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AN ANALYSIS OF THE ROLE OF SOFT SYSTEMS METHODOLOGY IN THE CHANGE PROCESS
AND THE CONTRIBUTION OF THE FACILITATOR WITHIN THIS PROCESS

SANDRA JULIE DICKINSON

Doctor of Philosophy

ASTON UNIVERSITY

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An analysis of the role of Soft Systems Methodology in the change process and the contribution of the facilitator within this process

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2009

This research aims to examine the effectiveness of Soft Systems Methodology (SSM) to enable systemic change within local government and local NHS environments and to examine the role of the facilitator within this process. Checkland's Mode 2 variant of Soft Systems Methodology was applied on an experimental basis in two environments, Herefordshire Health Authority and Sandwell Health Authority. The Herefordshire application used SSM in the design of an Integrated Care Pathway for stroke patients. In Sandwell, SSM was deployed to assist in the design of an Information Management and Technology (IM&T) Strategy for the boundary-spanning Sandwell Partnership. Both of these environments were experiencing significant organisational change as the experiments unfurled.

The explicit objectives of the research were:

- To examine the evolution and development of SSM and to contribute to its further development.
- To apply the Soft Systems Methodology to change processes within the NHS.
- To evaluate the potential role of SSM in this wider process of change.
- To assess the role of the researcher as a facilitator within this process.

- To develop a critical framework through which the impact of SSM on change might be understood and assessed.

In developing these objectives, it became apparent that there was a gap in knowledge relating to SSM. This gap concerns the evaluation of the role of the approach in the change process. The case studies highlighted issues in stakeholder selection and management; the communicative assumptions in SSM; the ambiguous role of the facilitator; and the impact of highly politicised problem environments on the effectiveness of the methodology in the process of change. An augmented variant on SSM that integrates an appropriate (social constructivist) evaluation method is outlined, together with a series of hypotheses about the operationalisation of this proposed method.

DEDICATION

This thesis is dedicated to my parents, James and Doreen Dickinson, whose loving support and absolute faith in me is a constant source of strength and inspiration.

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CHAPTER ONE

INTRODUCTION

1.1 Structure of chapter

This Chapter introduces the research and the theoretical concerns that underpin it. The aims and objectives of the research are explained and the general context of change in the NHS is reviewed. The contextual background to this research is set out at the end of this chapter.

1.2 Aims and objectives of the research

The aim of this research is to examine the effectiveness of the Soft Systems Methodology (Checkland and Scholes, 1999; Wilson, 1990, 2001) to contribute to systemic change processes within health sector environments in the UK. The Soft Systems Methodology (SSM) was applied on an experimental basis in two application environments, Herefordshire Health Authority and Sandwell Health Authority. The Herefordshire application used SSM in the design of an Integrated Care Pathway for stroke patients. In Sandwell, SSM was deployed to further progress the design of an Information Management and Technology (IM&T) Strategy for the boundary-spanning Sandwell Partnership. Both the Herefordshire health sector and Sandwell local governance environments were experiencing significant organisational change as the experiments unfurled. This

ongoing change, and the cultural turbulence associated with it, will certainly have framed the amenability of the agents and the capacity of their organizational environments to engage with the SSM experiments described in this Thesis.

The specific objectives of the research are:

To examine the evolution and development of SSM and to contribute to its further development.

The Soft Systems Methodology is one of a number of ‘Problem Structuring Methods’ (PSMs) to which Rosenhead and Mingers (2001) refer. The development of these methods constituted a response to a crisis in operational research and systems thinking over three decades ago. At the core of the crisis was the schism created among system thinkers between the hard systems paradigm of operational research and systems engineering, and what were later to be labelled as the ‘soft approaches’ which included Checkland’s SSM. The latter were designed to take into account the human and social factors of organisations during systems design.

‘Mode 1’ of SSM is comprised of the seven stages described by Checkland in its first phase of development (Checkland 1981, 1998). These stages are explained in full in Chapter 2. Although Checkland advocates iteration of the stages if and when it is required, the stages are generally interpreted as prescriptive and meant to be followed in sequence. The progress of the methodology is maintained until

the final seventh stage (taking ‘action to improve the situation’) is reached. However, more experienced users will tailor their application of the methodology as a ‘sense-making’ device. Checkland dubs this more intuitive approach, ‘Mode 2’ (Checkland, 1998). In this interpretation, researchers may, for example, begin an SSM analysis by constructing a relatively crude activity model based on their view of the problem situation. This model may be used to structure interviews with the stakeholders. In this scenario, the initial activity model takes the place of the rich picture in Mode 1, but greater weight is given to it. This is because it represents a logical, systemic view of the researcher’s perceptions and may in fact be incorporated in the final models.

In the current research, Checkland’s Mode 2 has been used as the primary approach to the experiments. In both cases, though, workshops were held with all stakeholders to attempt to construct consensus models. This was possible only because of a high degree of similarity between the original conceptual models in both applications. However, using SSM in this way is not conventional. Additionally, the identification of stakeholders, which is not regarded as problematic in either Checkland or Wilson, is identified as an issue in this research.

To apply the Soft Systems Methodology to change processes within the NHS.

In this research, SSM has been applied to health sector environments which are involved in a process of change. Policy making within health care settings in the UK is often portrayed as symbolic in nature (Pettigrew, 1992; Korman and

Glennerster, 1985). This perspective will be considered in this research. Checkland (1999), in his account of the impact of SSM on organisational change, highlights the plethora of changes imposed by UK governments on the Health Service. He is persuaded that this situation illustrates that structural change is imposed on this environment with little regard paid to the process and attitudinal change also required.

It would seem reasonable to view the NHS as an open system, operating within quite loose boundaries which are regularly defined by an influential external environment. Yet, the tenacious influence of its underlying culture, which is founded on the expert power of clinical professionals and their complex and hierarchical inter-relationships, is dominant in the culture of the NHS. The move towards seamless, integrated care and management settings certainly challenges this underlying culture and requires significant attitudinal shifts within the NHS, the extent of which may have been underestimated. This therefore provides a robust testing ground for an assessment of the effectiveness of SSM in the change process.

To evaluate the potential role of SSM in this wider process of change.

The contribution of SSM to structural, process, or attitudinal change has been claimed by Checkland (1999) to be one of its most powerful characteristics. SSM offers a systemic framework which can be used to explore problem situations and result in some kind of change or improvement. The emphasis on organisational change and improvement has increased steadily over the thirty

years of the development of SSM. It would seem, therefore, to be reasonable to attempt to assess the role of the approach in the change process.

The difficulty of assessing the role of SSM in the change process lies in the very nature of its philosophical stance as a continual learning system. This position does not take Stage 7 of the methodology ('action to improve the situation') to be the ultimate end point, since human affairs will be subject to continual transformation. This will in turn reshape norms and values which will then affect any evaluation of ensuing change or improvement. A fundamental difficulty for SSM is that the nature of the change or improvement evolves from the use of the methodology; from the outset, it is the problem situation which is explored, not the solution. The solution (that is, the change) emerges from the modeling which takes place during the application.

There are, in addition, some further issues that have been considered under this objective. These include the level and degree of substantive participation among stakeholders, the influence of organisational politics, and the impact of powerful actors – typically managerial – among the participating stakeholders. These issues are all obviously related.

To assess the role of the researcher as a facilitator within this process.

During the applications, the role and influence of the researcher has been monitored. The analyst's function in SSM is that of a facilitator, helping stakeholders to use the methodology. The SSM facilitator is therefore required to

maintain both objectivity (his or her worldviews are not deemed relevant to the study, nor should the researcher be judgmental about the worldviews offered by stakeholders) and a high level of trust. During this research, two major issues have been identified:

- a. The influence of organisational politics on the change process is significant, but the adequacy of the process of cultural analysis to address this is questionable. Theoretically, the facilitator must be culturally and politically neutral, but this research challenges the tenability of that stance in a change process.
- b. It is required that the SSM facilitator helps the stakeholders to use the methodology, but whether this concerns both process *and* content is not clear. In other words, stakeholders will need help in understanding how the methodology works and the modeling techniques used, but the act of advising on the latter, particularly to stakeholders using SSM for the first time, often requires the facilitator to suggest actual activities to be included in the modeling. This means that the facilitator is contributing to the outcome, a values-laden intervention.

SSM Mode 2, in particular, emphasises the issue of intervention in both process and content. Within Mode 1, the role of the facilitator is intended to be entirely objective and culturally independent. Its function is that of an expert facilitator in the use of the methodology. Checkland (2001) believes that the role of the

facilitator is to transfer knowledge of the process. Hence, within Mode 1, the facilitator's contribution is knowledge of process and the stakeholder's is knowledge of context. Mode 2 appears to suggest a different stance for the researcher, based on a more substantive contextual understanding. This poses the issue: to what extent does the facilitator influence the change process? Indeed, Franco (2007) refers to a 'facilitator effect' in most PSM-based interventions.

To develop a critical framework through which the impact of SSM on change might be understood and assessed.

In spite of the widespread knowledge and use of SSM in various contexts over three decades, there is relatively little available evidence on its effectiveness as an instrument of change in practical applications. White (2006) contends that in the wider field of Problem Structuring Methods there are few evaluative reports of their use. Evaluation activities provide a potential source of critical evidence. The limited evaluative concepts from the critical literature concerning SSM (Jackson and Keys, 1984; Flood and Jackson, 1991; Mingers and Taylor, 1992; Ho and Sculli, 1994; Ledington and Donaldson, 1997; Connell, 2001; White, 2006; Jackson, 2006) are considered in this research. It is also contended that Fourth Generation Evaluation (Guba and Lincoln, 1989) can be applied to the context of SSM to provide more appropriate evidence on its effectiveness. Fourth Generation Evaluation (FGE) is claimed to be 'responsive evaluation'.

'Responsive evaluation is not only responsive for the reason that it seeks out different stakeholder views but also since it responds to those items in the subsequent collection of information' (Guba and Lincoln, 1989:41).

There is thus an acceptance of ambiguity in the scope and elements of the evaluation and an explicit process of negotiation through stakeholder engagement. Stakeholders are important at all stages of the SSM process, and the notion that objectives cannot be clearly defined in advance is central to SSM. The hermeneutic dialectic circle of Fourth Generation Evaluation concerns the exploration of the different perceptions of stakeholders. This also resonates with SSM's focus on individual worldviews. Stakeholder empowerment, which assumes that more successful change outcomes are achieved through sustained stakeholder participation, is central to both approaches. These methodological parallels are thus suggestive of a potentially fruitful cross-fertilisation. This will be explored more fully in the ensuing analysis.

There now follows a brief overview of some of the central ideas and entities to be found in this Thesis.

1.3 Soft Systems Methodology

The Soft Systems Methodology is discussed in more detail in Chapter 2. It is one of the most well-known of a group of alternative information system methodologies which have been designed to account for and integrate the human and social factors of organisations while information systems are being designed (Checkland 1981, 1998, 1999; Wilson, 1990, 2001). It was initially developed to provide a structured methodology which could be used to carry out

organisational analysis within what were seen as problematic environments.

Two broad approaches to SSM have been developed. Checkland's interpretation advocates SSM as an organisational learning process with the aim of achieving organisational improvement or change. This approach accords considerable significance to the sociology, politics and culture of a situation during the process of organisational analysis. This is required, because these factors are considered to play an important role in the process of change (Checkland, 1999). The second approach is associated with Wilson (1990). It is more specifically focused on the field of information systems development. Wilson's interpretation likewise places a strong emphasis on socio-cultural analysis, but the ultimate aim of using this approach is to produce information systems requirements sensitised to an organisational context. The systemic interpretation of social and cultural factors is deemed to be important in interpreting that context, but they are not accorded the strong causal status to be found in Checkland's work. Although Checkland's approach is examined and utilised in what follows, some elements of the Wilson approach, such as Consensus Modeling, have also been used in the applications.

Documented examples of the specific application of SSM to the UK health sector exist (for example, Kalim et al, 2004; Jacobs, 2004; Kotiadis, 2007). There are, however, far fewer examples of systematic attempts to evaluate the effectiveness of SSM in the process of change, as noted above.

1.4 The National Health Service and Change

Since its creation in the 1940s and until the 1980s, the National Health Service (NHS) in the United Kingdom experienced relatively little structural and cultural change, apart from the natural processes of growth and development that one would expect to occur within any professionally complex service. Since the 1980s, however, a number of national policies and strategies relating directly to both the structure of the service and to its underlying ethos have resulted in a state of almost continuous change. An abiding characteristic of the NHS is the expert power of clinical professionals and their complex and hierarchical inter-relationships. Furthermore, as an organization, it is unique in terms of its size and complexity and therefore idiosyncratic in its approach to change (Pettigrew, 1992).

The health sector has been chosen as a research setting for the experiments conducted here for a number of reasons. It continues to experience significant structural and cultural change, the latter impacting particularly on the fundamental roles and inter-relationships of the clinical professions. So-called ‘National Service Framework’ agreements and clinical guidelines determine patterns of care to which the professions must conform. Rules of Clinical Governance require, moreover, increased forms of accountability for their actions. Health-related regulatory bodies frequently impose new guidelines and advice on health professionals regarding both professional processes and acceptable behaviour. For example, the ‘Council for Healthcare Regulatory

Excellence', established in 2003, published guidelines in 2008 regarding the 'sexual boundaries' which should be observed between healthcare professionals and teachers. Included in this broad-ranging guidance on professional and ethical standards is the development of so-called 'clinical pathways'. Integrated Care Pathways are a specific form of process maps that are long-established in the literature on Total Quality Management. They seek to mesh the efforts of a number of professional and technical agents through the systematic re-design of processes of patient treatment and care. These maps were of particular significance in the Herefordshire case and will be returned to as that case unfurls. The theme of inter-professional working is, though, a key issue in NHS change. The 'modern and dependable' NHS is committed to the development of seamless, integrated care (Department of Health, 1997). Traditionally a professional bureaucracy (Mintzberg, 1990), this vision implies that the NHS needs to move towards team working across professions, health sectors and related agencies. The implementation of Primary Care Groups in April 2002 and Integrated Care Pathways in the late 1990s, reflect an intention to deliver care across received professional and organisational boundaries. Their use implies at least partial deconstruction of those professional hierarchies that have dominated the physical and political structure of the NHS for many decades. The achievement of a truly integrated NHS thus requires something of a cultural revolution within the health and related sectors, both in the utilisation of more integrated information systems and technology and in the prevalent roles and inter-relationships between powerful interest groups (Munir and Boaden, 2001). The establishment of the National Programme for Information Technology

(NPfIT) as part of the 'Connecting for Health' initiative in April 2005, is a clear manifestation of this.

In common with public services in general, some of the changes within the NHS will be triggered in response to political or social issues which are reflected in national policies, but that may themselves be temporary in nature. The role of national and regional policies and, to some extent, public opinion is particularly influential (Webster, 1998). Pettigrew (1992) provided a comprehensive and well researched perspective on change in the health sector. In particular, he refers to a 'modus operandi' which concentrates action on the imposed policies to the detriment of those facets of health care that reside in the public's 'back drawer'. He refers to this modus operandi as strategy, as opposed to policy, the implication being that action is focused on the appearance of making imposed policies work. Korman and Glennerster (1985) have argued that policy making in health care settings is symbolic, driven in response and reacting to political or social issues. The continuing relevance of this view of policy making within the NHS will be considered in this research. Checkland (1999) echoes this sentiment in his account of the impact of SSM on organisational change. He notes the frequency and rapidity of change imposed on the NHS by the UK Government. This provides, he suggests, a 'good illustration of imposed structural change with relatively little attention to the process and attitudinal change also required' (p. A29). Pettigrew also refers to the neglect of the role and influence of power and politics in the change process. These important themes in the secondary research

are more fully addressed in Chapters 4 and 5 (Data Analysis) and 6 (Discussion).

This line of argument indicates an essentially reactive strategic environment which requires managers to make imposed and often untenable changes work – or at least, to gesture in that direction. It could then be difficult to engender a sense of change ownership and commitment in this kind of climate. The argument suggests that the influence of decentralized political power within this context of imposed change would appear to be limited to the activities surrounding policy implementation. Yet, the impact of expert power (that is, the knowledge that resides within the clinical professions, particularly doctors and surgeons) is reciprocally to the fore here. It is this possibility that makes any attempt at a cultural change which is seen to imply a fundamental shift away from such expert power, difficult to achieve.

White (2000) has argued that public and voluntary organisations are now facing the kind of turbulence and uncertainty in their operational and strategic environments that private sector organisations have always faced. He refers in particular to the emergence of policies and institutions which have resulted in radical and unintended consequences. For example, ‘contracting out’ to private or voluntary organisations has unintentionally resulted in a fragmentation of services. The response to this has been a movement towards horizontal co-ordination, partnership and joint accountability. The NPfIT project may be situated within this co-ordination effort. However, these attempts to re-centralise on the basis of voluntary agreement add yet another layer of complexity to an

already ‘change-fatigued’ public sector environment. The NPfIT project has been problematic for precisely these reasons, as Hendy et al (2005) show. Their research also illustrates that those projects which attempt to initiate integrated ways of working where little existed before, encounter cultural and political obstacles. The implication would appear to be that over twenty years of radical national policy relating to the NHS may have had only a limited impact on its dominant cultural paradigm and expert power base. Attempting to implement change which challenges this – as the experiments in Herefordshire and Sandwell reported below seek to do - may prove problematic.

Systems thinkers (Ackoff, 1974; Beer, 1978; Schon, 1971) advocate the planned management of complexity as a way of dealing with change in a problematic environment. More recently, a ‘whole systems approach’ (Bunker and Alban, 1994; White, 2000) has been recommended. White specifically addresses this approach in its application to the public sector. This entails viewing an organisation as a complex set of interacting parts, both influencing its environment and being influenced *by* it. Schein (1993) argues the fundamental importance of involving the whole organisation in any effective change process, a viewpoint that resonates with the ‘whole systems approach’. Given the noted fragmentation in delivery systems, defining the whole-organisation may be difficult in itself. Thus, Lowdnes and Skelcher (1998) argue that public sector organisations are now expected to redefine their boundaries and enact new relationships and partnerships, which may include the private and voluntary sectors, and network with those other agencies. White points out that a great deal

is known about effective public sector management, but less is understood about managing change in situations which cross organisational boundaries or involve networks of different agencies (White, 2000).

Although SSM appears to have potential in relation to this view of change strategy, it is not without its critics. Flood and Jackson (1991) do not believe that genuine participation – a key principle of SSM practice - is possible unless stakeholders are represented in the widest possible sense. They remain unconvinced that this is ever achieved in SSM. Beeson and Davis (2000) argue that analysis in SSM is largely conducted by the analysts alone and any debate about change is dominated by the voice of management, manifesting its positional power. Beeson and Lynch (1998) argued that the human activity models that are constructed in SSM are too idealised to model actual organisational behaviour. It should be noted here, though, that the conceptual models of SSM represent formal, more or less abstracted systems. Although the logical dependencies which determine the activities and their relationships to each other are essentially logical, rather than real, they do represent human activity (through the use of choice verbs). It is certainly possible that, from time to time, practical organisational behaviour is irrational, illogical or incoherent, but SSM modeling is concerned with the design of systemically coherent models. These various criticisms appear to demonstrate a gap in the knowledge base concerning soft systems and whole systems approaches in general. As noted, the effectiveness of SSM in the change process has not been rigorously evaluated, particularly in environments which seem to require a whole system

approach and which place a strong emphasis on cultural and human issues.

In this research, the two applications both concerned projects that involved a substantial level of integration between different professional agencies. In the Herefordshire application, the agencies were exclusively represented by health professionals, although many had not previously worked together. Here, the common understandings wrought by professional accountability – albeit to different associations – may have served to lend a degree of commonality to the worldviews of the participating stakeholders. In the Sandwell application, the agencies were more widely drawn from other functional constituencies of a Metropolitan Borough Council, including many non-health stakeholders. Both applications were considered by the author to provide a robust test of the capability of SSM to deliver change, albeit in different ways. Both involved working with agents who represented a plurality of interests. Both manifested facets of partnership working. It is to this issue that the discussion now turns.

1.5 The Concept of ‘Partnership’ in the Public Sector

For almost a decade in local authorities there has been an impetus, largely driven by funding arrangements, to work in ‘partnership’.

‘The pressure to collaborate and join together in partnership is overwhelming. Partnership is no longer simply an option; it is a requirement’

(Dowling et al, 2004:309).

The most recent wave of public policy drivers in the UK regarding partnership lie with the host of national imperatives launched by the Labour government from 1997. These demand joint working relationships within and between agencies (Balloch and Taylor, 2001). A similar emphasis on partnerships is evident in many health service environments. The Health Improvement and Modernisation Plans studied by Elston and Fulop (2002) provide one such example, as do the plethora of capital expenditure partnerships funded through the Private Finance Initiative. There is however, no generally agreed definition of partnership. The term itself could apply to either the form or type of organisation, or to a way of working. The form of organization – its structure – is also likely to shift over time. Knight and Harland (2005) describe a partnership ‘life-cycle’:

- a. Forming (establishment through a common cause)
- b. Frustration (partners question aims and try to acquire control)
- c. Functioning (roles are clarified and projects are initiated)
- d. Falling (partnership disintegrates through conflict and attrition)
- e. Flying (partners work together in an environment of shared leadership and achievement of goals)

The ambiguity over structures versus process is compounded by confusion regarding the aims of partnerships. Knight and Harland (2005) draw the distinction in problem focus between strategic issues and logistical or operational problems. They then argue that formalised objectives are not appropriate in the

first case, but they are in the second. In the case of Sandwell, the intent of the Partnership as crystallized in its vision statement was clearly strategic. The design of an IM&T strategy was, however, one of its key tasks, a tactical orientation. The application of SSM to this environment was prompted by the apparent failure of the Partnership to achieve progress regarding the IM&T strategy. The elision of strategic and operational foci within a defined 'problem situation' may provide one explanation for this lack of progress, as it sought to achieve both a substantial policy agenda and a complex technical and operational one at the same time.

Elston and Fulop (2002) refer to organisational actors being 'mandated' to work in partnership, which implies a degree of coercion acting on them. 'Partnering' as a process may require individuals to demonstrate specific attitudes and behaviours.

Individuals may regard partnership working as threatening. Partnership breaks down bureaucratic certainties and addresses realities which are complex and fragmented (Wastell et al. 2004). Gould et al (1999) refer to the problem of collaboration with unknown and possibly unreliable agencies.

The theme of partnering as a personal challenge is also addressed by Sullivan and Skelcher (2002). They argue that individuals need to exercise a specific set of skills and abilities (so-called capacities) in order to support partnership and collaboration. These include skills such as 'boundary spanning' and the resulting

ability to generate informal, interpersonal networks, and principled conduct, which builds social capital. Newman (2001) refers to the importance of partnership leadership, and Harrison et al (2003) specify exactly what leadership means in this context. Leadership in partnerships requires:

- Organisation
- Diplomacy
- Facilitation
- Consultation

The paradigm shift towards partnership working in the public sector is clearly problematic.

‘Partnership is a vital element of the drive towards holistic government, yet the transition to horizontally organised structures with fluid governance arrangements and new accountability relationships is profoundly threatening to the established order of monolithic vertically governed bureaucracies, and considerable inertia is to be expected’

(Wastell et al, 2004:205).

It is not the primary purpose of this research to assess the effectiveness of the Sandwell Partnership *per se*. It became clear, however, during initial interviews with the Sandwell client, that the Partnership was failing in its effort to create a culture of ‘joined-up’ working. An awareness of this failure evidently contributed to the impetus to apply SSM to the problem. While the ineffectiveness of the Sandwell Partnership may or may not have contributed to the failure to achieve an IM&T strategy, it is the latter ‘problem situation’ that

was the focus of the SSM application.

If the ambiguities of working in partnership impact on the policy context of the SSM experiments, then the specific issues in formulating an IM&T strategy or forging Integrated Care Pathways (the Hereford case) provide the immediate driver that frames the problem situation itself.

1.5.1 IM&T Strategies

Signoretta and Craglia (2002) emphasise the development of integrated information systems to facilitate collaborative working in the public sector. The implications for undermining traditional silo structures and for driving ‘joined up’ working within and across agencies seem clear. There may be organizational resistance to this, however. Wastell et al (2004) support this, and contend that:

‘the main barriers to data exchange are cultural rather than technical or legislative. Although there are exceptions, organisations are insular, protective of and pre-occupied with internal concerns’ Wastell et al (2004 :203).

Additionally, the divergence in aspirational and realized values which may be present within individual agencies (such as health, welfare and law enforcement) could prove problematic with regard to the sharing of data. Wastell et al (2004) refer to the element of trust as a prerequisite for both any successful partnership and an underpinning strategy of data and information exchange.

