, at best, the degree of domain consensus was somewhere between middling and low. These tensions surrounding domain consensus were exacerbated by different professional approaches and frames of reference about the cause of child abuse and how it should be addressed – differences in *ideological consensus*. The findings on *positive evaluation* were more variable with some examples of high and low evaluation, and in the light of all of this the extent of work *coordination* was low.

Overall, the authors conclude that:

'The evidence suggests that the operation of child protection networks most closely approximates that of domain inefficiency: reasonable levels of domain consensus, but limited ideological consensus and work coordination, and uneven positive evaluation'.

This is not dissimilar to the judgement in a study of the impact of policy documentation on child protection by Glennie (2003) that also draws upon the Benson framework. In looking at the implementation of national guidelines on child protection, it concludes that *'the experience has highlighted again the difficulties of achieving joint vision, priority and ownership across organisations'* (p183).

The predecessor to this publication (Hudson, 2004) also outlines an attempt to apply the Benson framework to an integrated front line team of social workers and community nurses – in this case with more positive findings on the various dimensions and the relationships between them [see also Hudson 2006; 2006a]. But for the purposes of this discussion paper, the key issue is not so much the relative success of the various programmes but rather the usefulness of the framework for analysing system dimensions.

Conclusion

A whole system approach does not offer a single technique or a new big answer – there are no solutions that can be programmed in from the top. Rather it provides a framework within which most or all of the participants can agree an agenda for improvement or a process for moving forward. Whilst this may be the best that can be achieved, it may still appear inadequate to those wedded to the idea of an instant solution. As observed earlier, whole system working is more about *problem coping* than *problem solving*.

Adopting a system approach therefore requires a radical reappraisal of *what* can be achieved as well as the *means* by which it might be secured. Unfortunately, despite occasional rhetoric to the contrary, failure is something that management and governments tend to shy away from. Chapman (2002) argues that rather than learn in detail from a failed experience they will simply ‘not do anything like that again’. However, he suggests that in the context of a learning culture, failures can be seen as opportunities to progress rather than occasions for blame, recrimination and point-scoring. But where failure is unacceptable, learning is not possible.

This discussion paper attempts to show how whole system working offers no simple solution and is difficult to achieve. Yet the paper remains optimistic that, in the context of the White Paper *Our Health, Our Care, Our Say*, there is now a sharper understanding of the inescapable need for working across a system – the beginnings of a theoretical underpinning to any such interventions – and a growing understanding of how the process can be undertaken. Much more will be heard about whole system working over the next few years, and much more will be demanded of those managing and working in inter-dependent domains. Doing nothing will not be an option.

Appendix

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USEFUL LINKS

The web site of the Integrated Care Network has a number of useful sources and links on whole system working – www.icn.csip.org.uk.

The Information and Statistics Division of NHS Scotland has access to the whole system study of emergency admission – www.isdscotland.org/wholesystem

The Audit Scotland whole system model on delayed discharge can be found at www.audit-scotland.gov.uk/publications/pubs2005-07-18

The use of systems thinking in relation to social housing is at www.communities.gov.uk/index.asp?id=1165574

A useful discussion of ‘wicked issues’ can be found at http://www.3m.com/meetingnetwork/readingroom/gdss_wicked.html

The International Collaboration on Complex Interventions [ICCI] is a project funded by the Canadian Institutes of Health Research. It includes funded collaboration on the use of complexity theory – www.interventionresearch.ca

There is a Health Complexity Group at the Peninsula Medical School (Universities of Exeter and Plymouth): www.pms.ac.uk/pms/research/healthcomp.php. Although focusing on healthcare, they have also done some work on community regeneration and broader issues of organisational change including at local govt level.

A discussion of whole system terms in the UK context can be found at www.cat.csip.org.uk/_library/docs/GoodPracticeGuides/wolesystemspaperfinal2.pdf.

A series of useful quotations of whole system working is at www.worldtrans.org/whole/wsquotes.html.

The NHS Modernisation Agency has an interesting section on ‘whole system alignment’ – www.wise.nhs.uk/cmsWISE/Service+Themes/acuteservices/sys/.

Wikipedia, the free encyclopedia, has a useful discussion of the concept of ‘systems thinking’ – http://en.wikipedia.org/wiki/Systems_thinking.

There are various consultancies that offer support with whole system working. Examples are www.bobhudsonconsulting.com; www.wholesystems.co.uk; www.thewholesystem.co.uk.

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