‘It is worth emphasising that the dynamic relations between trust, information sharing and collaboration are reciprocal and mutually enforcing’ Wastell et al (2004:206).

These issues will be considered further in this research.

1.6 Integrated Care Pathways

An Integrated Care Pathway (ICP) is a plan of patient care relating to a specific area of clinical treatment, such as Stroke. Synonyms for ICPs include ‘critical care paths’ and ‘care protocols’. The purpose of a pathway is to implement and manage care for individual patients more effectively, by clarifying actors’ roles and responsibilities, and to ensure that fundamental aspects of care are not omitted. Pathways may include various standards and guidelines, as well as checklists and specific information about drugs and medication. The pathway should define multi-disciplinary practice and form a large part of the clinical record. It also serves to document the care given to each patient and could therefore also provide the basis for an audit of treatments delivered. ICPs have been developed and used in the UK NHS since the early 1990s, regulating the treatment of clinical conditions in primary, secondary and tertiary care. Since the late 1990s, their profile as a significant care delivery tool has been raised, and they were acknowledged as an option for delivering the Government’s ambitions for Clinical Governance (NHS Executive, 1998). They were also considered to be a forerunner to the Electronic Patient Record. Campbell et al (1998) describe ICPs as structured, multi-disciplinary plans of patient care, which identify the

essential steps required for the treatment of specified clinical problems. A pathway will define locally agreed clinical standards and evidence-based guidelines, while enabling the care given to a patient to be systematically documented. An important characteristic of an ICP is that of standardisation. O'Connor et al (1996) therefore believe that clinical outcomes are improved through standardisation of care, while Chassin (1996) points to a correlation between poor healthcare and unintended variations in clinical practice. Differences in practice between clinicians can result in unjustified variations in care and outcomes. Gaps between ICPs and delivered care show variations, the sources and rationales for which should be continuously probed and validated. This gap analysis then informs further pathway development. In this sense, ICPs offer a means of evaluating current clinical practice and thus enable quality improvements to be implemented which are based on evidence and outcomes. Other reported benefits of ICPs include a fall in the length of hospital stays (Wentworth and Atkinson, 1996) and reduced costs of patient care (Eagle et al, 1990; Weingarten et al, 1993). Clinical outcomes (Ogilvie-Harris et al, 1993; Mosher et al, 1992) and levels of patient satisfaction (Hoyle et al, 1994; Stead et al, 1995) may increase as a result of their use. Schrieffer (1994) reports improved communication between doctors and nurses ensuing from the adoption of ICPs.

The Herefordshire case centres on the development of an ICP that relates specifically to Stroke. Sulch and Kalra (2000) claim that ICPs assist in the treatment of Stroke, which is essentially multi-disciplinary in nature. McNicol et al (1993) and Grimshaw and Russell (1993) claim that multidisciplinary

development groups produce more valid guidelines for patient care. ICPs may also contribute to effective information management, through the systematic collection and recording of patient data. McNicol et al (1993) and Grimshaw et al (1995) highlight the importance of the involvement of clinical staff in the development of guidelines. Involvement promotes both acceptance and implementation, contributing again to changes in clinical practice. Kwan et al (2004) have evaluated the effects of an ICP for acute stroke patients, and report an improvement in the quality of documentation and process of care, and a reduced risk of some further clinical complications in patients. Atwal and Caldwell (2002) however, found little evidence in their study to support an improvement in inter-professional relationships and communication.

1.7 Contextual background to research

This section explains the organisational contexts which prompted the application of Soft Systems Methodology to the problematic situations in Sandwell Metropolitan Borough Council, and the Herefordshire Health Authority.

Sandwell Metropolitan Borough Council

Sandwell is a Metropolitan Borough situated to the west of Birmingham and consists of the six towns of Smethwick, Oldbury, Tipton, Rowley, Wednesbury and West Bromwich. With a population of approximately 282,000, it is a sub-region that suffers from very high levels of social deprivation, the lowest levels of educational attainment, and the poorest set of health indices of any within

England. The population comprises of a diverse ethnic mix and approximately 31% of adults possess no qualifications. Over the last decade, some 30,000 people have moved away from the sub-region and these are typically the younger and more economically able citizens, resulting in an increasingly aging population. The traditional industries of the sub-region are car and metal manufacture, but these have declined substantially and have not been replaced by service industries on the scale required (Sandwell Health Authority, 2000).

The Sandwell Partnership

In 2000, the Sandwell Civic Partnership was formed (this is now known as the Sandwell Partnership). This was made up of the major agencies of voluntary organisations, health, local authorities, police authorities, Chamber of Commerce, and local industries. The Partnership was formed to address the challenge of social deprivation in the area, with the following vision:

‘The Sandwell of 2020 will be a thriving, sustainable, optimistic and forward looking community’

(Sandwell Partnership, 2001).

The work of the Partnership emphasised commitment to social renewal and regeneration. There was a desire to bring about change on a Borough-wide level and to underpin this change project with ‘joined-up’ services. The Partnership was also founded on an ambitious social agenda concerned with developing the economy of the sub-region through education and learning. A most important part of the Partnership’s vision was the creation of new institutional forms based

on inter-agency models of working (Sandwell Partnership, 2001).

The environment of Sandwell MBC was characterised by a myriad of different projects and initiatives which are the consequence of separate and independent funding streams. The founding of the Partnership was partially influenced by the realisation that few, if any, of the larger projects which it aspired to implement could be delivered solely by one agency. One of the most obvious areas where the necessity for inter-agency work could be demonstrated was in the relationship between the health service and social services. The Local Implementation Plan for social services, for example, required a significant input from the health service in order to meet its objectives. Furthermore, government policy initiatives on e-Government increasingly focused on the concept of integrated service delivery. This integration was to centre, furthermore, on the needs of citizens and not on those of the service providers. The former required the involvement of multiple agencies.

The Partnership immediately faced two fundamental issues. First, how could all the agencies charged with delivering services be made aware of all initiatives and projects. Second, the level of integration which was required for the seamless delivery of services to citizens meant that appropriate technology had to be deployed to support data exchange between the various agencies. In response to these dilemmas, the Sandwell Public Information Network (SPIN) and the Sandwell Partnership Information Group (SPIG) were set up. The issue of inter-agency communication was to be addressed through the work of SPIN, which

was tasked with the development of a Borough-wide public information network based on browser technology. Agencies would be offered a portal, called The Hub, which enabled them to assemble a network of linked projects and initiatives. The Hub provided an authoring tool which ensured consistency of content management and linkages. Additionally, there was a series of functions that ensured quality and legality and an active use of meta-tag technology to ensure a consistent network of information across the Borough. The Hub developed as information was added by the various agencies. In this way, the many staff establishments across the Borough were made aware of others' projects and initiatives. Some components of Hub pages were made publicly accessible and searchable by the general public, so that citizens making enquiries using the internet could locate service provision information. However, the e-Government agenda could not be fully accommodated via the Hub because it was not interactive. Citizens were not able to 'talk' to the Hub and they could not, for example, update personal details such as their address for the benefit of service providers.

The task of addressing the e-Government agenda was given to another group, the Sandwell Partnership Information group (SPIG), which represented all the major service providers within the Borough. It was this group which was required to define an Information Management and Technology (IM&T) strategy for the Sandwell Partnership. At the time that this group was formed (October 2000), it was clear that the creation of an integrated information and communication strategy for the Borough was complicated by the idiosyncratic information

requirements and data protocols of the various agencies and service providers. The NHS, for example, presented a particular challenge to the creation of an integrated IM&T strategy. Since the 1980s, the structure and form of the NHS had experienced several major changes which had affected organisational boundaries and lines of responsibility. Additionally, health authorities had been responsible for the implementation of their own information technology systems. This had resulted in a rather chequered picture of legacy systems and protocols across the national NHS which in many cases were unable to interface with each other. There were also issues of data protection which applied to patient data and to the transference of information across agencies (between, for example, the health and police authorities). This also highlighted fundamental differences between agencies. For example, information which may be regarded by the police as useful in preventing or solving crime, would be seen quite differently by social and health services. Their concern would centre on the protection and privacy of their patients. It could not be ensured that health information which is made available to non-health agencies is used for the delivery of services at the level of the citizen. To state the case somewhat bluntly, the motives for sharing data and information, and the use to which that information could be put, was not consistent across the Partnership.

The response of the SPIG to these issues was to adopt a number of streams and principles (or ends and means) which were aimed at addressing these fundamental challenges. These are set out in Table 1 below:



Aston University

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Table 1: The Sandwell Partnership IM&T Strategy Plan (Sandwell Partnership, 2001)

The Sandwell Project

Following the founding of the Sandwell Partnership and the work of SPIG to develop an action plan to achieve an IM&T strategy, there was confidence in the Borough that such a strategy would quickly be realized. Yet, within a year it was clear that the development of a Borough-wide IM&T strategy to support citizen-based services was proving very difficult to achieve. While there was general agreement on the Streams and Principles, an overall vision of what the IM&T

strategy would mean to all the agencies and stakeholders was lacking. This appeared to be because the agencies of the Partnership had become absorbed with their own localised information management issues and were not addressing how they could be resolved holistically, or at the level of the Partnership as a whole. The Head of IM&T at Sandwell Health Authority had some knowledge of SSM and believed it could be applied to this 'problem situation', because it was an approach that enabled problems to be explored at a systemic level. This person became the 'client' of the application, and the Sandwell Health Authority became the client organisation.

Herefordshire Health Authority

The Herefordshire Health Authority forms part of the West Midlands South Health Authority, which also includes Coventry, Warwickshire and Worcestershire. However, this project was confined to hospitals and agencies in and around Hereford only, and included the Herefordshire Primary Care Trust. Within Hereford, there is a Partnership framework in which seven organisations work together:

- a. The Chamber of Commerce: Herefordshire and Worcestershire.
- b. The Herefordshire Association of local councils.
- c. Herefordshire Council.
- d. Herefordshire Primary Care Trust.
- e. Learning and Skills Council: Herefordshire and Worcestershire.
- f. Voluntary Organisations.
- g. West Mercia Constabulary.

The Herefordshire Partnership was established in 2000. The Partnership is voluntary and comprises of public, private, community and voluntary organizations who are committed to working together to achieve the Community Strategy for Herefordshire (at the time of the research this was known as the 'Herefordshire Plan').

The Hereford Project

At the time that the Partnership was formed, the development of an Integrated Care Pathway for Stroke Care was identified as a priority by the Health Authority for delivering seamless, integrated care between acute and community settings. The development of a multidisciplinary ICP for Stroke as a significant change area was recognised by the SSM client, Herefordshire Health Authority, as an area of significant organisational change. It was the 'problem situation' to which SSM was applied. The work was concerned with producing an ICP and was not required to produce a specification for an electronic-ICP, although the use of SSM was considered to be conducive to this as a future development. Unlike the IM&T strategy in Sandwell, this application was not founded on any previous strategic work. That is, no formal 'Stroke Pathway' documents, strategies, or policy pre-existed the SSM application.

1.8 Conclusion.

This Chapter has set out the main objectives for this research. It has also outlined the key themes of the research and provided a brief contextual overview of the two cases to be studied. Both applications have been carried out in environments that were attempting to bring about significant cultural and organizational change. In both cases, the nature of those changes was fundamentally systemic in the sense that action was required to integrate and co-ordinate various elements operating at different levels in the environments of the problem situation. A plurality of interests was anticipated among stakeholders, given the partnership regulation of decisions and the strong professional accountabilities at work. The application of systemically coherent SSM modeling to these challenging problem situations would enable its effectiveness to bring about change and improvement to be robustly assessed. SSM has been halting in its approach to the task of evaluation, however. The current research seeks to address this issue through the development of more refined approaches to this task.

CHAPTER TWO

THE SOFT SYSTEMS METHODOLOGY – A LITERATURE REVIEW

2.1 Introduction

This chapter explains the fundamental characteristics and techniques of the Soft Systems Methodology (SSM) and its development over three decades of action research. An account is given of the emergence of SSM and the field of systems thinking in which it is embedded. The chapter includes a critique of the methodology with particular reference to the central issues of participation and evaluation in the change process, and the role of the facilitator, which is the theme of this research. The chapter will be structured into eight sections which cover the following themes: the emergence of SSM; the methodology explained; general systems thinking; hard and soft systems thinking; a rationale and critique of SSM including the issues of participation and the role of the facilitator, and evaluating SSM.

2.2 The emergence of Soft Systems Methodology

The history and development of SSM is detailed by Checkland and Scholes in their comprehensive 30 year retrospective account of the methodology (1999).

SSM began at the University of Lancaster during the 1960s. Here, Professor Gwilym Jenkins established the Department of Systems Engineering, the first of its kind in a UK University. The intended orientation of the new Department was towards organisational research and management, hence its position in the management area.

Previous to his work at Lancaster, Checkland, an early member of the Lancaster team (who would later become a major founder of SSM), was an experienced manager who had developed a healthy scepticism for the 'austere pleasures of General Systems Theory' (Checkland, 1981:10). This was based on a feeling that theoretical principles are not always helpful or relevant to the rigours of real-life. This appears to be the determination that he brought with him to Lancaster, a new Department which regarded engineering as an activity which could be applied as much to social situations (such as managing) as it could to mechanical or technical ones.

At this time the dominant paradigm for systems analysis was the systems engineering approach which is fundamentally rationalist, assumes the minimum of risk and uncertainty, and focuses on optimal solutions. Operational Research (OR) is a major example of this rational approach to planning (Rosenhead, 1989; Rosenhead and Mingers, 2001) and enjoyed a significant influence in rational decision-making during the 1960s and 1970's (Rosenhead, 1989).

Systems Engineering (SE) and OR belong to the group of 'hard' (as opposed to 'soft') systems analysis approaches. They are systematic in that they take organisations to be well-defined and unambiguously structured. Hence, the activities and functions can be broken down and systematised separately as increments. This perspective is aligned with Taylor's (1911) view of organisation and the machine-age approach which regards the whole organisation as being equal to the sum of the parts. It also coincides with a teleological view of management as being essentially concerned with goal-seeking decision making (Simon, 1960), and with Morgan's bureaucratic metaphor (1997).

The assumption initially made at Lancaster was that such rational, logical systems existed and that they were defined by unambiguous objectives. Furthermore, these were considered to be the only types of 'systems' which existed. Organisational systems were seen to comprise of functional subsystems, such as marketing and finance.

An early objective of the Department was to apply systems ideas to real world problems, in particular to less well-defined management problems. The new Department explored systems engineering methodology by applying it to non-structured problems in pluralist environments. They were concerned with ill-defined and ambiguous problems characterised by multiple viewpoints (Flood and Jackson, 1991). From its earliest origins, the development of the approach emerged from a conscious process of action research so that neither the ideas nor

the practice became dominant (Checkland and Scholes, 1999).

This experience within real-world organisations led to the discovery that systems ideas are not suitable to all environments, particularly those experiencing some kind of organisational problem which could not easily be defined. Checkland and Holwell (1998) are referring to this when they attack the 'naïve transfer' of systems engineering principles to ambiguous management problems.

This conclusion did not appear to question the validity or robustness of these conventional approaches to systems analysis, but it did challenge their applicability to all problem situations. In situations where the organisation is not well-defined and unambiguous, such approaches were seen to have limitations since they could not accommodate complexity. SSM can be seen therefore to have evolved out of the shortcomings of systems engineering and in particular its inability to deal with complex human and management problems (Checkland and Scholes, 1999).

However, this somewhat 'managerialist' standpoint is not itself unambiguous. SSM is referred to variously as a learning cycle (Checkland and Scholes, 1999), a problem structuring method (Rosenhead and Mingers, 2001), a methodology for organisational change (Checkland and Scholes, 1999), and a leading example of a research contribution to the area of real world problem solving (Ledington and Donaldson, 1997). This indicates a broader and more contestable view of managing. It also indicates a lack of clarity in the way that SSM is generally

regarded.

Over the thirty years of its existence and practice, two approaches to SSM have been developed. Checkland's approach takes SSM to be an organisational learning process which gives considerable significance to the sociology, politics and culture of a situation during organisational analysis (Checkland and Scholes, 1999). The approach developed by Wilson (1990, 2001) is aimed more squarely at information systems development. Peter Checkland and Brian Wilson both worked together in the same Department at Lancaster University.

Initially, the Checkland methodology focused on the structured systemic modeling of human activity (Checkland, 1981), based on the premise that what people perceive to be reality (rather than what the analyst observed reality to be) should be modeled. This stance therefore serves to 'legitimise' subjectivist evidence in analysis.

The incorporation of the stream of cultural analysis was the consequence of years of action research (Checkland, 1999) during which the methodology was developed, and the discovery that elements of organisational culture were significant to the process of logical modeling. The interaction between the two streams is clearly intentional and Flood and Romm (1996) contend that this demonstrates that SSM considers the two elements of structure and process and the relationship between the two.

The approach legitimises the open examination of organisational factors (such as culture) which are not normally explicitly acknowledged in conventional systems analysis. It is assumed that this increases the likelihood of system credibility (because the designed systems, which will be both organisational and information-based, will be culturally acceptable), and that this kind of 'front-end' analysis could itself be a powerful agent of organisational change, including cultural change which is arguably the most difficult to achieve (Kotter, 1996).

Both approaches share modeling stages and techniques and take a systemic view of organisation/information analysis. Although Checkland's culturally sensitised approach is advocated for the area of organisational change or improvement, he refers to its use in recent years 'in the creation of information systems' (1999:53). Checkland writes extensively regarding the role of SSM in information systems design (1998;1999). In so doing, he is deliberately interweaving both logic-based and cultural streams of practice.

In the late 1970s a number of alternative problem-solving methods, including SSM, had been proposed which challenged the technical view of systems analysis (Rosenhead and Mingers, 2001). Here, SSM was being cast in its culturally sensitised form. Rosenhead and Mingers refer to this as a crisis or a 'Kuhnian' paradigm shift in systems analysis. The new methods marked an important shift from 'problem-solving' to 'problem-structuring' approaches, and a change in the role of the modeller from 'analyst' to 'facilitator'. This was based on the fact that the new methods advocated a participative, user-centred approach

which required a facilitator to help users navigate their way through the process, and (in the case of SODA and SSM) to enable negotiation and accommodation. This will be an important theme in this research.

The emergence of an alternative systems paradigm generated significant challenge and criticism and the debate has continued (Jackson, 1982, Mingers, 1984). The major aspects of this critique are presented in Section 2.6.

Checkland's SSM played a significant role in this Kuhnian paradigm shift. Mingers (2004) refers to the early impact of SSM on the disciplines of Management Science and Operational Research:

“ Methods that had similar intentions to SSM were also being developed, for example cognitive mapping (Eden, Jones et al, 1983) and strategic choice analysis (Friend and Jessop, 1977) but none had the sustained impact of a series of well-argued papers by Checkland (1980;1981;1983;1985)”
(Mingers, 2004:43)

A major concept to emerge from this early work on SSM was a realisation that systems thinking constituted two different strands of thought, now known as ‘hard’ and ‘soft’ systems thinking (Checkland and Scholes, 1999). Mingers (2004) points to the complementarity between OR and soft systems and believes that OR practitioners generally recognised that hard technique alone could be inadequate and approaches needed to recognise the political and social dimensions of organisational problem contexts. It does now appear that the depiction of phenomenological approaches to systems analysis as a ‘paradigm

shift' is an exaggerated view; positivistic approaches are thriving and arguably remain dominant, particularly in information systems analysis.

2.3 The methodology explained

This section describes the fundamental stages of the methodology and how it works as a process.

SSM is one of the most well-known of a group of methodologies and approaches which have been designed for either information systems development or organisational problem solving, or both (Checkland 1981, 1998, Checkland and Scholes, 1999; Wilson, 1984, 1990, 2001). Rosenhead and Mingers (2001) refer to this group of approaches as Problem Structuring Methods. Also known as Soft Operational Research (OR), these approaches include the Strategic Options Development Analysis (SODA) approach by Colin Eden (Eden and Ackermann, 2001) and Strategic Choice Analysis (Friend and Hickling, 1977).

SSM is a user-centred approach which can be applied to implement organisational change, particularly that which concerns information systems development. The fundamental goal of the methodology is to apply purposeful action to problematical situations. Rose (1997) regards it as the most developed of the suite of soft systems methodologies. Its specific focus concerns both problem structuring and solving. SSM, like all soft OR methods, acknowledges that human and social factors are important in organisational activity and that

their investigation must be made explicit.

The key contentions which influenced the development of SSM are:

- a. Every situation experienced during the action research was one in which people wanted to take 'meaningful, purposeful action'. This directly contributed to the idea of creating human activity systems (which later became Conceptual Models). Human activity systems are defined as sets of activities which interact together to demonstrate the achievement of an underlying purpose. The product of systems interaction (goal achievement) generates a whole that would have greater value than the sum of the parts.
- b. In any given situation, the people involved may have different 'worldviews' about the purpose of the system. Initially, the SSM developers expected these worldviews to be technical in nature (according to the OR paradigm), but they discovered that worldviews could also be managerial and political. These worldviews could be used to inform debate and be compared to the real-world problem situation, contributing to the notion of SSM as a learning process. (Checkland and Scholes, 1999).

Flood (1995) defines SSM as a methodology for debating organisational change, with a direct impact on cultural change. SSM's contribution to change has been

claimed by Checkland (1999) to be one of its most powerful characteristics. It offers a systemic framework which can be used to explore problem situations and generate some kind of change or improvement. Checkland refers to structural, processual and attitudinal change, which may result from an application of SSM. This emphasis on change or organisational improvement has increased steadily over the thirty years of SSM development.

SSM is essentially concerned with exploring problems within areas of purposeful human activity and is theoretically applicable to a very broad range of organisational situations (Rose, 1997). Checkland's approach presents SSM as an organisational learning process which is continual and which attaches importance to the sociology, politics and culture of a situation during organisational analysis (Checkland, 1998).

SSM is described as 'soft' because it has been developed for ambiguous problem situations, such as those arising from issues of influence and responsibility, cultural change and effective leadership. These concerns are often rooted within the informal structures of organisational life, hence the emphasis on human and social issues within SSM.

Wilson (2001) points to the important difference between organisational units which contain people and are less well defined (such as an academic department in a University) and those which are specific and well defined (such as a power-generating plant). The former are more complex and contain a significant

uniqueness which SSM aims to surface. Organisations which are similar, such as manufacturing companies, will have a number of common functions, such as research and development or production. However, in terms of history and culture (the elements which a unique mix of people contribute to) all organisations will be different, to varying degrees. This is what characterises their 'uniqueness'. The following section explains the key stages of Checkland's (1975) approach to SSM.

2.3.1 The seven stages of Checkland's SSM

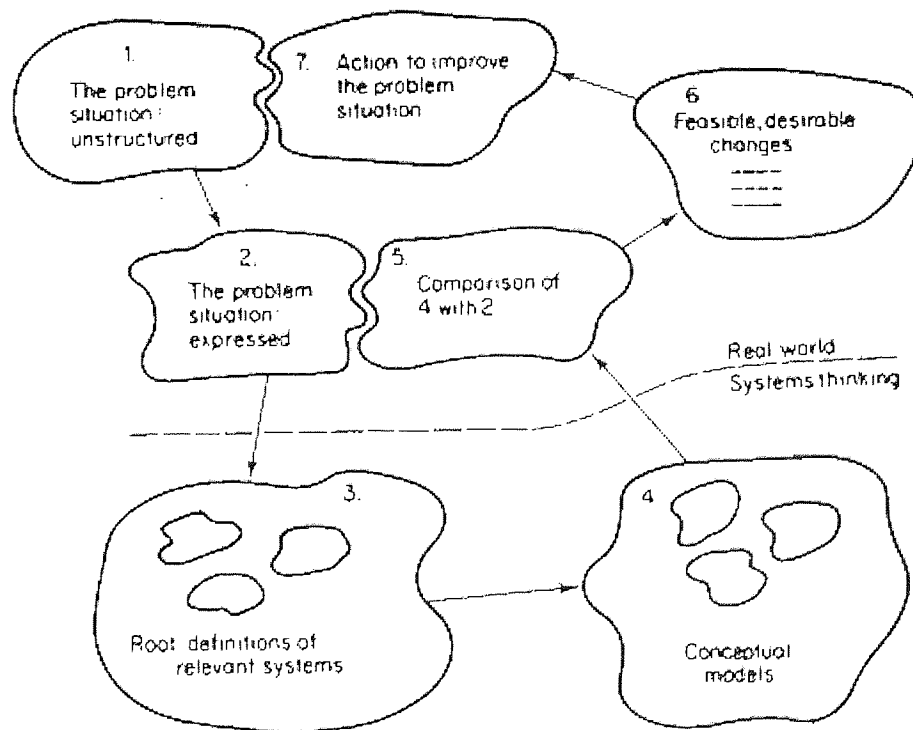


Figure 1. The 7-stage representation of SSM

In any application of the methodology, there will be participants (those who are directly involved in the problem situation) and the facilitator (or 'analyst'). The SSM process begins in a real-world situation which is regarded by some or all of its participants as problematic. However, although the participants sense that something is wrong, the participants cannot define, or cannot agree on, the cause of the difficulty. For example, they may have different worldviews concerning what the purpose of the organisation, or parts of it, should be. The process of SSM involves the collection of each participant's worldview, which is then used to create a systems model (a human activity system). The methodology is therefore used to facilitate exploration of this situation by 'selecting, naming, and modeling relevant human activity systems' (O' Pala et al, 2003: 707).

Stage One is a recognition of a problem, and is referred to as 'The problem situation unstructured'. It is at this point that a decision will be made to apply an SSM analysis to the situation.

As Stage One is concerned with identifying the problem situation, Stage Two is concerned with articulating the main tasks and issues of this situation in pictorial form as a 'Rich Picture'. This stage is referred to as 'Problem situation expressed'.

Stages One and Two are carried out by the facilitator and the primary purpose of the 'picture-drawing' stage (Stage Two) is to enable the SSM facilitators to express what they consider to be the key issues and tasks within the situation.

This stage is a real world activity and precedes any formal collection of worldviews (see below) and systems thinking. It essentially serves as an aid for the facilitator to understand the organisational context of worldviews. The facilitator may decide to show the Rich Picture to the participants, although there is a risk in this. By revealing their own interpretations of the situation they may a) antagonise some participants who may be depicted as 'issues' and b) compromise their supposed neutrality and unduly influence the way that the participants view the situation.

The technique of rich picturing can be used by experienced users of the methodology throughout the application, that is, it can extend into the systems modeling stages. For example, Rich Pictures can be used to express individual worldviews or the concepts which inform them. They may also be used to illustrate some of the formal modeling processes (such as Root Definitions, see below). If used in this context, they will be freely shown to all participants. In general, the purpose of the Rich Picture has changed and broadened over the years of the development of the methodology, and it has become a more interactive communication technique for both participants and facilitators.

The major modeling stages of SSM (Stages 3 and 4) are essentially concerned with the construction of activity models, each of which reflects an individual view of a situation requiring change or improvement. Most participants in the analysis will have their own so-called 'worldview' in SSM. As each application area will involve a number of participants, it is likely that a variety of

worldviews will be generated, although some if not most of them may be very similar. The degree of convergence is an approximate measure of problem consensus.

Each worldview will generally represent a mixture of what an individual believes is already taking place, and what should be taking place. Worldviews are therefore part-descriptive, part normative. It is presented as an organisational system which has an overall purpose, inputs and outputs, boundaries and constraints. The mnemonic CATWOE is used to ensure that these characteristics have been defined either explicitly or implicitly. CATWOE is defined as :

Customer - defines entities (people and/or organisations) who will be the recipients of the outputs of the system.

Actors - defines the people who will carry out the activities of the system.

Both C and A will help to define the boundary of the system.

Transformation Process- defines the input and the output of the system.

Worldview - defines the purpose of the system.

Owners – defines those who can cause the system to cease to exist.

Environmental Constraints – defines entities or processes which constrain (influence) the system but which can not be influenced or changed by the system.

Both O and E will help to define the system hierarchy, in terms of defining the system/sub-system environment. For example, 'owners' will usually operate within the wider system environment and the system of the CATWOE will constitute a subsystem of that. Constraints will also be generated by the wider system. A very common one in many organisational systems is the financial, or resource constraint.

The CATWOE is used to construct a 'Root Definition', which is essentially the worldview expressed as a system. A system may be very sparsely defined as a transformation of an input into an output, but the use of the CATWOE elements enables a richer and less general Root (system) Definition to be formulated. A further point about the transformation process in SSM is that the input and output entities must be the same – the input entity becomes transformed into a new state of that same entity. Here Checkland is seeking to avoid the error of confusing inputs with the resources required to achieve the transformation. It could also be argued that this 'rule' enables more abstract inputs and outputs to be modelled more easily. For example, if we were considering a system to transform sick patients into treated patients, the following transformation process would be wrong:

INPUT	OUTPUT
Sick patient; doctors; nurses; hospital; medication etc.	Treated patients

Yet the following expression would be correct:

INPUT	OUTPUT
Need to treat sick patient	Need met
Sick patient	Sick patient treated or Sick patient healed

Each worldview will have its own Root Definition. This is then used to construct an activity model (known in SSM as a ‘Conceptual Model’), which represents the set of organisational activities which would need to be carried out to bring the system described in the Root Definition into being.

O Pala et al (2003) explain a Conceptual Model as ‘a structured set of linked activities, which is necessary to carry out the transformation process (the operational system) supported by a monitoring system and a control system.’ (2003:707).

Because each Conceptual Model represents a system, it requires a sub-system of activities which are concerned with the processes of monitoring and control. This ensures that, fundamentally, the system is achieving its transformation and is

able to survive in a changing environment. Checkland and Scholes (1999) recommend three measures of performance for judging whether a successful transformation has taken place:

Efficacy (for 'does the means work?' The measurement of a system's efficacy is concerned with assessing whether the activities of the system work interactively together to produce the desired output of the transformation process).

Efficiency (for 'amount of output divided by amount of resources used'. The system should also be operating efficiently and with the minimum use of resources).

Effectiveness (for 'is T [the transformation] meeting the longer term aim [the worldview] ?' The measurement of a system's effectiveness is concerned with the achievement of the worldview). (Checkland and Scholes, 1999:39)

Each Conceptual Model is not a representation of the real world, but a systemic view of how each participant views the problem situation through a set of human activities. This is shown by the broken line in Figure 1 which separates the 'real world' from 'systems thinking' about the real world. Checkland and Scholes (1999) refer to such systems as holons with the following defining characteristics:

- a. Emergent properties: the whole has properties which are only present when the whole is operating *as* a whole – ‘the whole is greater than the sum of its parts’.
- b. Layered structure: there is an observable hierarchy of systems and subsystems, with emergent properties at each level.
- c. Communication and Control: necessary for the system to survive in a changing environment. (1999:19)

The Conceptual Models represent personal constructions of reality and any application of SSM may produce a number of such models. As notional models, they may in fact significantly challenge existing structures and cultures. As the analysis progresses, such models engender a strong sense of ownership and gain identity as a template for self- actualisation, so that the organisation may actually begin to mirror the modelled system before the analysis is complete.

Stage 5 is concerned with comparing the models with perceived reality (that is, the activities that actually take place in the real world). This is an important stage in the approach as it is concerned with discussing and debating the models in some detail in order to interrogate the real-world problem situation (Checkland and Scholes, 1999).

The purpose of this stage is also to find an accommodation between different, and sometimes conflicting, views so that the participants can move towards making changes or improvements to the problem situation. The participative, user-centred character of SSM helps to engender ownership of both the 'what' (the content) and the 'how' (the implementation) of change amongst clients or participants. The models therefore form the basis of a structured debate about change. Checkland uses the example of prisons to illustrate this. He explains that one way to learn about prisons is to compare the activities which actually take place in them to a set of models which would represent various systems, such as a 'rehabilitation' system, or a 'punishment' system, or a 'storage' system (O Pala et al, 2003: 708).

Stage 6 is the process of making changes which are 'systemically desirable' and 'culturally feasible' (Checkland, 1981). The former is linked to systems thinking and the concept that all SSM models are notional, systemic models grounded in subjective worldviews. Any changes arising out of Stage 5 must therefore also be considered as systemically relevant. The second condition of cultural feasibility is based on the pragmatic premise that changes will not work unless they are considered as 'meaningful' within the culture of the problem situation (Checkland and Scholes, 1999).

SSM is a process of enquiry (Checkland and Scholes, 1999) which could be continuous. The final stage of the methodology concerns the action taken to implement organisational change or improvement. The changed organisation that

results could eventually become a new problem situation and the cycle of using SSM may begin all over again. This suggests that SSM can be used to enable an organisational learning culture (Senge, 1990) which utilises double-loop learning (Argyris and Schon, 1978). The status quo is constantly challenged and evaluated and the contribution of the whole organisation to its strategic development is maximised. The concept of continuous change is therefore accepted within the organisation, and change itself is not regarded as an occasional, unusual and troublesome episode.

Additionally, the learning process of SSM is conducted through several stages which appear to correspond to Nonaka and Takeuchi's (1995) process of conversion of tacit into explicit knowledge. This posits a socialisation and externalisation phase corresponding to the SSM Stages 1,2,3,4, combination (Stage 5), and internalisation (Stages 6,7)). This implies a further link between continuous change and knowledge management.

Thus, the methodology is not seen to be positivistic ; nor is it meant to be carried out as a 'once and for all' event. It is an approach based on a continuous cycle of interpretation and learning, and on the premise of continuous change. The notion of a generally accepted social reality is not taken as given in SSM. Instead, it is assumed that this is continuously being created and changed (Checkland and Holwell, 1998). This view can be traced to Silverman's action frame of reference (1970). Silverman's view was that organisations should be analysed, not as teleological systems, but by the social relationships of the people within them.

These are fluid (continuously constructed and deconstructed) and influenced by organisational history, roles, norms and values. There is a link here with the explicit cultural analysis which has become part of the developed form of SSM, and which is covered later in this section.

The methodology is advocated as a process of enquiry with three underpinning principles endorsed by Checkland (Checkland and Scholes,1999):

- a. one must accept and act according to the assumption that social reality is socially constructed, continuously;
- b. one must use explicit intellectual devices consciously to explore, understand and act in the situation in question; and
- c. one must include in the intellectual devices 'holons' in the form of systems

(1999:A35)

On a practical level, there are four essential processes that comprise the methodology:

- a. finding out about a problem situation

- b. formulating some relevant purposeful activity models
- c. debating the situation, seeking systemically desirable and culturally feasible changes, and the accommodations between conflicting interests which will enable action to be taken
- d. taking action to improve the problem situation (O'Pala, 2003:707)

The stages concerned with cultural analysis (Checkland, 1981; 1999) serve to position the approach more specifically in the field of organisational change. Checkland's SSM is now represented as two main streams of analysis, which are the 'logic-based stream' (see Figure 1), and the 'stream of cultural analysis'. The latter comprises three forms of micro- analysis:

- a. The analysis of intervention: identifies the organisational client, the problem owners and problem solvers (that is, the participants whose worldviews will contribute towards the analysis).
- b. The 'social system' analysis: identifies the formal and informal roles, norms and values of the problem situation.
- c. The 'political system' analysis: identifies the dispositions of power and influence within the problem situation.

The modeling stages are referred to as the 'logic-based' stream because they include the formal (logical) systems modeling, that which Wilson (2001:4) refers to as 'simple, precise and defensible'. The 'cultural stream' is concerned with the socio-political infrastructure of the problem situation. It represents a way of gathering and utilising intelligence concerning the socio-political infrastructure of the organisation.

These two streams are meant to take place interactively, so that each informs the other.

At its current stage of development, SSM is usually practised in either Mode One or Mode Two. In this research, Mode Two will be applied to UK health sector environments which are experiencing change.

Mode One consists of the approach adopted in Figure 1, where all the stages are generally followed sequentially (Checkland, 1998). Although Checkland advocates repetition of stages if and when it is required (for example, the process of conceptual modeling may require elements of the CATWOE to be refined), the progress of the methodology is maintained until the final 7th stage is reached.

However, more experienced users will tailor their use of the methodology to each situation, using the principles of the methodology as a sense-making device. Not all the stages may be utilised here. It could be said that this way of using the methodology involves a greater level of abstraction than the 7-step process.

This use of the methodology has been named as Mode Two by Checkland (1998). It represents a more flexible, interpretive use of the methodology and involves choosing which stages of the approach could be applied to the situation. So, for example, the researcher may begin an SSM analysis by constructing a relatively crude but systemic activity model (that is, a Conceptual Model) based on their existing observations and knowledge of the problem situation, and this model may be used to inform interviews with the participants. In this example, the initial activity model 'replaces' the Rich Picture.

Using the methodology in this way requires good judgement and working experience of the methodology to ensure that the systemic integrity of the approach is not lost, and the use of Mode Two is significant in its implications for the role of the facilitator in the analysis process.

Within Mode One, the facilitator role is intended to be entirely objective and culturally independent. Its function is that of an expert facilitator in the use of the methodology which may also include the transferability of processual knowledge to the participants.

Hence, within Mode One, the facilitator's contribution is knowledge of process and the participant's is knowledge of context.

Mode Two appears to suggest a different stance for the facilitator, one that is based on a more substantive contextual contribution. As a body of practical

action moreover, SSM has evolved through a process of action research which implies that the facilitator takes a participatory approach extending beyond that of transference of processual knowledge. This practice inclines towards Mode Two implementation.

Stowell (1995) believes that SSM Mode Two represents a practical example of interpretive systems which can be applied to client-led design. The problems are expressed through the model building, but the principles of systems thinking as supported by SSM are used to navigate a more flexible mode of enquiry. Use of Mode Two is therefore not recommended for novice users. It is a sophisticated use of the methodology which requires an experienced hand to ensure that flexibility does not triumph over systemic coherence. It is essential to maintain adherence to Checkland's (1999) three underlying principles during *both* Mode One and Mode Two.

As SSM is participative and user-centred, this implies that both facilitator and participants must have a substantial knowledge of the methodology, for otherwise the role of the facilitator may become too dominant. This appears to be a particular danger when Mode Two is used, since here the neutral stance of the Mode One facilitator could be compromised by the more interventionist requirements of Mode Two.

During Mode One use, the facilitator is primarily concerned with advising participants on the process of using SSM and ensuring systemic coherence.

Mode Two however, requires the facilitator to exercise selective judgement concerning the stages to be deployed, based on their own interpretation of the conditions and circumstances of the problem situation. Thus, their contribution may extend into the arena of content.

Table 2 presents a comparison of the characteristics of Modes One and Two.

MODE ONE	COMPARED TO	MODE TWO
<u>Methodology driven</u> : the 7 stages of the methodology are followed through to the end although there may be a degree of iteration of the stages		<u>Situation driven</u> : the application of the stages are determined by the needs of the situation (stages may be omitted)
<u>Intervention</u> : knowledge of the process comprises the facilitator's contribution		<u>Interaction</u> : the facilitator's contribution includes a more substantial knowledge of the context and contribution to the content of modeling
<u>Sometimes sequential</u> : it is not always necessary to repeat stages		<u>Always iterative</u> : the methodology is used very flexibly and the normal 'order' of the stages may not be applied
<u>SSM an external recipe</u> : the methodology exists outside the application: it is, for the most part, applied in the same way for every application		<u>SSM an internalised model</u> : the methodology is adapted for each application

Table 2: Comparison of Modes 1 and 2 (adapted from Checkland and Scholes, 1999).

Early forms of SSM consistently advised cultural independence for the role of the facilitator, whilst recognising that maintaining this may be problematic in both Modes. In a clear reference to the action research approach, Checkland has more recently emphasised that SSM researchers have to take part in the change process, because such a social event can not be studied under laboratory

conditions (Checkland and Scholes, 1999). Checkland refers here to Durkheim's 'social facts' (1895) and Weber's interpretive strand of sociology (1904).

Additionally, Checkland is very clear that SSM is a methodology, not a technique, and this implies an interdependency between the methodology and the user (Checkland and Scholes, 1999). O' Pala et al (2003) refer to the lack of specific guidelines for facilitators during the negotiative real-world stages 5 and 6 – "the stage of comparison and action identification" (2003:708). This and other issues surrounding the facilitator's role are discussed in Section 2.7 and are examined in this research.

Given the nature of SSM, every application of it will be unique. The Constitutive Rules of SSM as defined by Checkland (Checkland and Scholes, 1999) represent a set of fundamental principles which must be present if SSM is being used in its fullest sense. They are a modified version of those originally suggested by Naughton (1977) as an aid to understanding what constitutes an SSM analysis. A summary is presented here:

- a. SSM is a structured way of thinking about a real-world problem situation, the aim of which is to bring about improvements in the situation.
- b. SSM is based on systems ideas, while its process can be seen as an explicit epistemology. Any application must be expressible in terms of that epistemology.

c. If SSM is claimed to have been used, the following guidelines should have been followed:

1. The real world is not assumed to be systemic
2. The difference between 'unreflecting involvement' in the real world and systems thinking about the real world is recognised
3. During systems thinking stages, holons, or human activity systems, will be constructed which embody the concepts of emergent properties, layered structure, and processes of communication and control
4. These holons are used to investigate the real world through a process of debate, therefore leading to feasible and desirable changes

d. Any use of SSM should be influenced by how it can be adapted to a particular situation

e. Any use of SSM, because it is a methodology, will yield learning about SSM in terms of its` ideas, processes, or the way it was used.

(1999:286-287)

2.4 General Systems Thinking

Checkland's SSM is predicated on the principles of general systems thinking. In his exploration of the field of systems thinking, Checkland (1981) refers to a system as, fundamentally, a set of connected elements which form a whole. A robust understanding of what is meant by 'system' also implies, though, that the whole has additional properties that are not present in the component parts. This concept of wholeness is particularly important in systems thinking and directly relates to Aristotle's extraordinarily thoughtful dictum that the whole is greater than the sum of the parts (Checkland, 1981).

The development of General Systems Theory is also rooted in the more recent work of von Bertalanffy, a biologist who essentially took an holistic view of systems as opposed to the reductionist, systematic view which reduced entities to constituent elements (von Bertalanffy, 1973). The systemic view takes a system to have emergent properties that are quite independent of its constituent parts. Von Bertalanffy believed that these general principles of emergence underpinned all sciences and hence unified the scientific disciplines.

Churchman (1968) emphasised the interconnectivity of systems and underscored the specific characteristics of the 'systemic' as defined in General Systems Theory (that is, that all systems must have boundaries, hierarchy, purpose, inputs/outputs, and control mechanisms). The presence of these elements implies a system, and they are articulated in all formal SSM modeling. Systemic thinking

requires taking the view that all systems are embedded within other, larger systems, creating a hierarchy of systems and subsystems. The fundamental concepts of General Systems Theory are described below:

CONCEPT	MEANING
Input	An entity or entities (eg energy & raw material) received by the system from its environment
Output	An entity or entities produced by the system which is generally released into the environment. In its purest form, the output could also be seen as the purpose of the system
Transformation	The process by which the system converts input into output.
Boundary	The point at which a system can be distinguished from its environment and other subsystems. In social systems, this 'line' is abstract. It can be determined by a discernible reduction in the level of interaction between the elements of the system and its environment
Purpose	The reason for the existence of the system; the aim of the system in terms of its output
Feedback, monitoring and control	Feedback in the form of information and data from the system which is used to assess whether it is performing effectively and informs any necessary corrections to be made
Subsystem	A system which is part of a larger system. It will take inputs from and release outputs into the larger system environment but which is distinguished from the larger system by a boundary
Open Systems	Interact with their environment, are dynamic and self-regulating; capable of significant growth and adaptation to change (Soft Systems are Open Systems)
Closed Systems	No interaction with the environment, are static and fixed with marginal facility for change (Hard Systems are Closed Systems)
Hierarchy	The environment of interactively connected systems and subsystems

Table 3: General Systems Theory Concepts

In relation to a system's purpose or output, Churchman (1971) also recognised a distinction between a system's declared objectives and the actual objectives. Declared objectives are usually allied to the precise and rational (normally linked to economic concerns), actual objectives often embed the more elusive human values which are connected to each individual's *weltanschauung* (or worldview). There may be connections here with work in the field of organisational learning (Argyris and Schon, 1978), in particular the concepts of 'espoused theory' and 'theory in use'. This refers to a distinction between two theories of action concerning the relationship between individuals and organisations. Organisational behaviour (a theory of action) which is implicit in what people actually do, is referred to as 'theories-in-use'. The way in which an individual actually behaves is influenced by a subjective view of their environment and the people (including themselves) within it. The similarity to the concept of the worldview, contained within SSM, is clear. The way that people speak about their behaviour to others, however, is influenced more by what a person wishes others to think. This is referred to as 'espoused theory' and bears a strong resemblance to Churchman's notion of a system's declared objectives (Churchman, 1971).

There could be a further link here between 'espoused theory' and the primary task worldviews of SSM on the one hand, and 'theories-in-use' and issue-based worldviews on the other. In SSM, a primary task worldview is a generally non-

contentious view which reflects an essential (or primary) purpose of the organisation. The implication here is that if the organisation did not subscribe to this essential purpose, it would not be the organisation it is formally defined to be. Primary task worldviews can usually be mapped closely onto the formal organisational structure. Although a primary task worldview could be genuinely adhered to by the participants, such worldviews could be conforming and characteristically linked to the notion of 'espoused' theory because of their close relationship to the formal organisational structure.

An issue-based worldview however, articulates a view which would not generally be considered as essential to the organisation, although the worldview owner may regard it as such. It may even represent a major departure from the formal primary task worldview of the organisation. In this sense it would represent an 'issue' and could be linked to the concept of 'theory-in-use'. Checkland (1999) admits, however, that the distinction between primary task and issue-based modeling is not absolute. This is related to the 'uniqueness' of organisations. For example, all Universities will be very generally similar, but that which University Department A considers a 'primary' activity (perhaps income generation through business consultancy), may be an 'issue' (that is, not regarded as an essential activity) for University Department B. Therefore, a judgement concerning whether a view is primary task or issue based is informed by the unique context of the problem situation, and is not universal or generic.

2.5 Hard and Soft Systems Thinking

A radical insight that emerged from the early work at Lancaster concerned the use of the word 'system'. In hard systems thinking, the real world is assumed to consist of systems which are rational and logical. In soft systems thinking, the real world is taken to be messy and complex, but the process of enquiry used to investigate it is systemic. Thus within the hard paradigm the world is systemic and can be investigated via systematic approaches, whereas soft thinking claims that the world is problematic but can benefit from systemic investigation (Flood and Jackson, 1991). Checkland regards this as the crucial intellectual distinction between hard and soft systems thinking (Checkland, and Scholes, 1999).

Wilson (2001) emphasises the importance of the meaning of systemicity in attempts to understand reality. Stating that it is not possible to achieve truly non-contentious interpretations of reality, a defensible mode of enquiry must be used to give different views some validity and "it is necessary to make and maintain a distinction between 'the real world', which is complex, messy and contains people, and the intellectual process of 'thinking about the real world,' which can be simple, precise and defensible." (2001:4)

He offers a set of characteristics for hard and soft systems thinking which provides a useful clarification:

HARD SYSTEMS THINKING	SOFT SYSTEMS THINKING
1. Define the problem	1. Define the situation that is problematic
2. Assemble the appropriate techniques	2. Express the situation
3. Use techniques to derive possible solutions	3. Select concepts that might be relevant
4. Select most cost-effective solution	4. Assemble concepts into an intellectual structure
5. Implement the solution	5. Use this structure to explore the situation
	6. Define changes to the situation
	7. Implement the change process

Table 4: Hard and Soft Systems Thinking. Adapted from Wilson, 2001.

In systems thinking, ‘hard’ assumes a stance which is positivistic and objective, whilst the position of ‘soft’ systems thinking is subjective and interpretive (Checkland and Holwell, 1998).

Ho and Sculli (1994) attempt to clarify the distinction between hard and soft approaches through the very different ways each approach takes to organisational problem-solving. The hard approaches assume that objectives are simple and easily defined, and that the courses of action required to address them can be determined by mathematical or analytical effort. SSM, on the other hand, views organisational problems in quite a different way. Essentially, there is an acceptance that there may exist multiple legitimate perceptions of the problem situation which can be challenged by alternative viewpoints so that a more

comprehensive understanding of the problem situation will be achieved through discussion and debate, which will also lead the parties towards a feasible solution (Ho and Sculli, 1994).

2.6 Soft Systems Methodology: Rationale and Critique

The research literature covering SSM is extensive. There is a significant amount of work concerning the development and explanation of the process of SSM (inter alia, Checkland, 1988, 1985, 1980; Davis and Ledington, 1991; Wilson, 1994, 2001; Stowell, 1995). A further body of research concerns the underpinning philosophies and social context of SSM (inter alia Mingers, 1984; Jackson, 1982; Wilmott, 1989; Flood and Jackson, 1991). Over the thirty years of its development, there have been many applications of the methodology (eg Checkland and Holwell, 1993; Ledington, 1992; O'Connor, 1992; Ormerod, 1995). A study of the adoption and use of SSM in the United Kingdom was reported by Mingers and Taylor (1992) and in Australia by Ledington and Donaldson (1997).

According to Flood and Romm (1996), the fundamental philosophies of SSM are Churchman's systems teleology (1971) (predicated on the concept of the worldview) and Vicker's concept of appreciative systems (1965, 1968, 1970, 1973). These philosophies could be seen to represent contradictory positions, and indicate a tension within the SSM methodology as between positivistic and interpretive thinking. There is a link here with the ambiguity of SSM's

managerialist stance referred to in Section 2.3. Beeson and Davis (2000), in their consideration of change in the systems perspective, identify a managerialist orientation in the application of soft systems concepts and principles to organisational change which supports Checkland's own view that human affairs must be managed in some way. This would appear to place the SSM facilitator squarely in the management paradigm.

Jackson (1982) claims that Checkland's SSM can be placed in Burrell and Morgan's interpretive sociological paradigm, which is also regulative. Interpretive sociology is concerned with attempting to understand how order is achieved and then maintained or regulated. A fundamental weakness in placing SSM within this paradigm is that it assumes little social movement beyond the status quo which is simply regulated. Flood and Jackson (1991) contend that SSM is managerialist and reformist, because it serves dominant (manager) groups, with worldviews reflecting existing 'social inequalities' (1991:189).

Jackson (1982) argues that the methodologies of Churchman, Ackoff and Checkland belong to the interpretive paradigm and thus over-estimate their ability to enable radical social and organisational change. This is because they fail to take into account the 'objective and constraining aspects of social reality' (1982:21). Checkland (1981) has stated that non-radical or incremental change outcomes are not attributable to the approach itself, but to how participants choose to use it. He is supported in this belief by Naughton (1979).

Flood and Jackson (1991) assert that SSM is idealist, as opposed to materialist, in its seeking to affect social reality through the changing of worldviews. The materialist view would regard worldviews as being profoundly influenced by economic and material interests. They contend that SSM does not connect worldviews to 'social and economic circumstances' (1991:187) and regard this as a weakness. This idealism also, they suggest, disables the methodology from dealing with the influence of conflict and coercive power relationships.

Vicker's notion of appreciative systems discusses a cybernetic paradigm based on maintaining, changing or avoiding relationships. Such relationships can be defined as being either metabolic or functional. Metabolic activities (such as budgeting) are fundamental to the stability of the system. Functional activities are a varied and fluid mix of relationships determined by different standards and values. Vicker's appreciative system is the act of evaluating such different standards and values in order to isolate relevant facts, and of recognising that the contents of such a system are systemically connected and act to determine how an individual perceives the system (Checkland, 1985). Vickers therefore regards the teleological model, centred on explicit goals, as inadequate.

Vicker's thinking appears to have significantly influenced the development of SSM. There is a clear connection between the concept of an individual's appreciative system, and SSM's worldviews. The emphasis on transient human systems and the fluid nature of cultural norms and values is captured in SSM through its use as a continuous organisational learning cycle and the contribution

of cultural analysis to systemic modeling. Checkland and Scholes (1999) refer to the never-ending flux and transformation which dominates human affairs. The influence of Vicker's appreciative systems 'means that the action to improve the problem situation is always thought about in terms of managing relationships' (Checkland and Scholes, 1999:A55). The implication of the more interventionist role of the Mode Two facilitator is that the social and cultural constructs of the facilitator may influence how the methodology is used. This issue is problematic, and will be examined in the current research.

The concern in SSM with cultural analysis and pragmatic thinking about reality, and the theoretical systems thinking about the real world, clearly positioned the approach more specifically in the field of organisational analysis and change. However, the separation between reality (cultural analysis) and systems thinking (logic-based stream), such a significant feature in early forms of the methodology, has since been described as a 'false dualism' (Tsouvalis and Checkland, 1996). Even reality is socially constructed and interpretative to a certain degree.

Mingers (2004) views this phenomenological stance in SSM as problematic. If it is to be taken literally, he argues, then there can be no external world on which to base our actions, since everything becomes an interpretive construction. Both Mingers (1984; 2004) and Jackson (1982) challenge SSM's non-positivistic and subjective stance and its feasibility in real social interventions such as organisational change. This concern underpinned the development of Critical

Systems Thinking (Flood and Jackson, 1991, Flood and Romm, 1996), which recognises the validity of both positivism and interpretivism. Jackson (1982) claims that some of the problems concerning social theory are also evident in soft systems approaches.

2.6.1 The Issue of Participation

The centrality of the human element in soft approaches to systems analysis (such as SSM) implies that change is constitutive of organisational life (Beeson and Davis, 2000). These approaches suggest that change is not prefigured or automatic, and certainly not teleological, involving instead processes of negotiation, invention, perception, and participation.

SSM is indeed highly client-participative and non-linear and the process of using it can help to unfreeze traditional structures and hierarchies. It is taken for granted that the methodology takes a participative and democratic stance, and in practice most successful SSM applications involve a reasonable degree of client participation (Rose, 1997).

Furthermore, unlike operational research and systems engineering methods, it does not use algebraic or numerical formulas within its modeling conventions, a factor which can render traditional hard systems thinking incomprehensible to the uninitiated. As Wilson (2001) explains, the modeling language used in SSM is naturalistic, featuring 'verbs expressed in the imperative' (2001:12).

Additionally, the use of graphical representations of object relations (such as Rich Pictures), further accentuates communicative accessibility. This should serve to liberate the approach and widen its potential accessibility beyond the analyst, but it is a view that is challenged by Gregory (1995). Gregory claims that ordinary language does not comprise a shared natural logic. Language is in itself interpretive, and there may be different levels of 'literacy' among participants. Additionally, as with all user-centred approaches, participants will be required to understand both the rationale and the process of SSM for effective use, but participants will have different capacities for learning and understanding. This will to some extent be influenced by previous knowledge and experience and thus embodies and enshrines positional power. Jackson (1982) refers to the 'unequal intellectual resources' (1982:25) which participants bring to the process.

This research has revealed that an imperfect understanding of the approach is sometimes difficult for the facilitator to detect and can significantly undermine its effectiveness. Participants may appear to understand the components of conceptual models, for example, but actual modeling may indicate that they have misunderstood the systemic relationship of the activities. SSM in fact requires a very deep level of learning which is arguably underestimated in the literature. Facilitation (Mode 1) or group leadership in problem-solving (Mode 2) demand deeper epistemological understanding than the initial inspection of SSM research might suggest.

The value of participation in organisational decision-making and information systems design is well recognised (Blumberg et al,1969; Bate and Mangham, 1981; Land and Hirschheim, 1983; Mumford,1983) . A sense of ownership is rarely achieved without a degree of participation (Rose, 1997). Flood and Romm (1996) comment on the social view of systems adopted by Checkland and the clearly central role of collaboration and participation in the process of problem solving which the methodology adopts. Checkland (1981) contends that recommendations for action or change must be culturally acceptable to participants.

Jackson and Keys (1984) maintain that SSM is positioned to cope with systemic problems because of its ability to handle multiple interpretations of the complexity which exists in organisations (see also Mingers and Taylor (1992). Furthermore, SSM has been explicitly linked with the field of Critical Systems Thinking (CST) which is based largely on the work of Habermas (1972) and Flood and Jackson (1991). This linkage concerns three central assumptions:

Complementarism: the principle of respecting the positions, rationalities and theoretical perspective of different methodologies. Methodologies of the critical perspective type are concerned with freeing people from 'unhealthy' constraints imposed by power relations.

Sociological awareness: the principle of countering the tendency to popularise certain types of methodologies due to organisational or social

pressures; thereby 'liberating' illegitimately suppressed methodologies.

Human wellbeing and liberation: this principle aims for the maximum development of individuals.

In this context, CST is essentially concerned with the non-suppression of relevant ideas during problem-solving and with ensuring conditions for genuine debate. Flood and Jackson (1991) believe that soft methodologies serve the practical interest of facilitating mutual understanding amongst a socio-cultural group.

This view, however, assumes that SSM is consistently successful in securing genuine participation. There have been a number of challenges to this.

Ormerod (1996), Pouloudi and Whitley (1997) and Lehaney and Paul (1996) emphasise the significance of the selection and involvement of participants to the success of softer approaches. Shaw et al (2006) also emphasise the crucial importance of selecting stakeholders widely in all PSMs to ensure the inclusion of key participants and relevant expertise. Flood and Jackson (1991) point to a fundamental weakness of SSM in the context of CST, in that genuine participation is not actually possible because getting the widest representation of stakeholders is problematic. This suggests that power is more or less affirmed at a pre-modeling stage. Checkland and Scholes have made the point, however,

that freedom to define stakeholders (participants) is crucial in an holistic approach and achieving access to the whole of an organisation is actually unreachable. Beeson and Davis (2000) argue that analysis in SSM is actually largely conducted by the facilitator alone (whose values and motivation thus assume significance) while consequent debate about change is dominated by the voice of management. Additionally, Beeson and Lynch (1998) maintain that the human activity models which are constructed through the methodology are too idealised and inert to model people's actual behaviour in organisations.

Jackson (1982) levels similar criticisms at Ackoff's methodology for Idealised Design, stating that it assumes uninhibited discussion among participants, but that equality of participation is difficult to achieve.

'The less privileged stakeholders will feel threatened by the massive resources that can be mobilised by the powerful' (1982:21).

Jackson refers to a 'framework of domination' which can be imposed by powerful participants, and Flood and Jackson (1991) contend that the 'cultural feasibility' of changes relate only to the dominant culture and dominant coalition. Callo and Packham (1999) suggest that genuine debate is particularly difficult to achieve in corporations with strong hierarchies of power. In the same vein, Keen and Gerson (1977) point to political problems and power struggles between different groups which could inhibit progress towards change. White (2006), relating to PSMs in general, contends that different stakeholders have different priorities and it is important to identify their relative power structures.

Handy (1993) defines five possible sources of individual power. These are physical power, resource power, position power, expert power, and personal power. Of these, physical power (the power of superior physical force) is the least credible source of organisational power. Whilst the phenomena of organisational bullying exists, it is not acceptable in modern civilised societies and there are processes to protect employees against it. Resource power is exercised by those who control resources which are valued by others. These may be material, but the offer of increased status for an individual, or group, could also be used as a potent source of power. Position power is the result of a person holding a particular organisational role, but will only be effective if this person exercises credible influence in the organisation as a whole, or has the support of physical or resource power. Expert power is the consequence of a person having expertise or knowledge which is valued by the organisation. Personal power is the power that can be exerted through a strong personality, personal charisma or popularity.

In the field of information systems development, Land and Hirschheim (1983) note that there are many 'detractors' who contest the advantages of participation. Perhaps the most interesting of these is Mumford (1982), whose Effective Technical and Human Implementation of Computer-based Systems (ETHICS) methodology is wholly centred on participative information systems design. Mumford is prepared to concede that if the impact of the information system is likely to lead to worker redundancy, then participation will naturally be difficult to achieve . A fear of job loss or redeployment could negatively impact on any

participative change process. In fact, this area constitutes one of Lewin's major restraining factors in the process of planned organisational change (1951).

Connell (2001) also believes that not all participation will be functional, and a high degree of participative activity may be the result of resistance to change. The underlying organisational culture may thus prove tenacious. Although different worldviews may be reconciled by SSM, differences which are deeply rooted in organisational culture are more difficult to overcome. The UK health sector represents an example of the persistence of deep organisational structures (Gersick, 1988). Connell refers to the autonomy of doctors and the effects of inequalities of power on participation (Connell, 2001). These issues are obviously relevant to the research to be carried out here.

Within Checkland's work, the cultural stream aims to address these sorts of issues through the 'political system' analysis. However, both the 'political' and 'social' system analyses are naturally value-laden and Flood and Romm (1996) contend that the methodology does not offer the facilitator enough guidance on how to manage these elements, thereby compromising facilitator neutrality. They suggest that the principles of participative action, and the various forms of participation, would have value for SSM.

Checkland and Scholes (1999) admit that these analyses are less well developed than the logic-based stream, but this should not undermine their significance. Flood and Jackson (1991) believe that 'in coercive contexts SSM is to be

avoided because of the ease with which it lends its support to already powerful decision makers' (1991:190). Brown (1996, Flood and Romm) agrees that the issue of whether participation is a means or an end is a fundamental issue in systems research. She suggests that the selection of participants could be influenced, problematically, by the perceived purpose of the application. Here, the embodied values of an organisational system may overwhelm any cognitive or behavioural independence of the sub-system within which a given problem may formally locate. Brown agrees that the lack of guidance within SSM is likely to result in both the facilitator and the organisational culture shaping participation. If this is the case, both participation and discourse will be affected.

2.7 The role of the facilitator

Callo and Packham (1999) suggest that participation is enabled by a competent facilitator rather than by a particular methodology :

'The relationship of the facilitator(s) and the research participants, and the relationships among participants, are key factors in ensuring participation' (1999:318).

Franco (2007) goes further in his view that the facilitator must have legitimacy amongst the participants. There is very sparse coverage of facilitation issues in the research literature on SSM. The placement of the development of SSM in an action research paradigm seems to suggest that Checklands' view of the role is wider than that of 'consultant'. The assumption is that there is a strong

facilitator-participation element, certainly in terms of process. According to McKay and Marshall (2001) the nature of action research is implied in its very name. That is, it is a juxtaposition between action (practice) and research (theory) which requires the researcher to become actively involved in the research. . This implies that within SSM, the facilitator's contribution is both processual and contextual. This would appear to be the case especially when Mode Two is used, as has been discussed earlier. A study of the best practices of facilitators adopting a range of PSMs and Soft OR methods (Papamouchail et al, 2007), established that the initial focus of knowledge for facilitators is process, but that this widens to include content as the application progresses. Andersen et al (2007), with reference to Group Model Building, also consider the distinction between finished models and the process of constructing the models.

Brown (1996) believes that the aim of the SSM facilitator is to achieve 'accommodation between viewpoints' (1996:206). Within SSM there are clear guidelines and explanations for the facilitator, including theoretical underpinnings, for the systemic modeling stages of the methodology. These include, for example, naming relevant human activity systems, and constructing root definitions and conceptual models. Keys (2006) acknowledges the strong technical dimension of facilitator activity which is inherent in PSM model-based engagement. Advice is much less categorical concerning the stages of debate and negotiation in Stages 5, 6, and 7 (O' Pala et al, 2003). These are the stages where accommodation takes place. Given that SSM is user-centred and requires that

participants also understand the processes of SSM, these guidelines could not be regarded as exclusively intended for culturally independent facilitators. They must also be understood, unambiguously, by the participants.

Jackson (1982) believes that Stages 5 and 6, where discussion about change occurs, should conform to Habermas's (1970, 1976) model of 'communicative competence' if real accommodation is to be achieved. Jackson also refers to the likelihood that facilitators may be forced to abandon radical systems which do not fit the social and cultural realities of the situation. Jackson points to this as evidence that Checkland's subjective approach is nevertheless constrained by 'objective aspects of the real world' (1982:25). Brown (1996) questions the assumption that the facilitator could even judge a worldview to be radical. This could equally be seen to be the result of the subjective limits of the intellectual freedom of the facilitator, as it is to the deeply contextualised nature of worldviews.

Critics of the methodology have claimed that there are some naïve assumptions within SSM. Romm (1996) believes that there are problems concerning the assumption in SSM that change can be achieved through a process of accommodation. The outcomes of the process are not judged by the facilitator but rather, by the client, while the issue of potential confrontation is ignored. Additionally, SSM assumes that acceptable accommodations can be reached and that the facilitator can direct debates to achieve this. This includes enabling participants to understand other worldviews, a not insubstantial task. Jackson

(2006) believes that PSMs exhibit a 'pluralist bias' regarding the achievement of accommodation between different stakeholders.

Callo and Packham (1999) suggest that the personality of the facilitator could influence the success of participation, suggesting that authoritarian personalities are unlikely to be effective. It should be noted, however, that such personality types are unlikely to be attracted to SSM either as facilitators or participants.

Checkland (1999) recommends a 'light touch' but there is scant treatment of the real tensions likely to be encountered by the facilitator, particularly concerning involvement in process and content. SSM is often used to model complexity. Complexity may be undisciplined and non-linear, but the SSM episteme is not itself an undisciplined approach.

Inconsistent terminology in the SSM literature suggests some confusion of understanding regarding the role of the facilitator. The terms 'analyst', 'researcher', and 'facilitator' are used almost interchangeably. Each of these terms connotes a different orientation, yet this research will suggest that within SSM facilitation a dynamic alchemy of these roles may emerge (see Chapter 6).

2.8 Evaluating SSM

In spite of the widespread knowledge and use of SSM in various contexts over three decades, there is relatively little evidence available concerning its

effectiveness as an instrument of change in real applications. In the wider context of PSMs White (2006) suggests that evaluation may be difficult because it is seen as the application of a rational construct onto complex social contexts. Etienne et al (2009) claim that PSMs remain substantially invalidated. In an attempt to address this they offer a theoretically-based approach to measure the effectiveness of group model building. Concepts from the critical literature concerning SSM (Jackson and Keys 1984; Ho and Sculli, 1994; Flood and Jackson, 1991; Flood and Romm, 1996) and in particular Connell's SSM success matrix (2001) have influenced the design of this research.

Checkland distinguishes between evaluations of Modes One and Two. Mode One applications centre on problem resolution and evaluation should likewise, he suggests, centre on this issue. For Mode Two the concern is with the learning *process* enabled by the methodology and it is this learning that will lead to agents taking 'purposeful action to improve a problem situation.' Therefore Mode Two SSM must be evaluated in the context of both problem and methodology. Checkland also claims that there is a distinction to be drawn between attitudes of academics and managers towards evaluation. Managers adopt a pragmatic approach by looking for solutions which work for them.

Connell (2001) explores exactly who evaluates SSM. It could be a) those who use the approach (principally the facilitator) or b) those with whom it is used (the participants). This includes those he identifies as 'tangential users'. These are defined as stakeholders rather than modellers, but they could be the most

influential in determining success at the stages of analysis where ideas or changes are enacted upon. He constructs a simple 'participation matrix' to illustrate 'stakes' in an SSM exercise.



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Table 5: Connell's stakeholder participation matrix (2001)

Cell Three may be occupied by Checkland's 'clients.' These are generally managers or leaders who have initiated the analysis and they are usually also the budget holders. They will be important in evaluating the outcome of the analysis.

Connell identifies two aspects of SSM which are particularly amenable to evaluation. These are:

- a. the high level of methodological structuration and formalisation. For instance, the contribution of the SSM methodology in clarifying or identifying the problem situation enables a clear attribution of means and ends and
- b. the successful implementation (the outcome of the approach) which

focuses as much on subjectivist values and attitudes as on changes in 'hard' systems. This inclusive set of outcomes is uniquely suited to evaluative approaches.

Mingers and Taylor (1992) and Ledington and Donaldson (1997) claim two possible frames of reference for success (which enable evaluative clarity). These are a) making sense of a problem situation and b) change management. However, they do not propose explicit criteria to measure 'success' in either case. Mingers and Taylor (1992) call for more detailed research on how the characteristics of the problem situation may affect the way that SSM should be used. The implication here is that each problem situation is unique, a point that Checkland (1990) also gives emphasis to. Similarly, Connell (2001) claims that any evaluation of SSM should be founded on three criteria:

- a. The approach itself
- b. The domain in which it was applied
- c. The way in which it was used

Connell (2001) highlights two aspects of an SSM application which can be used for evaluation purposes. These are first, the structuring issues including for instance the contribution of the methodology in clarifying or identifying the problem situation. This is the contribution of the approach. The second aspect concerns successful implementation (that is, the outcome of the approach). Connell's approach is summarised in Table 6 (Connell, 2001).



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Table 6: Connell's Success Matrix (2001)

An application would be said to have a high positive value in a quadrant if the following conditions prevailed:

- Quadrant 1 the approach was viewed as successful in that it helped to generate pertinent insights
- Quadrant 2 the approach was viewed as successful in that it helped to manage change
- Quadrant 3 the problem situation was successfully resolved, through a clearer understanding of it from SSM use
- Quadrant 4 the problem situation was successfully resolved, the change being managed through SSM use

The 'success matrix' is clearly grounded in different types of social problems, in

different mixes of consensus/dissensus and in attitudes to learning.

At a conceptual level of evaluation Flood and Jackson's (1991) claims for SSM require acknowledgement. They state that SSM should be credited with a) using systems as an organising framework for seeing an always contested 'reality' and b) introducing both hard and soft paradigms in combination, thus causing the epistemological break from positivist to interpretive thinking.

This paradigm shift may be significant in systems thinking at the organisational level and is supported by others (Ellis,1995, Hopkins,1995, Crowe et al 1996). This suggests that one measure of the effectiveness of SSM should be the extent to which systems change has been achieved.

The difficulty of assessing the role of SSM in the change process lies in the very nature of its philosophical stance as a continual learning system. This position does not take Stage 7 ('action to improve the situation') to be the ultimate end point, since human affairs will be subject to continual transformation. This will in turn reshape norms and values which will then effect any evaluation of ensuing change or improvement. O'Pala et al (2003) go further and question our underlying ability to answer questions which are fundamental to any kind of measurement of the outcome of success of SSM. These difficult questions include: What is the problematic situation? Which actions have been taken? What is the new situation? To what extent was improvement the result of action taken?

The limitations of applying positivist measures to the effectiveness of PSMs have been acknowledged (White, 2006). SSM is a phenomenological approach which is applied to problem situations which are ill-defined. Objectives regarding change outcomes are not clear and therefore may not be objectively measured. This points clearly to the limitations of positivist evaluation and suggests that a framework for evaluation which comprised a learning approach, would better suit the needs of SSM.

Such an approach is Fourth Generation Evaluation (Guba and Lincoln 1989), which may be applicable to the context of SSM, because it comprises the concept of Responsive Evaluation. This accommodates ambiguity in the scope and elements of the evaluation, which is negotiated via the stakeholders. Checkland emphasises the importance of participant stakeholders at all stages of the SSM process, and the notion that objectives can not clearly be defined is inherent in the SSM approach. The exploration of the different perceptions of stakeholders is also central to the hermeneutic dialectic circle of Fourth Generation Evaluation, and this aligns with the the notion of stakeholder empowerment which is a fundamental premise of SSM, and which assumes that more successful change outcomes are achieved through genuine stakeholder participation. In SSM, the views of all stakeholders are important, and it is accepted that the process of using the methodology will influence the personal constructs (worldviews) of the stakeholders. The interpretive paradigm, in which both SSM and Fourth Generation operate, also acknowledges the role of values and the importance of local context. The potential of Fourth Generation

Evaluation to contribute to the process of evaluation in SSM is explored in this research.

2.9 Conclusion

For nearly three decades, systems thinkers (Ackoff,1974, Beer,1978, and Schon,1971) have advocated the management of complexity as a way of dealing with change in a problematic environment. More recently, a 'whole systems approach' has been recommended (Bunker and Alban,1994; White, 2000). SSM would seem to accommodate these views, yet there are powerful criticisms of its capacity to engender true participation and genuine debate. The impact of political influences and how these should be managed by the facilitator is unclear. The degree of intervention of the facilitator, particularly in Mode Two use, is ambiguous. If high, it could compromise the neutrality (and therefore possibly the effectiveness) of this role in SSM analysis. There is a lack of clarity concerning the nature of involvement of the facilitator in process and content, which is complicated further by the interpretive stance of the methodology.

There would appear to be a requirement for SSM facilitators to be highly skilled in participative action, as well as in communication and negotiation skills.

Furthermore, the research literature challenges many of the central assumptions of SSM, notably that worldviews can be changed and that this itself can lead to organisational change.

These issues are central to its impact in the process of change, and indicate a need for a rigorous evaluation of SSM in environments which require a 'whole system approach' and which place a strong emphasis on cultural and human issues.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the methodology which has been applied to this research and describes the SSM applications which were carried out in both Sandwell and Hereford. The first section details the application of action research practices in both of these problem situations. It goes on to discuss the process of template analysis which was used to analyse the primary research data gathered from the applications. Remaining sections provide further detail on the application of SSM to Sandwell and Hereford.

3.2 The Research Question and Strategy Adopted

The aim of this research is to examine the effectiveness of the Soft Systems Methodology (SSM) in systemic change processes within health sector environments in the UK. The specific objectives of the research are described in Chapter 1 (Section 1.2).

The review of the research literature suggests that a gap in the knowledge surrounding SSM concerns a rigorous assessment of the role of the approach in the change process. In the Mode 2 form of SSM, Checkland appears to concede

that there may be value, in some situations, in incorporating the views and perspectives of the researcher in the analysis of organisational change and improvement. As with all participation in an SSM analysis, such views and perspectives may be highly subjective and interpretative. The scope and nature of the facilitator's role will therefore need to be taken into account in any assessment of this approach in the change process.

A further factor to be considered in any assessment of the researcher's role relates to the use of action research, the main research method adopted here. Checkland's SSM has been developed through action research applications. As noted earlier, McKay and Marshall (2001) have interpreted action research as the juxtaposition of action (practice) and research (theory). This includes the active involvement of the researcher in the investigation. It follows that within SSM, the researcher's contribution is both processual and contextual. Action research can therefore be defined as an integrated research approach from which both client and researcher benefit.

Baskerville and Wood-Harper (1998) portray action research as the typical approach to qualitative research in the field of information systems (IS). Citing Van Eynde and Bledsoe (1990), action research is seen as the 'touchstone' of effective organisational development activity. Baskerville and Wood-Harper (1998) are persuaded that it 'remains the primary methodology for the practice of organisational development' (1998:27). They then proceed to observe that 'different forms of action research have different models, different structures and

different sets of goals' (1998: 90). In this view, three distinct process models comprise the different forms of action research:

- a. The iterative process model, where a repeating sequence of activities and problem diagnosis takes place.
- b. A reflective process model, which is also iterative, but focuses on the reflective analysis of the differences between espoused theories and theories-in-use (Argyris and Schon, 1978).
- c. A linear process model comprises a single set of activities which are followed with no iteration or repeating cycles.

The form of action research carried out here may be interpreted as a combination of the iterative and reflective process models. Baskerville and Wood-Harper (1998) further argue that there are a number of ways in which researchers may situate their contribution within these models:

- a. Collaborative involvement, which assumes absolute equality between the researcher and the study subjects.
- b. Facilitative involvement, based on a subtle division of labour between researcher and research subjects (Baskerville and Wood-Harper, 1998).

‘A facilitative involvement distinguishes the researcher as an expert among the study subjects. While the work is still co-operative, the tasks of the researcher and the subject are quite distinct. The burden of solving the immediate problem setting rests with the study subjects. The task of the researcher is to facilitate or help the subjects with expert advice, technical knowledge or an independent viewpoint. However, the subjects are responsible for determining exactly what interventions will be created’ (1998:95).

- c. An expert involvement, in which the researcher functions as an expert with responsibility to solve the problem.

This research commenced within the framework of facilitative involvement, but then evolved. The legitimacy of such shifting roles is recognised by Baskerville and Wood-Harper (1998). ‘Some forms of action research allow the researcher to adopt different involvement roles depending on the problem setting.’ (1998:95). The involvement strategies described above clearly overlap. The research strategy followed here did not, in fact, adhere strictly to one involvement strategy. The use of SSM Mode 2 resulted, for example, in some interventions at some points that pointed to collaborative involvement tactics. At other times, facilitative involvement was to the fore.

During and following the SSM applications, stakeholder interviews were held to evaluate the perceived impact of the use of SSM on the process of creating change within both problem situations. Additionally, observation data was collected during both applications. The chronology of SSM applications and data collection activities is presented below:

TIMELINE AND RATIONALE	DATA COLLECTION ACTIVITIES
<p>Summer 2000-Summer 2001</p> <p>Rationale:</p> <ul style="list-style-type: none"> • <i>Stakeholder analysis</i> to identify problem solvers/owners • <i>Worldview interviews, models, workshops</i> to carry out SSM application • <i>Observation data</i> to gather observations with regard to the role and interventions of the facilitator 	<p>Summer 2000 – Hereford application commenced; initial client meetings held; stakeholder analysis</p> <p>Autumn 2000 – Hereford worldview interviews; observation data collected</p> <p>Winter 2000 – Hereford models produced, circulated, refined; observation data collected</p> <p>Spring/Summer 2001 – Hereford workshops held; observation data collected</p> <p>Spring/Summer 2001 – Sandwell application commenced; initial client meetings; stakeholder analysis; worldview interviews; models; workshop; observation data collected</p>
<p>Autumn 2001 – Summer 2002</p> <p>Rationale:</p> <ul style="list-style-type: none"> • Assessment interviews to evaluate the impact of SSM in the change process 	<p>Autumn/Winter 2001 – Sandwell 1st Assessment interviews</p> <p>Winter 2001 – Hereford Assessment interviews</p> <p>Summer 2002 – Sandwell 2nd Assessment interviews</p>

Table 7 Chronology of data collection activities

The time applied to SSM activity in each application was distinctively different. The Hereford project extended over a period of approximately fifteen months. In Sandwell, modeling work and SSM activity was concentrated over two months during the Spring and Summer of 2001. In both cases, there were institutional circumstances which influenced these timelines. There were issues in Hereford surrounding the availability of busy clinical staff which delayed meetings and communications between the facilitator and the participants, but there was also evident a reflective culture which manifested itself throughout the SSM project.

In Sandwell, the SSM project was established as a formal project very early on, and this, coupled with a sense of urgency which had arisen from previously unsuccessful attempts to move the IM&T strategy forward, resulted in a desire to focus the application into a contracted timescale, thus endowing it with tangible momentum.

The purpose of the assessment interviews, in both cases, was to evaluate the impact of SSM in the change process, as perceived by the participants. The longer timescale of the Hereford application and the churn in personnel which had occurred since the application began (see Section 5.2), together with the continued involvement of the facilitator, resulted in the decision to carry out one set of assessment interviews twelve months after the commencement of the study. The more contracted timescale of the Sandwell application and the ending of facilitator involvement at an earlier stage, resulted in two sets of assessment interviews, taking place at four and twelve months respectively after the commencement of the study. Additionally, observation data was collected by the author throughout the application, with particular regard to the role and interventions of the facilitator.

The longitudinal view was intended to facilitate an assessment of the impact of SSM in both cases which went beyond any immediate, tangible effect, in an attempt to surface deeper impacts, such as changes to organizational culture and *modus operandi*. Observation data was collected by the facilitator during the SSM applications (that is, worldview interviews and modeling work). This data

(see Chapter 5) concerns observations with regard to the role and interventions of the facilitator. Post-application data collection (that is, the assessment interviews) took place over twelve months and thus the views expressed should be seen as the retrospective sentiments of the key actors in the SSM experiments. The composition of these key actors changed during this time. In Hereford, fifteen participants took part in the SSM application and nine were eventually interviewed for their assessment of the impact of SSM. This was the consequence of changing roles and staff downsizing, and the pressures of clinical work. In Sandwell, sixteen participants took part in the SSM application and the first assessment interviews; as a result of changing roles and staff turnover, fourteen participants took part in the second set of assessment interviews.

Formal facilitator involvement had ceased in Sandwell before the first assessment interviews took place, but this was not the case in Hereford. Informal contact with the ICP developer was maintained until late 2002, to assist in the development of the pathway model.

The active involvement of the facilitator may have affected participant's perceptions of the impact of SSM to some degree, in particular the view was expressed by some that a degree of momentum was lost when facilitator involvement ended. Additionally, the impact of personnel turnover must be acknowledged during the consideration of longitudinal data. Finally, any analysis of a longitudinal view of the impact of SSM must take into account the likely influence of other organisational events and changes within the problem situation

(which may or may not have been prompted by SSM). These issues are discussed in Chapters 4 and 5 (Data Analysis and Results).

Four sets of primary data have been analysed for this research. These are:

- a. First assessment interviews for Sandwell (Sandwell 1) (Autumn/Winter 2001/2)
- b. Second assessment interviews for Sandwell (Sandwell 2) (Summer 2002)
- c. Assessment interviews for Hereford (Hereford). (Winter 2001)
- d. Observation data from both Sandwell and Hereford (Observation). (2000-2002)

Assessment interviews were semi-structured.

Data has been analysed qualitatively using template analysis (Crabtree and Miller, 1999; King, 1992) and a basic form of grounded theory (open coding) (Strauss and Corbin, 1990).

Template analysis requires the researcher to produce a list of codes, known as a template, which defines themes which have been identified in textual data. The themes will usually represent a combination of *a priori* codes and codes which

have emerged from data interpretation. King (1992) positions this approach between content analysis (Weber, 1995), where codes are determined *a priori* and are statistically analysed, and the grounded theory approach of Glaser and Strauss (1967) in which codes are not pre-determined. Template analysis therefore occupies a middle ground and enables researchers to adopt a flexible and less prescribed approach to analysis, thereby reflecting the ‘differing philosophical orientations of researchers’ (King, 1995: 118). It is a less prescriptive method of scrutiny than that supported by grounded theory. It enables researchers to begin the interpretive process with a few defined codes (as in the case of the current research), which is a helpful starting point when trying to make sense of the data. However, these codes may be discarded or re-interpreted as the template is refined and developed over time.

The arrangement of codes within template analysis is normally hierarchical (King, 1995). Similar codes are grouped together and notated as belonging to a higher order code. The facility to analyse data at different levels produces a richer level of interpretation. Theoretically, there is no limit to the number of levels which may be assigned although a large number may compromise the clarity of analysis.

The large amount of data produced by this research (interview transcripts and observation data) required a flexible approach to analysis which enabled an insightful and unrestrained identification of relevant themes. It was recognized that this flexibility needed to accommodate the recognition of both *a priori* codes

and codes which are not pre-determined; essentially this is a social constructionist view of analysis which was considered appropriate to an evaluation of SSM.

Therefore, although a generally inductive approach has been used, enabling recognition of frequently repeated patterns in the data sets (Thomas, 2003), the templates have been initially informed and shaped by some *a priori* themes. These themes are based on the initial research question guiding this work, together with the results of the literature review. Thus in this research, data analysis has combined elements of deductive and inductive techniques in a mixed format.

Interview transcripts were read several times and templates (lists of codes) identified from each transcript. Themes which appeared to be conceptually similar or linked hierarchically were then clustered together and labelled as categories. This initial process of template construction enabled *a priori* and undetermined themes and their relationships to be considered, refined, and reconsidered, thus facilitating deeper insights into the meaning of the data.

This process began by listing what were considered to be key points made by each interviewee. For example, during the Sandwell 1 interviews, many people commented on the impact of SSM. The list below represents a sample of their comments.

<i>Creates coherence, structure, clarity</i>
<i>Produced a clearer view of the Sandwell (IM & T) Strategy</i>
<i>Created awareness of the technical and operational complexities (of the IM & T Strategy)</i>
<i>Creates consensus</i>
<i>Broadens horizons</i>
<i>The models led to a business case</i>
<i>Enabled collective agreement</i>
<i>Played a role but not pivotal (to change)</i>

Figure 2. Impact-related Themes from Sandwell I Interviews

Initially, such comments were coded as ‘Impact of SSM’ (the highest order code), with each theme (eg ‘Creates coherence’, ‘Clearer view of strategy’ ‘Awareness of technical and operational complexities’ etc) designated as lower-order codes (King, 1995). Further scrutiny revealed, though, that some comments were expressing either a generic impact, or more specifically a cognitive or personal impact. For example, many participants mentioned that SSM helped to structure their thinking. It also produced clarity and coherence concerning the way that people perceived partnership and strategy issues, which had not existed before. Other comments highlighted the impact of SSM on organisational issues. Thus, the SSM models had been used directly in the production of a Business Case for the Sandwell Partnership. This process did help to disaggregate what could be regarded as generic, context-free attributes of the methodology (such as the view that it brings structure to a complex issue) from content-specific characteristics. This distinction was still a problematic and ambiguous one, though. For example, use of SSM appeared to encourage

participants to share information to a greater degree than previously, which led to an increased awareness of other projects and others' commitments. It is plausible that any user-centred and participative methodology will require a degree of sharing of ideas and would lead to the breaking down of barriers where these existed. This appears to have occurred here, although this effect may have been temporary. The organizational and functional divides appeared to run deep. However, whilst the effect of breaking down barriers could be regarded as a cognitive, generic impact, its importance in the apparently silo-driven culture of Sandwell Council was significant. It was therefore an impact that had generic and site-specific qualities at the same time. As the coding work progressed, drawing this distinction between the generic and the specific impacts of SSM was not considered to be helpful, since the two effects could be considered to be closely inter-independent. These revisions reflect learning and need to be welcomed by the researcher.

Open coding was used to cluster sets of similar comments, using a very basic form of grounded theory (Strauss and Corbin, 1990). The coding was carried out manually. The coding process resulted in a set of categories and sub-categories for each set of assessment interviews, and these are presented below:

CATEGORIES	SUB-CATEGORIES
1. PERCEPTION OF CHANGE	1a. BUSINESS CASE (regarding IM&T strategy)
	1b. CONFIDENCE TO ACT (regarding IM&T strategy)

	1c. AGREED DIRECTION (of the IM&T strategy)
	1d. CREATES ORGANISATIONAL INSIGHT
	1e. CREATES CLARITY AND LEGITIMACY
2. NON-SSM FACTORS	2a. SILO CULTURE
	2b. ESPOUSED PARTNERSHIP CULTURE
	2c. TENACIOUS POLITICAL CULTURE
	2d. ORGANISATIONAL HISTORY
	2e. STRATEGIC EVENTS
	2f. TIMING
	2g. MOMENTUM
3. PARTICIPATION FACTORS	3a. INTIMIDATION
	3b. STATUS ISSUES
	3c. EMPOWERMENT/COLLABORATION
	3d. SENSE OF OWNERSHIP/RELEVANCE (of IM&T strategy)
4. KNOWLEDGE & INFLUENCE	4a. ORGANISATIONAL ROLES
	4b. ORGANISATIONAL INFLUENCE & KNOWLEDGE
	4c. KNOWLEDGE & UNDERSTANDING OF SSM
5. FACILITATOR ROLE	5a. INTERVENTIONS
	5b. NEUTRAL FACILITATION

Table 8: Categories and Sub-Categories for Sandwell 1 Interviews

CATEGORIES	SUB-CATEGORIES
1. PERCEPTION OF CHANGE	1a. IM&T STRATEGY
	1b. PARTNERSHIP CULTURE
2. NON-SSM FACTORS	2a. SILO CULTURE
	2b. POLITICAL FACTORS
	2c. STRATEGIC EVENTS
	2d. MOMENTUM

Table 9: Categories and Sub-Categories for Sandwell 2 Interviews

CATEGORIES	SUB-CATEGORIES
1. PERCEPTION OF CHANGE	1a. CREATES ORGANISATIONAL INSIGHT
	1b. CREATES VALIDITY AND STRUCTURE
2. NON-SSM FACTORS	2a. CULTURE
	2b. ORGANISATIONAL SUPPORT
	2c. MOMENTUM
3. PARTICIPATION FACTORS	3a. INTIMIDATION
	3b. OWNERSHIP/RELEVANCE (OF ICP)
4. FACILITATOR ROLE	4a. INTERVENTIONS
	4b. NEUTRAL FACILITATION

Table 10: Categories and Sub-Categories for Hereford Interviews

CATEGORIES	SUB-CATEGORIES
FACILITATOR ROLE	1a. INTERVENTIONS
	1b. NEUTRAL FACILITATION

Table 11: Category and Sub-Categories for Observation Data

The discussion turns now to a detailed description of the organisation and delivery of these general research strands within the two test sites of Sandwell and Hereford.

3.2.1 The Sandwell Application

In the Spring of 2001, the Head of IM&T, Sandwell Health Care Trust, approached the researcher to discuss the potential application of SSM to development work which was currently taking place concerning Sandwell's IM&T strategy. This person is henceforth referred to as the client. The application of SSM to the problem situation in Sandwell commenced with the identification of sixteen key problem owners and problem solvers (Checkland and Scholes, 1999), including the client. Although Checkland does not use the term 'stakeholder', this aspect of the methodology could be seen to constitute a form of stakeholder analysis (see Davison et al, 2006, for use of stakeholder analysis in information systems development). It requires the identification of the participants who are believed to have a 'stake', or interest, in the outcome of an SSM application. This followed the logic of the stakeholder power – interest

models at the problem formulation stage to be found in Bryson (2002). In this case, the problem domain is that of the development of the IM&T strategy for Sandwell. The sixteen participants (hereafter referred to as stakeholders) and their institutional affiliations were as follows:

- Deputy Director of Finance, Black County Mental Health Trust.
- IM&T Strategic Co-ordinator, Sandwell Metropolitan Borough Council
- Head of IM&T, Sandwell Health Care Trust.
- Head of Strategic IT, Sandwell Metropolitan Borough Council.
- Information Manager, Sandwell Social Inclusion and Health.
- Information Officer, Sandwell Council of Voluntary Organisations.
- Chief Inspector, Police Headquarters, Community Services Division.
- Director, Sandwell Ethnic Minority Umbrella Forum (SEMUF).
- Project Manager, Sandwell Public Information Network (SPIN).
- Chief Executive Designate, Sandwell Health Authority.
- Director, Sandwell College.
- Chief Librarian, Sandwell Library and Information Services.
- Head of Education and Microtechnology Unit (EMU), Training and Development Centre.
- Executive Director, Sandwell Learning Plus (SLP).
- Director, Sandwell Civic Partnership.
- Head of IM&T, Sandwell Health Authority.

Delivery of SSM Mode 1 Stages 1,2,3,4,5 in Sandwell

A number of initial visits were made to the Sandwell Health Authority to discuss the application with the client and to gather some 'real world' information about the client organisation, the IM&T strategy work to date and the problem situation. It became clear quite quickly that the proposed application was unusual in that the client organisation required the modeling work (Stages 3 and 4) to be undertaken and completed within a very short fifteen-day period during the early part of June/July 2001. This urgency was partially created by an executive drive to address a problem which had already been stagnating for some time. It also meant, though, that assimilation of the methodology by the stakeholders and the preparation of the models had to be done in a very focussed and intense way. An administrator was assigned to the application from within the Health Authority to arrange interviews and meetings between the facilitator and the potential participants and to ensure that diaries and calendars were co-ordinated. However, the contracted timescale meant that there was not an opportunity to meet with all stakeholders together and explain the methodology and the application before the worldview interviews began. This truncation does appear to have impacted on the way that some stakeholders participated in the application (see Chapter 4).

Initial interviews between the facilitator and every stakeholder were arranged. Written material about SSM was prepared and circulated to each participant in advance of the interview (included here at Appendix 1). In addition, a large part of the initial interview with each stakeholder was spent explaining and

discussing the approach. However, the main purpose of the interview was to gain the stakeholder's worldview and this was elicited through the question: 'What is your view of a Borough-wide IM&T strategy?' This problem theme (Checkland and Scholes, 1999) had been discussed between the client and the facilitator and it was considered to be the most effective way to introduce an interrogation of the constraints impeding progress towards an IM&T strategy to that point. The client suspected that some stakeholders had quite different perspectives concerning the strategy and this line of inquiry would be an effective way of surfacing any such differences.

In fact, these initial interviews revealed three key emerging themes which provided an early insight into the reasons behind the deadlock on the IM&T strategy. The issues emerged from the worldview interviews and are summarised in the three tables below:

THEME	ISSUES AND CONCLUSIONS
<u>The need for seamless 'joined up' services</u>	<ul style="list-style-type: none"> • Too much overlap across groups and services • Roles and functions of groups too 'fuzzy'; co-ordination and rationalisation required • Some reporting mechanisms appear arbitrary and driven by personal interest • A small number of key projects appear to be driving the strategy (there is a territorial and funding driven culture) • Individual projects feel responsibility to their sponsor than to the Partnership (funding-dependent achievable creates more tangible parameters than a fuzzy corporate vision) • Resources should be pooled and co-ordinated <p>CONCLUSION: A true Partnership culture is not working in practice. There is a lack of common ground and projects are driven by funding initiatives rather than by a cohesive strategy. There is a requirement for co-ordination and rationalisation.</p>

Table 12: Worldview Theme One (Sandwell)

THEME	ISSUES AND CONCLUSIONS
<u>views regarding the clarity of the overarching Partnership strategy are mixed.</u>	<ul style="list-style-type: none"> • <i>What</i> to do (strategy) is not a problem, but <i>who</i> and <i>how</i> (operational) is not specified • No clear strategic leadership • Vision is loose and not widely owned • Strategic empowerment appears to be focussed at the top • The need for a strategically powerful agency/individual to make the strategy work <p>CONCLUSION: The Partnership strategy requires a powerful, influential, hands-on champion.</p>

Table 13: Worldview Theme Two (Sandwell)

THEME	ISSUES AND CONCLUSIONS
<u>The importance of the technical agenda</u>	<ul style="list-style-type: none"> • Difficult to rise above the technical issues • Slow progress on protocols for information sharing • Too little sharing of information • Currently too much information to digest • IT must support a concept of service • Use technology to encourage learning and regeneration • Could the Hub be used as the 'web' base for the IM&T strategy? • One network across the Borough • The IM&T strategy should not be totally IT focussed <p>CONCLUSION: Almost by default and because it has a more tangible momentum, the technical 'agenda' appears to be driving the strategic process.</p>

Table 14: Worldview Theme Three (Sandwell)

Following each interview, a CATWOE (customer/actor/transformation process/worldview/owner sequence) and a conceptual model was drawn up for each of the stakeholders, based on their worldview (a selection of these are shown at Appendix 2). When all of the interviews and modeling of the worldviews had been completed, a workshop meeting was arranged in July 2001, to debate the resulting models (Stage 5). All stakeholders were invited to this. The aim of the workshop was to attempt to reach an accommodation of worldviews and construct one or more conceptual models which would help to drive the strategy forward. Twelve stakeholders were able to attend the meeting which was chaired by the author acting as the facilitator. A complete set of all worldviews and conceptual models was circulated at the meeting. The meeting began with the circulation of additional notes and a presentation by the author in her facilitating role,

concerning the methodology and how it worked. This gave the stakeholders an

opportunity to resolve any queries that they may have had regarding the approach. For the first time, they could discuss the application together as a group of stakeholders.

The process of examining and debating the conceptual models was extremely useful. Two key themes appeared to emerge from this examination. These were:

- A need to reconcile a funding/budget driven culture within the Partnership with the need for a cohesive strategic agenda. This was identified as a Partnership issue.
- The requirement for a supporting infrastructure of information and knowledge management across the Partnership. This was identified as an 'information strategy' issue.

In response to this, stakeholders as a whole initially agreed that a hierarchy of three systems needed to be considered. These were:

- The need to create change within the Partnership.
- The adequacy of mechanisms for information management.
- The technical infrastructure required to deliver any IM & T strategy.

Working initially as a single group, the stakeholders attempted to construct conceptual models for each of these three decision systems. After a very short while, it was agreed that the 'information management' system was a pervasive issue that could largely be assigned to the 'Partnership Change' system. As a

consequence of these further deliberations, the larger group divided into two smaller groups. One group concentrated on the 'Partnership Change' system, while the other focussed on the 'technical infrastructure'. The conceptual models are shown below.

WORLDVIEW A (the 'W' in the CATWOE sequence)

The Partnership must have a clear strategic lead which is best provided by a strategically empowered team that includes technical (and other) staff, and which has a clear remit to deliver the objectives of the Partnership.

- C - the public, stakeholders, partners and professionals.
- A - partners (including bosses), dedicated resources, hands-on people.
- T - the need to 'programme manage' the Partnership [input] - need met by an empowered team [output].
- O - Sandwell partners.
- E - central government, regional/sub-regional changes, legislation.

This sub-group was able to develop what it considered to be a good working model for this view, which is reproduced below. This model defines the requirement for a fully resourced agency led by a programme management team charged with the IM&T Strategy Implementation Process. It also sets out the activities that that agency will be required to carry out.

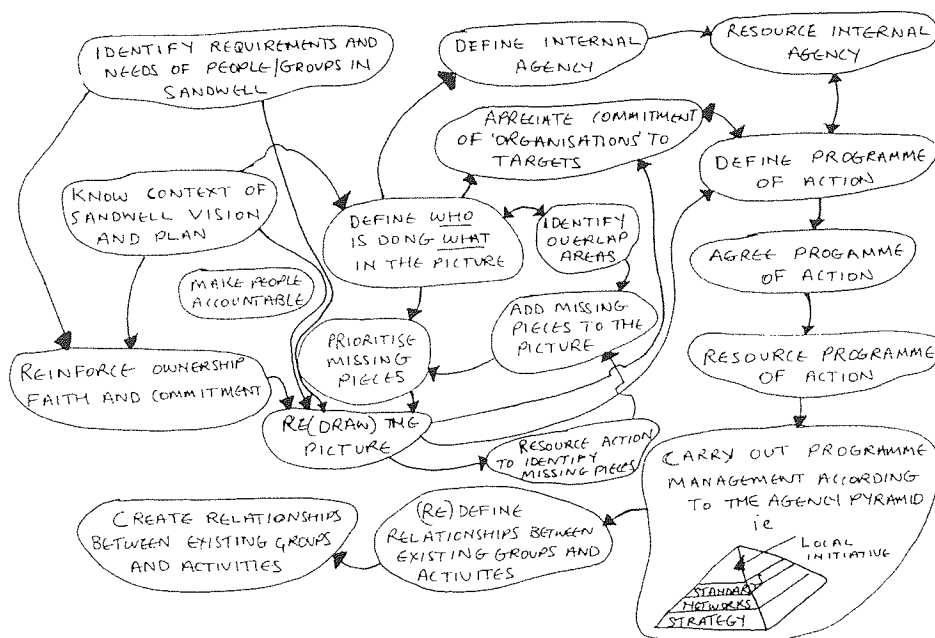


Figure 3: Sandwell Conceptual Model A.

WORLDVIEW B

The IM&T strategy 'box' must converge existing information systems to create 'joined-up' channels of information provision to both the public and to members of the Partnership.

- C - citizens, businesses, Partnership stakeholders.
- A - Partnership stakeholders.
- T - The need to converge stakeholders' IM&T strategies into the 'box' identifying areas of commonality as well as stakeholder-specific

functions [input] need met [output].

O - The Sandwell Partnership.

E - NHS organisation, co-terminosity, existing infrastructure.

The model identifies the fundamental activities required for this worldview and the nature of the transformation that needed to take place.

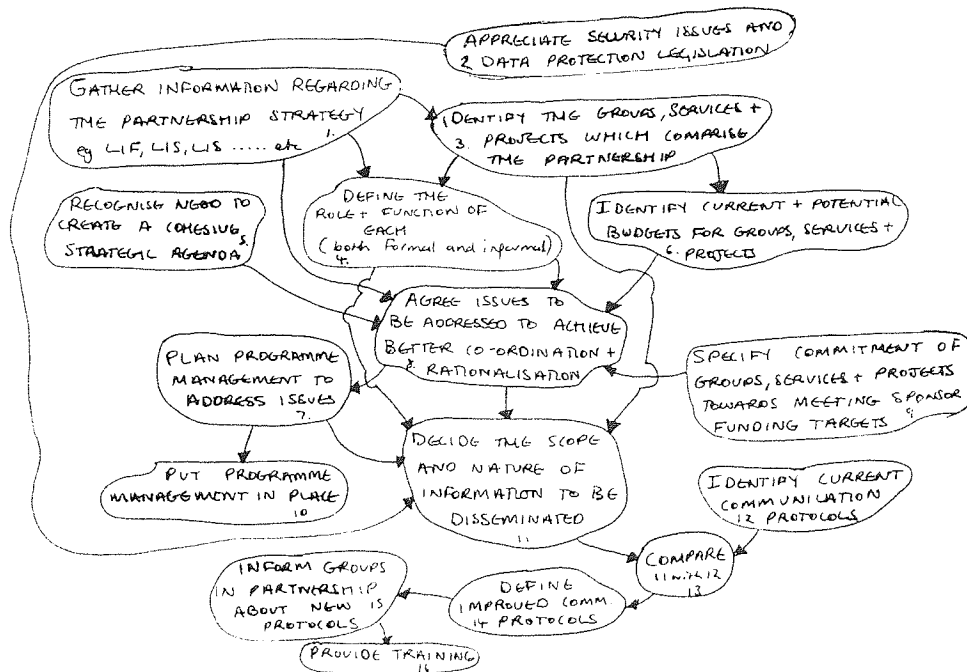


Figure 4: Sandwell Conceptual Model B.

At this point, the SSM application process formally ended. The models were used to produce a business case for the appointment of a new Partnership post of Executive Director who was then to lead the IM&T strategy. The actors perceived this alone to be a considerable step forward, although progressing this appointment was later hampered by the political climate of Sandwell (see

Chapter 4). The facilitator concentrated thenceforth on gathering evaluative data concerning the application of SSM.

3.2.2 The Hereford Application

The development of an ICP for Stroke Care was identified as a priority project in Herefordshire for delivering seamless, integrated care that traversed acute and community settings. During the Summer of 2000, the Director of Health Informatics, Hereford Health Authority (hereafter known as the client), approached the researcher to discuss the potential application of SSM to the development of an ICP for Stroke Care. There were three principle reasons for this:

- a. The delivery of Stroke care is multidisciplinary. It involves a wide and complex range of clinical expertise, as well as other connected agencies such as carer associations and social services. It was important to use an approach that would bring these groups together and encourage commitment, co-operation and collective ownership. A Stroke Team existed but did not have formal protocols for integrated clinical practice and consultation concerning medical and strategic development. The ICP would require a significant cultural and structural shift towards an holistic team-based care delivery programme which would extend beyond the Health Authority.

- b. Hierarchical barriers may have existed within the clinical groups which would inhibit team discussions. An egalitarian approach was needed to mitigate this. The client felt that SSM allowed participants to challenge their assumptions and surface disagreements in a non-threatening way.
- c. The approach could be used to develop an information system for the pathway, based on the Conceptual Model, therefore providing a means to develop an electronic care pathway. It was anticipated that the participative character of the approach would help to dispel some of the apparent fears and misconceptions concerning the use of electronic care pathways.

Although the implementation of ICPs was seen as a strategic (policy) requirement, the area of change was identified as the need to loosen Hereford's organisational structures and culture so that integrative team-working could progress to reality.

The application of SSM to this problem situation commenced in August 2000 with an analysis to identify participants, particularly problem owners and problem solvers (Checkland and Scholes, 1999), referred to here as a stakeholder analysis. Key individuals were identified as representative of the areas involved in the problem situation.

Delivery of SSM Mode 1, Stages 1,2 and 3 in Hereford

The specifics of the problem and of the extant organisational system meant that delivery followed a somewhat different path in Hereford compared to Sandwell. Multidisciplinary meetings were held to provide information about SSM and to explore the level of acceptance of the approach. These meetings included the Director of Health Informatics (the client), who was very familiar with the approach, and a small selection of participants. The author as facilitator was not always present at these initial meetings. Because SSM is participative, understanding and commitment was critical among the participants. In addition, written material about SSM was prepared and circulated to each participant prior to the individual, worldview interviews. The facilitator also began to gather written documentation about existing Stroke care processes and ICP development initiatives.

The participant analysis was wide-ranging and rigorous. Given this and a high initial apparent commitment, it was not necessary to interview all stakeholders. Key individuals were identified as representative of the areas identified in the initial analysis and they were interviewed individually by the facilitator to explore their worldviews. Seventeen individuals were interviewed during the Autumn of 2000. The functional and professional areas represented by the interviewees are set out below.

FUNCTIONAL/PROFESSIONAL AREAS	NUMBER OF INDIVIDUALS INTERVIEWED
DOCTORS/CONSULTANT	1
STROKE TEAM – CO-ORDINATOR	1
SPEECH AND LANGUAGE THERAPIST	1
STROKE PATIENT	1
SOCIAL SERVICES	1
PLANNING AND PARTNERSHIP	1
CARER SUPPORT	2
OCCUPATIONAL THERAPY	1
PATIENT ACTIVITY MANAGER	1
PHYSIOTHERAPIST	2
DISCHARGE PLANNING	1
NURSES	3
INTERMEDIATE CARE	1

Table 15: Interviews Conducted with Hereford Stakeholders

The worldview of each stakeholder was gathered in an initial one-to-one interview with the facilitator. Each interviewee was asked the question: ‘What is your view of an effective Stroke care service?’ This problem theme (Checkland and Scholes, 1999) had been agreed with the client and participants at the multi-disciplinary meetings. It was considered that the most effective way to model a pathway was to define the components of an effective Stroke care service and then deal with issues of sequencing, responsibility and so on.

One of the conventional ways of commencing a Mode 1 SSM analysis is to complete a rich picture of the problem situation as part of Stages 1 and 2 of the methodology. However, this is sometimes considered ‘too uncertain a process

for some' (Checkland and Scholes, 1999: 66) and the naming of relevant systems, root definitions and conceptual models is preferred. This was the case here. Rich pictures were seen as unstructured and arbitrary compared to the relative logic and credibility of systemic modeling. There was a very strong instrumentalist culture at work in Hereford. A price may have been paid in not developing this Rich Picture, though. Such an exercise would have aided in the development of the facilitator's knowledge concerning the socio-political climate of the problem situation. This proved significant, and is discussed in Chapters 5 and 6.

Delivery of SSM Mode 1 Stage 4 in Hereford

For each interviewee a worldview, CATWOE, Root Definition, and Conceptual Model was constructed. Two nurses (from the same nursing home unit) preferred to be interviewed together and produced a shared worldview and model. One of the carers was interviewed with her husband, a stroke patient; they also produced a shared worldview and model. In all, 15 models were produced. The interviews were lengthy and often very detailed, since the activities required for the individual's conceptual model were also discussed there. In addition to this, the facilitator continued to collect written documentation to support a developing understanding of the processes and activities which were extant regarding Stroke care.

The models were provisionally drafted during the interview process. These were later refined by the facilitator and circulated to individuals and where feedback was received (not universally), the models were refined further. A sample of these models is attached at Appendix 3. The worldviews represented by each model were reasonably convergent and they are summarised below. They are categorised into two groups. Group A represents those systems that describe the Stroke care environment as a whole. Group B represents those logical relations that may be considered to be sub-systems of a general Stroke care system model. It should be noted here that the models were not presented to the stakeholders as two separate entities before the initial workshop. This categorisation was stakeholder-led and occurred during the first workshop.

AREA	RELEVANT SYSTEM
Stroke Co-ordinator	Individual care with equality of standards
Patient and carer	Effective communication
Social Services	Equality of community for stroke patients via formal links between stroke care professionals
Planning and Partnership	Flexible care programme for individual patients and appropriate information
Senior Physiotherapist	Equality of specialist care via a multi-disciplinary team
Carer Support	Effective communication and inclusion of Carers
Occupational Therapist	Equitable Stroke service ensuring continuity and consistency
Consultant	Tailored care by a skilled stroke team whilst maintaining equality of standards

Table 16: Group A: Relevant Systems

AREA	RELEVANT SYSTEM
Nurses (nursing home)	Adequate access to physiotherapy
Speech & language therapist	Assessment of speech and language capabilities
Patient Activity Manager	Efficient & effective discharge to rehabilitation and re-ablement
Community Physiotherapist	Balance patient's wishes with clinical judgements
Nurse (re-ablement)	Stroke patient prepared for return home
Intermediate Care	Stroke Rehabilitation is done in patient's own home

Table 17: Group B: Relevant Systems

Delivery of SSM Mode 1 Stage 5 in Hereford

A complete set of models was circulated to all stakeholders prior to two half-day workshops to debate them. All participants were able to attend at least one of these Stage 5 workshops with the exception of the Doctors/Consultants group. At the beginning of each workshop, the methodology was briefly explained and discussed, because some time had passed since the initial interviews. Two additional stakeholders joined the project at this point, representing the areas of Clinical Governance and ICP Development across the Health Authority and Trusts. They had been unable to take part in the initial worldview interviews due to commitments elsewhere.

Clinicians' ability to attend meetings and interviews proved to be increasingly problematic as the project progressed. This was due to their onerous work commitments. Additionally, during the lifecycle of the project, some staff left the Authority. This attrition may have been partly due to organisational downsizing,

a factor the significance of which was not known to the facilitator at inception. This political and structural factor may have influenced participation and is discussed in Chapters 6 and 7.

At the first workshop, the models were debated and the participants suggested that an attempt be made to construct a general model which would incorporate what they identified as the key elements of the initial models. The facilitator responded with the observation that this would in fact comprise an accommodation of worldviews – and was inherently desirable. This was an important progression, as it required a move away from Stage 5 of a Mode 1 application of SSM, to a Mode 2 application in which the approach is driven by the methodology rather than the ordained stages (see Chapters 1 and 2). The model constructed in this way is close to Wilson's Consensus model building which is not a specific feature of Checkland's approach to SSM. However, the stakeholders were here attempting to use the material presented in the initial models to agree a relevant pathway system. They immediately began working on a conceptual model for a stroke pathway which was being informed by the initial conceptual models.

This synthesising process took place over two workshops and was characterised by intense debate and some disagreement about clinical practice and protocol. This may have been because stakeholders had never before gathered together to discuss Stroke care processes as a group. Whilst this was in itself surprising, it also indicated a lack of process cohesion in the existing Stroke team, confirming

This model was circulated to all stakeholders, accompanied by ‘refresher’ explanations of the modeling conventions, and feedback invited. With the benefit of hindsight and an interval of reflection the stakeholders reconsidered some aspects of Model A. For example, activities 13, 7 and 5 in Model A were considered to be redundant, as they would occur at sub-system level. Greater accuracy in describing intended activities was also introduced. What resulted from these changes was Model B.

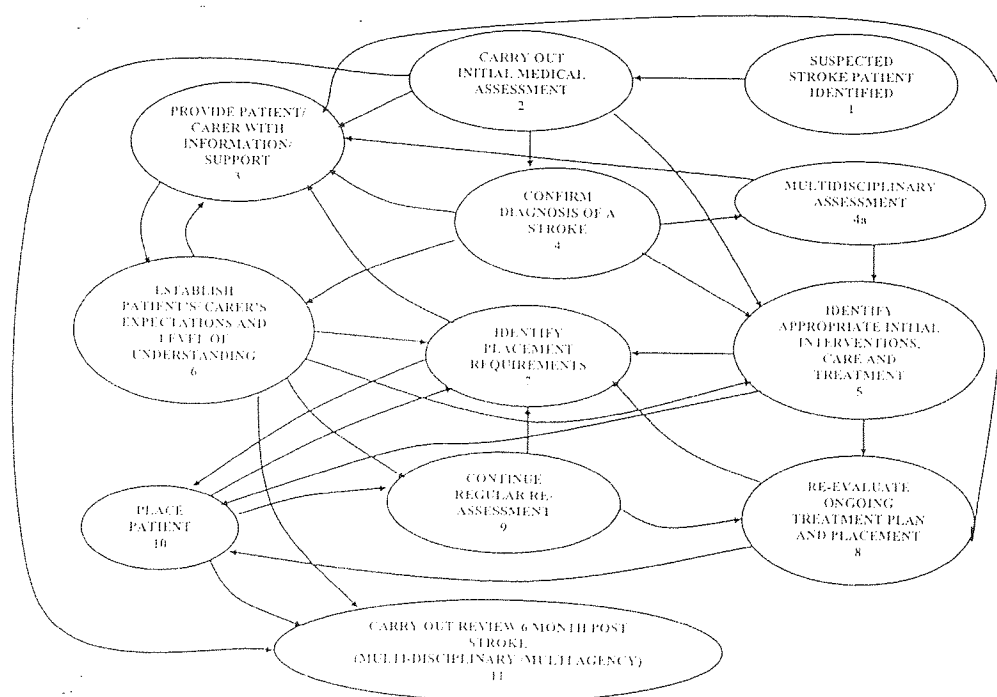


Figure 6: Hereford Conceptual Model B.

Sub-groups of stakeholders explored each activity in the main model. The ICP developer contacted participants and gathered the information required to construct 'sub-system' conceptual models which were translated into corresponding process maps (one of which is shown in Appendix 4). By this point in the project, the facilitator was no longer taking an active role, since the work was being carried out by the stakeholders and the ICP developer, although the facilitator was consulted regularly concerning the models.

The project was never formally closed, although formal facilitator activity ceased in late 2002. Evaluation interviews were carried out with 9 stakeholders in late 2001 and early 2002, when most of the modeling work was complete.

3.3 Conclusion

This chapter has presented the methodology which has been followed in this research. In summary, the research carried out here comprises two stages:

- a. SSM application to two test sites – Hereford and Sandwell: The applications have been carried out in the context of Action Research which may be interpreted as a combination of iterative and reflective process models (Baskerville and Wood-Harper, 1998). The research strategy did not adhere directly to one particular type of involvement as categorised by Baskerville and Wood-Harper (1998), but rather a

combination of collaborative and facilitative involvement.

- b. Data Collection and Analysis: Data was collected from three sets of evaluation interviews and one set of observation data, and analysed qualitatively using template analysis (Crabtree and Miller, 1999) and open coding (Strauss and Corbin, 1990). The research has been carried out using a combination of an inductive approach (identifying patterns of meaning in the data) and a deductive approach (using *a priori* themes to initially shape the templates).

The following two chapters present the data analysis from each test site, followed by the Discussion and Conclusions.

CHAPTER FOUR

DATA ANALYSIS AND RESULTS - THE SANDWELL CASE STUDY

4.1 Introduction

This Chapter evaluates the results of interviews conducted in the Sandwell case study. The findings from the Hereford case study and analysis of the observation data is presented in Chapter 5. The purpose of this appraisal is to understand the retrospective sentiments of the key actors in the SSM experiments and set those experiences within the organizational context. In both cases, the politicised nature of that context is a major theme.

Four sets of primary data have been analysed for this research. These are:

- a. Transcribed accounts of the first assessment interviews for the Sandwell application. This body of evidence will henceforth be labelled 'Sandwell 1' for brevity.
- b. Transcribed accounts of the second assessment interviews for the Sandwell application, labelled as 'Sandwell 2'.
- c. Transcribed accounts of one set of assessment interviews for the Hereford application, labelled as 'Hereford' (presented in Chapter 5).

- d. Author's notes, based on contemporaneous observation data from both Sandwell and Hereford (presented in Chapter 5).

4.2 Sandwell 1

The data analysis from sixteen semi-structured interviews carried out four months after the SSM application was complete is presented here. All of those interviewed had been identified as stakeholders, had contributed their worldviews and were referred to as SSM participants, and had been invited to attend the workshop meeting (most, but not all, had attended).

The purpose of the interview was to obtain each individual's view of the effectiveness of the application with regard to achieving an IM&T strategy for the Partnership and to assess the role of SSM in the change process. The interview transcripts for Sandwell 1 were read several times and as a result the process of defining categories and sub-categories underwent several iterations (see Chapter 3). The five categories that emerged, along with their associated sub-categories, were judged to be the most significant themes yielded by the raw data of the interview transcripts. They are tabled below, followed by a discussion of each category and its associated sub-categories.

CATEGORIES	SUB-CATEGORIES
1. PERCEPTION OF CHANGE	1a. BUSINESS CASE (re:IM&T strategy)
	1b. CONFIDENCE TO ACT (re: IM&T strategy)
	1c. AGREED DIRECTION (of the IM&T strategy)
	1d. CREATES ORGANISATIONAL INSIGHT
	1e. CREATES CLARITY AND LEGITIMACY
2. NON-SSM FACTORS	2a. SILO CULTURE
	2b. ESPOUSED PARTNERSHIP CULTURE
	2c. TENACIOUS POLITICAL CULTURE
	2d. ORGANISATIONAL HISTORY
	2e. STRATEGIC EVENTS
	2f. TIMING
	2g. MOMENTUM
3. PARTICIPATION FACTORS	3a. INTIMIDATION
	3b. STATUS ISSUES
	3c. EMPOWERMENT/COLLABORATION
	3d. SENSE OF OWNERSHIP/RELEVANCE (of IM&T strategy)
4. KNOWLEDGE & INFLUENCE	4a. ORGANISATIONAL ROLES
	4b. ORGANISATIONAL INFLUENCE & KNOWLEDGE
	4c. KNOWLEDGE & UNDERSTANDING OF SSM
5. FACILITATOR ROLE	5a. INTERVENTIONS
	5b. NEUTRAL FACILITATION

Table 18: Categories and Sub-Categories for Sandwell 1 Interviews

Perception of change

An initial reading of the interview transcripts had revealed that the use of SSM had caused some change or affect to occur in two areas. These were, firstly, that the use of SSM had led to tangible outcomes regarding organisational activity. Secondly, SSM appeared to have altered or influenced to some degree the way that participants thought and behaved. These areas are clearly interconnected (since, for example, a change of behaviour may lead to an organisational event taking place). It was also clear that the participants could be divided into two groups:

- Those who were at the centre of and strategically connected to the Sandwell Partnership (such as the client and the Head of Sandwell Learning Plus); and
- Those who were on the periphery of Partnership activity, including participants from the voluntary and schools/colleges sectors (such as the Manager of SEMUF).

The former, who could be classed as Partnership 'insiders', did perceive that the analysis had had some impact on the problem situation (although this was limited and complicated by other organisational factors). The latter, who could be referred to as Partnership 'outsiders', were largely of the opinion that no real change had occurred as a result of using SSM. Analysis of the interview transcripts does not indicate that the application of SSM produced any

substantial impact on this divide. Indeed, it may even have exacerbated it.

The 'insiders' observed a number of behavioural and organisational consequences:

- It encouraged a reflective approach (which was not usual in this environment)
- It enabled participants to view the problem situation with clarity and structure
- It revealed the complexity of the situation
- It enabled people to see the big picture
- It created a greater level of political awareness
- It broadened horizons
- It 'validated' the problem situation (that is, the development of an IM&T strategy); it confirmed its legitimacy as something which needs to be addressed
- It brought formality and organisation to the problem situation

The key observations here relate to problem clarification and structuring, contextualizing that problem and legitimizing it within the lifeworld of the organization (Habermas, 1972).

These aspects were grouped under the heading 'Perception of Change', and the comments were located in five sub-categories:

- Business Case (regarding the IM&T strategy) - As a direct result of SSM modeling work, a Business Case had been produced which was used to justify an advertisement for the post of executive lead of the IM&T strategy. Additionally, it gave the Director of the Sandwell Civic Partnership a more robust profile and therefore added credibility to the IM&T strategy, which came under the umbrella of the Partnership. What the participants had dubbed the 'silo' culture of Sandwell Council had created an ambiguous approach to the Partnership (the aim of which was diametrically opposed to silo working), and therefore to its Director.
- Confidence to Act (regarding the IM&T strategy) - The use of SSM encouraged a confidence to act (in terms of achieving the strategy) which was perceived as a change because, prior to the SSM analysis taking place, the project had reached a stalemate. This antecedent state was perceived in quite severe terms by some of the most senior personnel from Partner agencies.

'I think that as a group of peers, they have failed historically to move forwards and they get bogged down' (Chief Executive, Health Authority).

With increasing confidence came surety of action, along with a new-found willingness to take measured risks.

‘Effectively, a piece of learning went on which... gave people confidence to shift from... thinking about solutions without ever doing anything about it to being willing to share those ideas in a public space, take risks with some slightly off the wall ideas, and then act on them’ (Executive Director, Sandwell Learning Plus).

- Agreed Direction (for the IM&T strategy) - The modeling work had enabled participants to agree on a direction for the strategy. This was used in the first instance to produce the Business Case which prompted executive agreement for the creation of a post to lead the strategy.

‘I think it made us think and I think we’ve got together and I think we have taken a slightly different approach... I think we’re being more pragmatic, looking at what we’ve actually got in terms of the various initiatives... and yes there are other cash-rich (partners) that just say, “well, what have we got that we can share?”, you know, the common goal, rather than all trying to perhaps cluster round just one or two projects. So, I think it (SSM) has helped’ (Project Manager, Sandwell Public Information Network).

What appears to have happened here, in the immediate judgment of this participant, is a process of strengthening in the common purpose of the Partnership. This resonates with long-established theorizing on partnership working, which talks of a shift from organization to environment focus (McIntosh, 1992).

- Creates Organisational Insight - The use of SSM had enabled people to gain a number of understandings into the operation of the Partnership and that of some of its constituent members:

‘There were some quite major differences (between partners). I think there was some very simplistic thinking prior to SSM and SSM actually identified some complexity that was there that some had recognised and some hadn’t’ (Executive Director, Sandwell Learning Plus).

‘We’d been overly bureaucratic - I mean council employees - ...because we have a structured way of doing things where we go to a meeting and we have an agenda, and that agenda is fairly rigid and it’s time managed and all the rest of it and we just tend to go in that way, rather than kind of thinking loosely .. If we think loosely we think we’re wasting our time because we’re not driven and we’re not focussed enough’ (Chief Librarian, Sandwell).

This participant was evidently persuaded that SSM provided just that opportunity to construct a creative space within which unorthodox ideas could be generated.

- Creates Clarity and Legitimacy - SSM was considered also to have shed useful light on the problem situation, as the Director of the Sandwell Civic Partnership noted: ‘I think it helped crystallise things at a critical moment’. SSM appeared to have legitimized action, even if its direct contribution as a problem-solving framework may have been less clear. This was the view of the Chief Executive of the Sandwell Health Authority:

‘There was an impact though it would be difficult to define what it was that created that impact. So, whether... it was the fact that in driving (the IM&T strategy) forwards, an independent view was brought on board which underlined a particular perspective that in effect was there before the work was done which gave it legitimacy’.

Non-SSM Factors

The interviews identified a number of factors which were not caused by or connected to SSM, but which were considered to be influential in some way in the process of change which the analysis was also trying to achieve. These were grouped under the category of 'Non-SSM Factors'. There were seven sub-categories, all of which could be said to be directly connected to organisational factors which were beyond the control of the SSM analysis.

- Silo Culture - This sub-category is concerned with the culture of the organization. As an organizational descriptor, it is a term that is itself replete with ambiguity (Kotter, 1996). Several participants referred to the silo and funding-driven culture in Sandwell's body politic. This culture encouraged a focus on discrete projects and made it difficult to progress wider, strategic initiatives. There was, in particular, a noticeable gravitational pull of people, their energies and attention towards cash-rich projects, such as the multi-million pound Sandwell Learning Plus project. This project enjoyed a significant power base and overall influence within the Council.

This culture had existed before the SSM analysis took place and was one of the factors that had made operational progress of both the Sandwell Civic Partnership and the IM&T strategy, problematic. These projects required a substantive commitment to 'joined-up' working, but the silo culture was tenacious and there did not appear to be any operational incentives in place to

encourage people to break with that cultural legacy.

Some senior managers, such as the Executive Director of Sandwell Learning Plus, discussed the actions that they were taking to encourage a move away from silo working, but these were difficult to achieve and maintain in the prevailing culture. The nature of working within the Council was that projects were funding-driven and allocated to particular Departments. This resource-led model did not motivate managers towards shared initiatives, since survival depended on funding which in turn depended on effective project outcomes. During the interviews, it was clear that the silo culture still continued, notwithstanding the SSM analysis:

‘I think one or two people...enjoy working this way, they’re more suited to it, because some people are still in their silos’ (Project Manager, Sandwell Public Information Network).

The Head of Strategic IT believed that ‘...I know in general everything being centralised (through the IM&T strategy) and building this Partnership empire goes against the grain (of the Council)’. Although this participant believed that the development of an IM&T strategy would be culturally important in creating real Partnership working, he is saying here that the Council is not used to this seamless, joined-up way of working. The Chief Librarian was enthusiastic about the SSM experiment, because it enabled more honest and creative thinking to take place. He contrasted the SSM decision environment with the apparently mistrustful ethos of the Council, which was rooted in turn in its resource-led culture.

‘If I’m having a conversation with other people in the Council or the Health Authority or anywhere else, I know they’ve got their own agendas and they’re looking to try and position themselves particularly with all the bidding to get more money for everything. So, you’re constantly conscious of... keeping your powder dry, you don’t want to tell people what you’re actually planning or thinking in case they run off and get the money from Europe or somewhere themselves’ (Chief Librarian, Sandwell MBC).

The project manager of the Sandwell Public Information Network thought that there had been some progress, albeit modest, towards breaking down the prevalent silo culture.

‘I think there has been an attitudinal shift and I think that there’s more thinking around, “well, does it matter if it’s SLP (Sandwell Learning Plus) or does it matter if it’s SPIN (Sandwell Public Information Network)...” We’re all trying to reach something that’s very similar... there’s quite a lot of common ground, so there’s more people approaching things together’ (Project Manager, SPIN).

- Espoused Partnership Culture - As mentioned earlier, there appeared to have been some earnest attempts by a few participants to instil elements of a ‘partnership’ culture. The Executive Director of Sandwell Learning Plus talked about how his approach to his own large project (the biggest in the Council) involved attempting to bring people from the Health and Education Authorities together.

‘One of the things I came here with a passion about doing was not just inventing something for me... What I’ve been trying to do is embed everything I do in the Partnership, so I, for example, have created staff posts here which have now a hat in other organisations because that way it’s a physical manifestation of the Partnership working’ (Executive

Director, Sandwell Learning Plus).

However and running somewhat counter to this, the Head of Strategic IT suggested that the Sandwell Learning Plus project was able to pull people into its centre of gravity almost by default, because it controlled so many resources.

‘I think Sandwell Learning Plus has always kept its distance in a way probably because they feel they’ve got the momentum of resources. I mean, it may not be deliberate, but it’s “well, we’re pulling everything else with us”’.

These diametrically opposed readings underscore the importance of perception and subjective construction in network governance. The Head of the Training and Development Centre had become disillusioned about the Council’s ability to implement those projects that had been conceived and framed in a Partnership milieu.

‘I’ve been involved in running a lot of work... preparing the bid... for Sandwell Learning Plus, where we set up a group called Jigsaw which glued together as many of the sections that could come together and we felt at that point that we’d done a fair degree of joining and captured many of the stakeholders effectively. Of course, that position - although we didn’t realise it at the time - became frozen in time.’

This participant was disappointed that, because other larger projects came on board and distracted staff away from this group, the momentum to continue working together was lost. Another participant perceived the same lack of momentum in relation to the SSM application itself:

‘Because we sat on the Sandwell Partnership Information Group which contained many of the players that were there (at the SSM application), Sandwell Learning Plus certainly, the head of IM&T both sides, the Local Authority and the Health Authority... and we’d gone, which is I think why you were called in, round in circles for a year and what it needed - which again is why you were called in, I’m sure - is somebody to just facilitate that process... Now that group has met once more and I wonder whether that facilitation needs to continue in some way, whether it’s you that’s doing that or someone else just to be objective and work in a neutral position without an agenda, because I think that would be helpful’ (Project Manager, Sandwell Public Information Manager).

This extended series of observations illuminates the truncated nature of at least some of the partners’ planning horizons. It also suggests that facilitation could play an important role in unfreezing the situation and addressing this short-termism. Finally, it also underscores the potential significance of the qualities of the facilitator as an individual. These latter points will be more fully examined below.

The belief in a culture of Partnership was often declared by participants. Yet, a tenacious, funding-driven culture and the highly politicised environment of the Council appeared to make it difficult for wider strategic initiatives to move forward.

There was also apparent duplication of work, coupled with a lack of communication and co-ordination. The Health Authority’s Information Manager referred to both of these factors, when he observed that ‘people beaver away not realising that, down the corridors, somebody else is beaver away on something probably very, very similar’. He gave an

illustrative example of this kind of duplication at work.

‘I went to a one-day workshop the other day on child services and I asked the lady who was running it... to work out what was going on in child services in the borough and she came back with something like sixty projects to do with kids in the borough, all different places, different areas, no linkages or very few linkages.’

- Tenacious Political Culture - One of the ways that political imperatives were manifested was in the reaction of some staff to the creation of the post of executive lead of the IM&T strategy. This role would carry status and power and there appeared to be some jostling for position amongst staff who were clearly interested in applying for it. The Director of the Sandwell Civic Partnership thought that this had influenced the intervention of some participants during the SSM analysis stage:

‘The difficulty here is that some people have got their eyes on the job as well and (were) also wanting to influence the person specification and the job description. That process (the SSM analysis) was seriously affected by that.’

The Head of Strategic IT also shared this view.

‘As to whether other people are still sort of keeping their powder dry... I’ve heard other people say that about... the people who participated in the process (of SSM analysis), not necessarily referring to that event, but in general since the event... I think there’s jockeying for position (for the post of Executive Lead).’

- Organisational History - Some participants suggested that the Council had a history of being unable to move forward and to implement the strategies that it had formulated:

‘In the past in Sandwell... I’ve been involved in groups similar to this (tasked with the IM&T strategy) and I could show you a strategy document that was produced five years ago and it is brilliant. Bugger all has happened to it. We looked at it about six months ago and found that not one of the actions has been implemented’ (Chief Librarian, Sandwell MBC).

The Chief Executive of the Health Authority referred to the repeated failure of the IT managers and directors to achieve agreement on the technological detail of how the IM&T strategy should work. He also highlighted the significance of personnel selection to the achievement of specific outcomes. Thus, ‘that (IT group) was a more operational level, so you’ve got differences in terms of what the actual activities needed to be’.

- Strategic Events - There was also a substantial strategic change taking place in the task environment, while the SSM experiment was proceeding. The imminent introduction of the Primary Care Trusts represented a major preoccupation for the Health Authority. It clearly constrained their staff from participating in the SSM process.

‘I think the change in organisational structures and the creation of Primary Care Trusts has been a terrific distraction’ (Head of IM&T, Health Care Trust).

‘The Health Authority’s going through great transition again. It’s difficult for them at the moment, because they’ve had to sort of retreat back into their trenches a bit whilst they go through this process and... there were obviously a lot of people there who were making very valid contributions (to the SSM analysis) who probably feel a bit insecure at the moment... Some of the openness from them is probably not as much as it was... Some of these people may not have jobs, so they are retreating back a bit to protect what they can’ (IT Strategic Co-ordinator, Sandwell MBC).

The Executive Director of Sandwell Learning Plus echoed this view when referring to the way of working that he thought had been adopted by the staff responsible for the technical operation of the IM&T strategy. He saw this as 'pragmatic survival tactics'. This phrase indicates that there was obviously some pressure on this group (known collectively as 'the techies') to deliver an integrated IT system which would serve all the different organisations and projects of the Partnership. Yet, the prevailing silo culture meant that this was difficult to achieve. Consequently, this group had resorted to protecting and influencing what they could, which was limited.

- Timing - The precise timing of the SSM analysis in the context of Sandwell Partnership's awareness of, and action upon, the problem situation (the development of a shared IM&T strategy) emerges as a strong theme from the analysis of the interview transcripts. For example, some participants believed that the development of a more sharing culture was already happening.

'There's been a major change - it was happening anyway - the cultural change of Sandwell over the last two to three years... People are certainly talking to each other, exchanging strategies, comparing notes, working together, developing common aims... sharing common practice' (Director, Sandwell College).

Several interviewees referred to the timing of the application.

'I think the approach would have been very useful if we had done it at the beginning' (Project Manager, SPIN).

The decision to adopt a structured approach to the design of an IM&T strategy had occurred some time before the SSM application proper. Some participants were persuaded that it would have been useful to deploy SSM at that earlier point.

‘There’s a lot going on about shared services in Sandwell with the re-organisation of the Health Service, so whether it’s (the SSM application) arisen at the same time... It’s difficult for me to decipher whether it’s about... using your methodology or whether it’s just a momentum of change that’s going on generally’ (Deputy Director of Finance, Sandwell MBC).

The SSM application occurred in parallel with wider discussion on how to move the IM&T strategy forward, but the Partnership appeared to be unable to take any practical action. The SSM experiment may have served to ‘unblock’ this situation; yet the effect was temporary, as noted above.

- Momentum - Once the SSM models had been produced and debated (Stages 5 and 6 of the SSM 7-stage cycle) and the facilitator had left the organisation, the momentum of the application appeared to be lost. Although there had been a tangible impact (manifest in for example, the Business Case and the creation of a post to lead the strategy), this too had appeared to reach a stalemate at the point of the first evaluation interviews and the silo mentality still dominated. This suggests that there was little or no sense that the methodology had been ‘transferred’ to the organization, with no further applications of SSM in evidence. As mentioned previously, this application was carried out over a very short timescale and there was little time for

participants to assimilate deep learning about the methodology. This, and the subsequent preoccupation with organisational re-structuring (specifically the creation of the Primary Care Trust), may both have contributed to the Partnership 'moving away' from the methodology.

Though the application could be regarded as a critical incident, it nevertheless remained an isolated episode in the ongoing process of change.

'Whilst it was quite important on the day, people moved quite quickly away from it' (Director, Sandwell Civic Partnership).

However, one participant believed that the SSM application had exerted a very positive impact on removing a strategic logjam.

'The structural changes within the Sandwell Partnership now resulting in real responsibilities and allocation of roles and so on have now happened for the first time in six years, so whether this (SSM application) has unclogged that - I would suggest it has, because I can't think of anything else that could have made this happen. The issues haven't changed, the priorities haven't changed, the people haven't changed, but all of a sudden the kind of logjam that was there which prevented any real change and real things happening seems to have been swept aside now and we're caught up in now actually starting to deliver the solution, not just talking about it' (Chief Librarian, Sandwell Library and Information Service).

The SSM application appeared to have achieved the limited but important purpose of removing obstacles in order to allow the development of the strategy to progress. Once this had been achieved, the 'need' for SSM no longer existed. This interpretation accords with the general view of

participants, only a very few (two) of whom regarded SSM as something which could be utilised in the future. It was seen, in short, as having potential specifically for project management. One regarded the language of SSM as ‘inhibiting’. A few tentative conclusions may be deduced from this. First, the very short timescale of the application allowed little opportunity for participants to assimilate deep knowledge about SSM. The Hereford application took place over a number of months and participants were noticeably more interested in the methodology itself from the outset. They also engaged with the methodology over a longer period of time. Second, it became clear during both the application and the evaluation interviews, that the Sandwell environment is highly politicised and hierarchical. It may be that the egalitarian, participative and non-partisan requirements of the SSM approach posed a significant threat or challenge to this environment, or more simply it was felt to be ultimately ineffective to the culture of the organisation.

Participation Factors

The prevailing silo culture of Sandwell appears to have inhibited open and candid participation in the SSM analysis, as did the presence of powerful managers and Chief Executives in the stakeholder group. The contribution of such senior personnel was, however, disputed. One participant mentioned that the presence of such people gave the SSM work importance. Motivation also affected participation, in that less enthusiasm was demonstrated by participants

on the periphery of the Partnership, previously referred to as 'outsiders', who felt less ownership of the strategy.

There were five sub-categories associated with Participation Factors, one of which is directly connected to the IM&T strategy: the sense of ownership/relevance. Each of the five factors is now discussed in turn.

- Intimidation - As might be expected, no participants claimed that they themselves were inhibited by the status of hierarchically powerful managers and their presence in the SSM process. Given the politicised environment of the Council, this must be seen as an espoused stance in some cases. As has been demonstrated, the SSM application was not immune to the political manoeuvring that appeared to be a feature of the Sandwell culture. It may not be politically wise to admit to a feeling of threat or intimidation from a colleague in an environment where most people would be vying for position and influence. However, the issue was very occasionally referred to in respect of other colleagues.

'I would say that I think it was hard for (colleague X) to engage fully with it... It's not just to do with (it being) manager-led. It's to do with how vocal people are and people like (names a number of senior colleagues), we're fairly vocal participants in things, you know. We're confident and it does make it difficult for other people to participate' (Director, Sandwell Civic Partnership).

The Executive Director of Sandwell Learning Plus discussed the 'the unequal power in the debate', which was the result of including Chief Executives in

the analysis. As he then conceded, ‘I don’t know... how you ameliorate those influences, because they can be major distorters’.

- Status Issues - The unequal influence of powerful agents in the process is further underscored by references to the importance of status in the organisation. Although the non-hierarchical characteristic of SSM was appreciated, the presence of Chief Executives in the stakeholder group was also noted by some participants and the reaction to this presence was ambiguous. It was regarded as either inhibiting or as a spur to drive people to action. Either consequence is undesirable in SSM since the contributions of participants ought to be role/status-neutral. The Information Officer for the Council of Voluntary Organisations discussed status in relation to the significance attached to job titles.

‘Someone in this Borough has got quite a high-paid job... and their job title altered recently, simply because their job title included the word “co-ordinator”, (which) was perceived as low-status, so they couldn’t get any ticks (be noticed) with people and they were always being put off.’

He had earlier referred to the respect that he had received from his colleagues during the SSM analysis, because of his knowledge, rather than his status.

‘I was probably the least senior person in the room and... I felt I was treated on my ideas, thoughts and abilities and not on any perceived status that I might or might not have.’

Having access to privileged information sources and sets is seen in the research literature as merely another form of (resource) power that sits alongside the more familiar category of social status and positional power.

- Empowerment/Collaboration - There is the possibility that some participants regarded the SSM analysis as a vehicle for themselves to acquire increased power within the Partnership/Council environment. The Head of IM&T at Sandwell Health Authority had initiated the SSM analysis and may thus have had a vested interest in its success. He was the most enthusiastic interviewee in terms of the impact that SSM had on the change process:

‘I’ve certainly seen a change. I don’t know if it addresses any issues here but we know why we did it (the SSM analysis) and we know where we’ve got to now and I think the beauty of it was that, before, we were being very analytical and systematic and breaking it down and we were actually going completely down the wrong path.’

The Chief Inspector of the Community Services Division believed that the SSM application brought about a positive outcome:

‘What it did was it brought people together to get a view of where they were, of where they wanted to go.’

- Sense of Ownership and relevance of the IM&T strategy - As far as the IM&T strategy was concerned, not all participants felt the same sense of ownership towards it, or perceived its practical relevance to their areas of work. Those who felt themselves to be on the periphery of the Partnership, such as the voluntary sector and Sandwell Health Care Trust, articulated a

sense of exclusion from the main group. The Director of SEMUF referred to the application as being 'very Health Authority', suggesting that she did not see the application as a Sandwell Partnership project. The fact that the 'client' was located in the Health Authority may have influenced this perception. She felt 'a little detached', because her priorities are about the survival of her own organisation. Her interest in the SSM analysis centred on trying to find ways of improving her IT resource base, through sharing of IT resources and expertise. Her stake in the process was narrowly defined, such that 'the overall strategy... I mean, it's important but it isn't a priority'.

The Head of IM&T in the Sandwell Health Care Trust also indicated that local priorities were more compelling in terms of commitment.

'I can't give (the IM&T strategy) the time, because our organisation has a separate agenda... the inter-collaboration things are not given the time to do it, nor do you get thanks for it.'

Knowledge and Influence

The structure of Sandwell MBC was, as indicated, clearly hierarchical with perceived power and influence centred on roles and status. This meant that the involvement of senior managers and executives in the stakeholder group could have an impact on other participants, by either constraining the level of frankness in their own contributions or by endorsing the importance of the application and thus 'forcing' other participants into a more formally active

stance. Influences of this kind, theorists contend, are not desirable in an application of SSM. Its effectiveness in inducing organisational change is crucially underpinned by its non-hierarchical and egalitarian principles and practice. The Partnership 'insiders' were generally people with senior roles and this affected their levels of organisational knowledge and hence their influence on the application as perceived by others. Additionally, managers were perceived by non-managers to have a superior understanding of SSM. There are three sub-categories of 'Knowledge and Influence' that have been derived from the interviews:

- Organisational Roles - This sub-category is derived from text segments relating to the way that people perceive their own and/or other people's roles in general. These perceptions should be considered alongside issues of participation. For example, the Head of Sandwell Learning Plus regarded himself as a systemic thinker and this may have influenced his positive reaction to the analysis. This senior manager also appeared to command a great deal of power and influence in the organisation because he managed the largest funded budget (several million pounds). The SSM client, the Head of IM&T, Sandwell Health Authority, believed that the application had resulted in substantive organisational change and use of the methodology had enabled people to see the broader context for the project. He too regarded himself as a systemic thinker. Additionally, within the politicised and apparently macho-culture of Sandwell MBC, his own professional reputation within the Council could be influenced by the success or

otherwise of this application. Arguably, he would want it to succeed.

The impact of the presence of Chief Executives in the group has been referred to previously. The Director of Sandwell Learning Plus referred to some of his senior colleagues as ‘major distorters’:

‘I don’t know how you could have got round... the unequal power in the debate... because you stick someone like (colleague X) [in the group] then you can’t ignore his position... I think we could have predicted that (X’s) position would have skewed things... he is so powerful, and extremely quick and articulate’ (Director, Sandwell Learning Plus).

- Organisational Influence and Knowledge - the Partnership carried some considerable political weight and kudos within Sandwell and it became clear that some participants attempted to use the SSM application to consolidate or achieve personal power and influence within the organisation. The Head of Strategic IT referred to ‘a jockeying for position’ which occurred during the SSM analysis.

One participant went on to discuss factors which were part of the political culture of Sandwell, such as a desire for ‘actions and quick wins’ – a part of a wider ‘macho’-culture - which he believed were influencing the contribution of senior colleagues to the SSM application. He also argued that these ‘external factors that are not in the debate almost need to be kept out of the debate, because they can’t be challenged or checked or validated’. These factors were evidently being compartmentalised by this actor and deemed to

be exogenous in nature.

In terms of limitations posed by specialist knowledge, the Director of SEMUF felt that the workshop discussions ‘went above [her] head’. ‘We’ve got specialist people like (colleague X), you can tell he’s an intellectual, he’s done this sort of thing before.’

- Knowledge and Understanding of SSM - there were some inferences in the interview transcripts to participant’s levels of knowledge and understanding of SSM, and this aspect is also referred to in the author’s notes, based on observation. In any application of a user-centred methodology, the success of its use will be dependent on the participants’ knowledge and understanding of its principles, rationale and techniques. It has been previously noted that the timescale of this application was short and there was little time for the participants to assimilate deep knowledge of the approach. The methodology was discussed with participants on a one-to-one basis and also explained to the group as a whole. Written notes were also circulated to the participants. However, SSM is best assimilated by participants when it is being applied by them to a problem situation. Participants had a truncated experience of SSM in this application and there was some lack of clarity regarding how the methodology worked.

‘There was a learning curve for me...particularly for using it and its something that we might be prepared to consider using again although I think I would probably have to be reminded of some of the rules to do it...’ (Director, Sandwell Civic Partnership).

Knowledge and understanding of the methodology appears to have been affected by personal levels of motivation, wider knowledge and experience. It is apparent that not all participants had understood the holistic nature of the methodology.

‘It was very difficult to keep a focus on what we wanted to achieve while trying to use the methodology that was given us. I think there wasn’t enough common ground such that we all agreed, there were no right or wrong answers sort of thing and I think we had problems... I’d much rather just go back down to the requirements sort of model... the soft approach could go so far but I couldn’t anchor it into reality’ (Head of IM&T, Sandwell Health Care Trust).

‘I’ve never quite understood what the work of the SSM project was really focussed on... so I don’t feel that I’ve used it properly’ (Director, Sandwell College, Smethwick Campus).

Against such negative and quite sweeping responses, some participants appeared to grasp the methodology quickly. For example, a participant who exhibited a high degree of insight and appreciation of the methodology had an IT role within Sandwell:

‘it’s something I’d sort of heard of but not sort of gone into... but having been through the process I think I’m wanting to go and spend a bit of time boning up on the process, because it seems to me a very utilitarian way of working... that is very flexible and used in a wide range of contexts’ (Information Officer, Sandwell Council of Voluntary Organisations).

This participant also felt that there was a good level of understanding of the methodology in the stakeholder group.

‘The group was primarily made up of strategy makers, IT professionals, it’s quite a high level group so you would expect them to be able to adapt, to pick up on methodologies quite quickly.’

Managers were generally perceived by non-managers to have a superior understanding of the methodology - perhaps a degree of expertise - but the degree to which this actually existed is questionable. It is telling that the SSM application lost momentum once the facilitator had left the organisation. One may have expected organisational ‘experts’ to have been able to carry on the work without the help of the facilitator, but one participant felt that ‘people moved quite quickly away from it (SSM) andsaw it as a means to an end’ (Director of Sandwell Civic Partnership).

Facilitator Role

This category is concerned with how participants viewed the role of the facilitator. A number of points emerged from the interview analysis relating to this theme. The sub-categories for this role were identified as ‘Interventions’; and ‘Neutral Facilitation’.

- Interventions - There were several text segments relating to the nature of the facilitator’s intervention. One participant thought that the facilitator influenced the change process and that the facilitation process was ‘very powerful’.

‘You were getting probably quite incoherent ramblings which you had to put some structure on, that was the job’ (Director, Sandwell Learning Plus).

The Director of SEMUF believed that the facilitator’s intervention simplified the way the Partnership was trying to deal with the problem situation. She clearly regarded this as positive.

‘It’s too early to say... in terms of your facilitation and the ideas you have in terms of the soft systems methodology. I think that was a good one and it simplified the process in a way’ (Director, SEMUF).

Participants regarded the facilitator and her interventions as fulfilling a number of roles:

‘I think you played a number of roles didn’t you? You were there as the expert on the methodology and to explain to us the teaching, the learning of it. Then you were guiding us as well, I remember you coming out when we were getting a bit lost and we were getting a bit bogged down and you just said: “well, what about looking at it this way” and that kind-of kick started it again’ (Information Manager, Sandwell Social Inclusion and Health).

The Deputy Director of Finance, Black Country Mental Health, had a narrower vision: ‘I identified you primarily as a facilitator’. One participant thought the role of the facilitator was useful in the sense of bringing different approaches together:

‘there were a number of different approaches going on that weren’t coming together. We needed you to be there to say, “get back, how about?”’ (Information Manager, Sandwell Social Inclusion and Health).

In terms of expertise, there was some ambiguity concerning whether the facilitator’s input concerned the process of using the methodology, or whether it also involved advising on the content of the models. In reality, advising participants on model construction in SSM inevitably includes suggestions and comments concerning the content, since the two are inextricably linked. This theme is covered further in the observation data. One participant was persuaded that SSM did not provide a clear distinction between these elements.

‘I’m not sure with this kind of approach that you can create that kind of clear dividing line between... process and content’ (Information Officer, Sandwell Council of Voluntary Organisations)

Other participants appeared to agree with this view as a result of their own modeling experience:

‘I didn’t really know what to expect in terms of that day (that is, the workshop). I have to say, I think my view was that you were there to help us understand the process, so to talk us through how the methodology was supposed to work, how we should use it and then... to leave us to it, and then you were obviously there then to facilitate the approach but not to help with the solution, not to work the solution through for us but to say: “you are or you aren’t using the process properly” and certainly for us that got confused. I think in the end we realised we were disappearing up a blind alley so it was just “help, any help”, including help with the content’ (IT Strategic co-ordinator, Sandwell MBC).

‘My view of you was as the expert of this methodology but I would expect to look to you and get guidance. I could say: “I don’t understand what’s going on here, I’m a bit lost” and I would expect you to step in and be confirming. Whether you did that just by nodding, but to confirm that we were in the right direction or that what we were doing was good work, you know what I’m saying, you know you need that feedback. I don’t think it would have worked so well for me personally if you had left the room or particularly if you’d sat in the corner, that would have been quite odd... I think I would have felt like I was there as a subject, which in some ways I think I probably am!’ (Information Manager, Sandwell Social Inclusion and Health).

- Neutral Facilitation - The neutrality of the facilitator was regarded as important by several participants.

‘For me, it’s very difficult to say that I believe there was a change going on anyway... I believe that in any project it’s essential to have somebody who keeps a watching brief on a project who is totally independent no matter who that person is’ (Director, Sandwell College, Smethwick Campus).

‘Anybody who tried to do it other than yourself from within the organisation has got baggage and when I talked to the Chairman initially about this idea, that we have somebody coming in completely objective, that external objective facilitation role tied up with the methodology was absolutely crucial’ (Head of IM&T, Sandwell Health Authority).

Some participants believed that the culturally independent status of the facilitator may have encouraged a more active and willing involvement in the process.

‘What I think is interesting is that... it’s very difficult to get to a place, to give up that sort of time, all brushed up well, I wouldn’t say at the drop of a hat, but there has been that commitment and enthusiasm where quite a few of these characters, if I call a meeting with them, and unless I happen across them it’s like pulling teeth - so that was interesting.’ (Head of IM&T, Sandwell Health Authority).

‘I think that as a group of peers they have failed historically to move forwards and they got bogged down with the mapping process so... to take that thinking and move it along needed a third party to get involved that would be seen as an honest broker for the process’ (Chief Executive, Sandwell Health Authority).

‘I think it was a major catalyst, I must say... You didn’t come with a personal agenda, you haven’t got a Sandwell agenda and therefore the lack of all those agendas means that, certainly for me, I don’t know about other people, you can afford to be completely unguarded... I know that you’re not gonna go away and say: “he said this you know, I’d watch him” and that complete impartiality I think makes the whole experience far more open and far more honest’ (Chief Librarian, Sandwell Library and Information Services).

However, one participant thought that total neutrality was difficult to achieve and not necessarily desirable (and this is related to the theme of ‘intervention’). The facilitator had to move beyond a totally neutral stance in order to have effect.

‘I think to a certain degree if you’re totally neutral as a facilitator there’s a danger that all we’ll end up doing is having a very good talk shop’ (Deputy Director of Finance, Black Country Mental Health).

Another participant believed that the close involvement of chief executives (as already noted) had compromised the neutrality of the facilitator.

‘When (colleague X) came, ...it was quite clear that, you might well think that you see yourself as neutral but his interjection would question that’ (Chief Inspector, Community Services Division).

4.3 Sandwell 2

The data analysis from twelve semi-structured interviews carried out twelve months after the SSM application was complete is presented here. Four staff had either left the organisation or changed roles since the Sandwell 1 interviews, to such an extent that they could no longer be deemed to be a part of the stakeholder group. Given the time that had passed since the SSM application, the purpose of these interviews was to obtain a longitudinal view of the effectiveness of the application and its role with regard to the achievement of an IM&T strategy.

As with Sandwell 1, the interview transcripts were read several times and categories and sub-categories emerged. Unlike the first interviews, there was a great deal less emphasis on the SSM experiment *per se* (as this had effectively ended before the Sandwell 1 interviews took place) and more on exploring whether any organisational change had taken place and the contribution of SSM towards this. Two categories emerged, each with a number of sub-categories. These are shown in the table below.

CATEGORIES	SUB-CATEGORIES
1. PERCEPTION OF CHANGE	1a. IM&T STRATEGY
	1b. PARTNERSHIP CULTURE
2. NON-SSM FACTORS	2a. SILO CULTURE
	2b. POLITICAL FACTORS
	2c. STRATEGIC EVENTS

	2d. MOMENTUM
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Table 19: Categories and Sub-Categories for Sandwell 2 Interviews

Perception of change

It was evident during these interviews that there had been what could be described as an attitudinal shift within the problem environment towards a more tangible partnership ethos. Yet, the degree of shift was perceived as small; the partnership still did not have an effective IM&T strategy; and SSM had not, in the perception of many of the participants, contributed significantly to any such shift. Comments regarding ‘Perception of Change’ focussed on two factors: the IM&T strategy; and the Partnership.

- IM&T Strategy - The Director of Sandwell Learning Plus believed that the SSM application had demonstrated that there were ‘two discrepant positions’ regarding the IM&T strategy.

‘I think we took a fairly simplistic view and I think partly, if you go back a year, that was because we had such a high portion of technical people in the room (that is, at the workshop). I think at the time you indicated that there were some fairly discrepant models coming out, one that was very much, “here, now fix it, do some technical stuff and then that’s it”; and then the other group who were talking about process and possible structures and strategy and in the end I think we tried to pursue the technical fix-it approach all the way through probably till January/February time of this year?... but rightly, (that) hit a brick wall’

The SSM modeling work had shown that the strategic direction had to be resolved before the IM&T strategy itself could be developed. Yet, it appears

that the group had simply reverted back to grappling with the technical problems once the SSM application had ended.

The Director of Sandwell Learning Plus also made the point that no-one 'owned' or had responsibility for the strategy:

'all of us were busy, that's the problem. It's none of our jobs so what we did was to try to pursue the agenda that the technical group had gone down and I suppose that a number of us thought it was wrong, but at the same time we thought we ought to try and make it work so we did try and make it work. At least it was something, at least it was an action we could all agree to'

This view was echoed by the Chief Executive of the Sandwell Health Authority:

'what we lack is a coherent strategy and a champion of that strategy at a partner level and a designated lead officer whose job it is to lead that strategy'.

The IT Strategic Co-ordinator for Sandwell MBC believed that the IM&T agenda for Sandwell was still struggling to gain a real foothold in the partnership.

'I think it's struggled, I think the whole agenda's struggled to move forward at the partnership level.... maybe one or two individuals sticking to the task and trying to force something to happen. I think it's been hard work on the partnership to actually get them to appreciate that this is a big agenda for Sandwell... I still don't think that the partnership appreciate what our agenda is all about. I think they still think it's a techy thing, they still seem to think, "well, why should we be bothered with it?"

This participant also reiterated the observation that this was not a priority job for the individuals driving the strategy.

‘I think it is about the type of people they are, their own belief that it’s an important agenda... I think that there’s never been a full-time resource to push this forward at the partnership level. It’s always been one or two individuals who are dealing off their own back, but they’ve got day jobs so if push comes to shove it will revert to the day job.’

Another participant believed that there was a widespread belief that the IM&T strategy was not a priority and ‘that could be a misunderstanding of what they think it is because they might think it is just about technology’. Additionally, he believed that the IM&T strategy was too nebulous and not grounded enough in the reality of the everyday concerns of Sandwell MBC.

‘It’s funny, you talk to people and they all say, “well actually, the priorities in Sandwell are keeping the bloody streets clean and cutting the grass and getting people their benefit”, that’s the priorities. This (the IM&T strategy) is too “out there”, it’s too nebulous for people. What’s that going to deliver to “so and so who doesn’t have a council house down in whatever deprived estate it is in Sandwell who’s struggling to feed her kids”.’

He also characterized the policy intention to create an information society as long-term, which made it difficult to gain political acceptance to information technology investments:

‘I’m not saying that we shouldn’t do it. I’m saying that there are tremendous benefits in progressing this information society agenda in Sandwell but they’re quite long-term and... the nature of politicians, they’re always looking for “quick wins”.’

- Partnership culture - Most participants felt that Sandwell had perhaps moved closer to a genuine partnership culture, but this was a slow cultural development which would take more time to be achieved.

‘There are so many things that make partnership working ten times slower than you would hope that it would be and it’s all to do with politics and where it really is placed in people’s allocation of their own priorities, and not where people say it’s placed. Really, there’s a lot of excellent lip service to it, it’s fantastic, the lip service to it, it’s unbelievable. This partnership is the best thing since sliced bread, but the reality when you actually say: okay, through the partnership, this wonderful body that we all support and love dearly, we want to create an information management strategy and resource to deliver this, this and this, it’s, “well, we’ll have to see if we can get the budget for that so I’m not sure if it’s really a priority”... I don’t think we’ve really addressed how we turn partnership into real operational outputs’ (Director, Sandwell Civic Partnership).

The Head of the Training and Development Centre believed that progress was being made towards substantive partnership.

‘I think there’s a culture where people are mindful that we are trying to work together as opposed to what I think was the case probably back in 1999/2000 ...where there was a great danger that because of all these funding streams coming in, that there’d be a network established for that group and another network for that group and never the twain meet. I think there is a consciousness that there’s more to be gained by working together.’

However, this participant then conceded that there was still a way to go towards achieving genuine, working partnership.

‘I think we’ve made a lot of progress... but we still have silos, and some of them are new silos, actually.’

- Impact of SSM - Whilst acknowledging that SSM had contributed to a sense of change within the partnership, stakeholders found this contribution difficult to quantify. The Chief Librarian believed that prior to the SSM application, there was confusion and disarray. He asserted that agreement had emerged about ways forward, with stakeholders increasingly clear about their roles. He was asked what he thought had caused that shift.

‘It’s difficult to say, I think. I don’t think it’s possible to attribute it to one thing because life isn’t like that, is it, but what I would say is that... up to that point everybody was all over the place, we really didn’t know. Now, we’re all marching behind the same things, so something has changed. Now, that (the SSM application) I would guess has to have been one of the catalysts.’

When asked the same question, the Head of the Training and Development Centre also referred to other aspects which were contributing to a deepening in the local partnership.

‘It’s difficult to answer, but I rather think there are a number of things happening at the moment. People have got this awareness and are thinking about services, e-government, e-learning, e-commerce - all this sort of stuff. I suppose really it’s (SSM) one of the things hopefully contributing to the thinking.’

The Information Manager for Sandwell Social Inclusion and Health did not believe that the SSM application had created significant change, although 'there was a lot of coming together and mutual understanding and it was great; but practically, on the ground not much has changed'. This participant went on to say that although awareness of the partnership and 'the fact that there's something going on around information' had increased, she did not think that this was a direct outcome of the SSM application.

The Director of the Sandwell Civic Partnership agreed that SSM had an impact at the time of the application, but this effect was more difficult to define over the twelve months since this work.

'We're trying to develop, as you know, a partnership response to the challenge represented by being or developing into an information society and there are a number of ways of taking the agenda forward... and it's difficult really to know what has brought us to this point: but I would say that it's probably bloody-minded determination more than anything else and not letting it drop. I think it's about that tenaciousness, really. I mean, looking back at trying to use soft systems, it was helpful in terms of engaging more people, it was helpful in formalizing, helping people understand the distinction between doing something from a technical point of view and doing something from a strategic point of view, it was helpful. It engaged more people and that really helped consolidate that understanding, and basically what we've done, we've stopped developing the technical side. There's been very little support for enabling that to happen during this whole year since January.'

Although SSM appears to have enabled a more strategic (that is, non-technical) approach to the IM&T strategy, the Partnership did not immediately react to this. Approximately six months after the SSM application, the stillborn technical approach to the IM&T strategy was finally

abandoned!

Non-SSM Factors

Factors which were not caused by or connected to SSM, but which were considered to be influential in some way to the process of change, had also been raised during the Sandwell 1 interviews. However, they constituted a much larger part (the majority) of the narrative concerns articulated in the Sandwell 2 interviews. Again, this seems to indicate that the SSM application was regarded as an 'episode', and not something which had been successfully woven into the problem environment. There were four sub-categories, all of which had also appeared during the Sandwell 1 analysis.

- The Silo Culture - This still existed and internal projects remained a priority.

The Director of the Sandwell Civic Partnership had encountered difficulties in promoting a partnership culture within an extant silo mentality.

'Where people have got to make choices about putting time into partnership working or into delivering and managing their own internal organisation's demands, nearly all of it's going to internal demands and I'm forever having to create an environment of partnership working. I'm not the only one who does it, obviously. Sometimes, it's coming from somewhere else, but my job is to try and nurture that environment and help take things forward and it can be extremely laborious and frustrating.'

The Chief Inspector of the Community Services Division believed that once the SSM workshop had been held, there was a return to silo working: 'we

should have all been working after that, working together, and not in little pockets'. In this perception, the reversion appeared to be rapid.

The Project Manager of the Sandwell Public Information Network believed that the SSM application was useful, because it gave people a prerogative to move out of their silos, but this was again not a lasting effect.

'It (SSM) stops barriers, it gets people thinking differently and we all have our targets and our milestones and we seem to still be sitting in these individual silos to a certain extent and every now and then there's the opportunity to break out of that, but I think we almost needed permission.'

- Political factors - The political culture which was discussed during the Sandwell 1 interviews had, not surprisingly, persisted. The impact of this on the ability of the partnership to make any further progress towards an IM&T strategy was referred to, either directly or indirectly, by most of the participants. In particular, organisational politics appeared to have prevented an appointment to the post of Executive Lead of the IM&T strategy.

'The funding's been one of the issues, the process by which we tried to appoint was flawed in terms of not having sufficient ownership behind it, but then you can't always tell that when you start. I think the fact that we got a very poor response rate to the advert and there was one of the (internal) candidates decided that she felt that the process was unfair in that the job description that we had was too similar to hers - so all that meant that we couldn't appoint but in fact we wouldn't have appointed anyway' (Director, Sandwell Civic Partnership).

This participant also referred to political agendas which had affected the process: 'people see opportunities in things, especially if they're part of developing them. They get attached and they can muddy the waters'.

It appears that the competitive and 'macho' culture of Sandwell, one of the consequences of which was a 'jockeying for position' which had been referred to in the Sandwell 1 interviews, had halted this appointment process. No participant offered explicit details, but it is probable that there had been internal competition for the role and some considerable anxiety about the impact of the role on the political dynamics (that is, the power structures) of the current key players.

'I have heard rumours that they're looking to make an internal appointment to this post and I think that's really bad... anyone who comes into this post internally has got too much baggage and I think they need somebody new with all the usual incredible personal characteristics and experience who can actually see the bigger picture' (Head of IM&T, Sandwell Health Authority).

The Chief Executive of the Sandwell Health Authority believed that the situation had become very complicated.

'It's to do with people who are in the system, not sure whether we looked internally first but it became very messy with people who were in the system saying, well, they actually were doing that job, so in human resource terms it got very cluttered up... Well, there is now a paper being drafted that's saying, right, if we need clear leadership on this, do we need to go looking outside? Or do we just look at one of the initiatives we've got and see whether one of these will provide the leadership for the whole lot: so to develop a "first among equals" sort of status rather than spending additional money; so possibly to upgrade one of those

initiatives to be the senior partner that will then lead the rest.'

This participant acknowledged that 'there's going to be people who are unhappy about that'. Aside from the human resource and internal motivation issues which have been mentioned above, there was also a cost issue.

'The money we were prepared to pay wasn't going to get you a (names a senior colleague X) sort of person, it was going to get you a technically proficient (sort of person).'

The Information Officer for the Council of Voluntary Organisations also believed that organisational politics was influencing the outcome.

'Not a lot has happened (since the SSM application). I think it's kind of disappeared into a mire of politics and blind panic in some cases, so the problem is that the core group who met and did the work and went through the SSM stuff really hadn't been able to influence direction with the main players.'

This participant is, in fact, the only one to mention that there were other 'main players' who had not been involved in the SSM application. This would be a cause for concern, as it suggests that the stakeholder group was incomplete. However, it later became clear during this interview that there had been changes in personnel since the application which had then appeared to shift the structure of power at a senior level.

'There was... shifting different people around, there were one or two people who weren't at the study who maybe should've been there - you know, Chief Execs of the Council. There were one or two people who

came after, like the marketing manager.’

- Strategic events - The substantial strategic change that was taking place in the problem situation during the SSM experiment was still evident during the Sandwell 2 interviews. The Head of IM&T at Sandwell Health Care Trust referred to the changes concerning the Primary Care Trusts which were still ongoing: ‘everything else has been happening including the organisational changes which have swamped planning in the strategic sense’.

This participant also referred to the recent merger which had taken place between health services in Sandwell and Birmingham.

‘The complication of merger with City which has meant that strategic planning with Sandwell has now been complicated by strategic planning with Birmingham, so that it only took a week from the announcement of the merger before Birmingham was coming in and saying, “you must do this and that, we’ve now got projects which must include you, the whole empire”.’

The Information Officer for the Council of Voluntary Organisations referred to problems which the IT Department appeared to be experiencing.

‘The report on IT services wasn’t exactly a great report, and I think there’s a bit of blind panic over there where they just don’t seem to realize quite how they’re going to move us on from these things. It certainly doesn’t help that with the local authority they had new people and a new marketing manager over there who got given the responsibility for their websites who from the outset seemed like he was going off on his own.’

This participant referred to the problems besetting the IT Department again during this interview.

‘The council’s IT Department took a bit of a beating on Best Value, not a disaster but enough to sort of call into question their ability to deliver the government’s agenda, which means that they now sort-of pulled their heads in and have tried to sort things out.’

Some members of the partnership had visited Tampere in Finland earlier in the year and this event appeared to have been influential.

‘Tampere is no different from us, in terms of 90,000 people. Okay, it’s an island in a forest but we’re an urban island, their economy hit the buffers in the (19)80s and they had to re-invent themselves and redevelop. They did it through knowledge, so really why didn’t Sandwell start to re-invent itself through knowledge? So, instead of trying to solve IM&T, why not go a step above it and create a structure in which you have to hold the IM&T?’ (Director, Sandwell Learning Plus).

It is notable that the Director’s conclusion that the Partnership needed to ‘create a structure in which you have to hold the IM&T’ was also reached as an outcome of the SSM application. Yet it is presented as a fresh insight which emerged from the visit to Tampere. This participant was a partnership ‘insider’, and other ‘insiders’ also seemed to regard this visit as pivotal in terms of increasing commitment and moving the partnership closer towards achieving an IM&T strategy.

‘Tampere... helped us to see... not only what was necessary but how it could actually be done in practice and that’s helped raise the awareness and the profile and the level of commitment’ (Director, Sandwell Civic

Partnership).

This does appear to demonstrate that participants needed to see physical evidence of a strategic approach to Partnership in order to invest it with some credibility.

- Momentum - As has been observed, stakeholders appear to have viewed the SSM application as an episodic event which lacked momentum once the facilitator left the Sandwell environment.

‘I think it (the SSM application) does need a lynchpin. I mean, (names colleague) does need to keep up the pace’ (Head of IM&T, Sandwell Health Care Trust).

This was also the view of the Information Manager of Sandwell Social Inclusion and Health. She believed that the SSM application created ambition and focus, and it broke down barriers, but ‘...it needs somebody now whether that (is) you or someone else. It could have been you... but you know that Partnership post was ideal.’

The Project Manager of the Sandwell Public Information Network believed that there were other factors which contributed to the lack of momentum of the SSM work. When asked whether the SSM work ‘disappeared’ after the facilitator left, she replied:

‘I don’t think it did immediately because, once you’d disappeared, the decision was made: “yes, we need this body of people, we need a more co-ordinated approach”, the bid went forward, it failed, and I heard no more. So had it been successful and we had that body of people together, I think we would have carried on, but I think as I said to you before, we needed you back again really. I felt we needed more support with it (the SSM work), because we were just beginning to run with it and as I say the bid failed and I think the momentum went. And the problem now is that the projects are maturing in slightly different directions, they’re evolving all over the place and there’s the need to perhaps check it to bring us back again.’

The manager of the Sandwell Public Information Network believed that the major value of the approach was that it brought different groups of people together - but the work begun during the application needed to be continued.

‘I think everyone agrees that it was a very good approach, but... there has been nobody pulling people together to get together to actually use the methodology.’

‘I think it sowed a seed and that it needed some continuation and some nurturing of that.’

This participant, unlike the majority of the interviewees, asserted that the SSM application should not have been an episodic event. In order for it to work, its use should have continued within the organisation after the SSM facilitator had left.

The conclusion of this participant that SSM ‘sowed a seed’ that ‘needed some continuation and some nurturing’ is interesting, but also disappointing from the Author’s perspective. The Information Manager for Sandwell Social

Inclusion and Health put forward a similar view: ‘...now we need somebody in, a driver, a navigator, somebody to say you’ve done this, you’ve agreed this, right what’s next?’

These views indicate that, in spite of the positive reactions to SSM expressed in Sandwell 1 and enthusiasm for its use, there was insufficient institutional commitment to it to enable any real ‘follow through’. Additionally, the lack of momentum regarding SSM also appears to coincide with the lack of any further progress regarding the IM&T strategy. However, it should also be acknowledged, as discussed above, that other strategic events had a distracting effect on the problem environment in the immediate aftermath of the SSM application.

SSM had not been effectively ‘transferred’ into the organization. It proved too weak in a single episode to seriously challenge the political culture of resource-driven silos and quick wins, which had essentially survived. The SSM experiment was too short-lived to become a silo in its own right, but it may be that it was used by some Partnership insiders to gain increased power and influence in a predominantly macho culture.

The Chief Executive of the Sandwell Health Authority believed that, if the momentum had not been lost, the SSM application would have been seen to have a directly traceable impact on the change process.

‘My gut reaction is that it had an effect... and had we had the resolve and made the investment and stuck with it and got on with it, it would have been a directly traceable impact... We just lost the plot and it went back into blight... and got lost in the doldrums again.’

As far as the impact of SSM on the change process is concerned, this participant believes that:

‘it won’t look like it was the methodology even if it was, because it will be one of a number of things that’s contributed, and its directly traceable links to a product or a successful outcome will be obscured’.

4.4 Conclusions

Analysis of the evaluation interviews for the Sandwell application would seem to reveal a causal connection between the ultimate effectiveness of SSM and the tenacity of the existing politics and culture of the problem context. The Sandwell application was seen by participants as episodic, and although it may have contributed to a small attitudinal shift towards Partnership working, other organisational factors also contributed to this shift. The immediate outcomes of the application were promising, and if the post of Executive Lead to the IM&T strategy had been appointed it is likely that deep structure change could have been achieved which would have demonstrated a causal relationship to the SSM application. The failure of the appointment can be attributed, in large part, to organisational politics and the interplay of power and influence amongst participants.

Additionally, some of the comments made here suggest that totally candid participation was not achieved and that there was, in fact, 'unequal power in the debate'. In spite of the espoused willingness of participants to engage in the non-hierarchical and egalitarian approach, it clearly carried less credibility as a strategy for real survival than the prevailing political culture.

Further, the neutral role of the facilitator was also compromised by the prevailing political ethos. Notwithstanding the advantages of involving a neutral facilitator (for example, increased participation and the possibility of less constrained contributions), this role, and the SSM application, could not maintain political independence in the prevailing macho culture of the environment.

CHAPTER FIVE

DATA ANALYSIS AND RESULTS - THE HEREFORD CASE STUDY AND OBSERVATION DATA

5.1 Introduction

This Chapter evaluates the results of interviews conducted in the Hereford case study and presents the analysis of observation data. As in the previous chapter, the purpose of this appraisal is to understand the sentiments of the key actors in the Hereford case study, and set those experiences within an organizational and network context. The observational data is supplemented by an analysis of notes taken by the author during workshops for both the Sandwell and Hereford case studies.

5.2 Hereford Research Process

The data analysis from nine semi-structured interviews carried out twelve months after the SSM application commenced is presented here. Originally, fifteen stakeholders had provided worldviews and conceptual models which were considered during the application. Some of these participants had changed their role and were working elsewhere at the time that the interviews were taking place. In other cases it was not possible to arrange an interview due to the pressures of clinical work.

As with the Sandwell 2 interviews, the purpose of these encounters was to provide a 'snapshot' of the effects of the SSM experiment some time after the fieldwork had occurred. This comparative static approach enabled processes of change to be, to a degree, inferred. The specific remit of the SSM application in Hereford was the achievement of an Integrated Care Pathway for the treatment of Stroke.

The interview transcripts were repeatedly scanned and categories and sub-categories emerged. Four categories surfaced, each composed of a number of sub-categories. These are shown in the table below, followed by a discussion of each category and its associated sub-categories.

CATEGORIES	SUB-CATEGORIES
1. PERCEPTION OF CHANGE	1a. CREATES ORGANISATIONAL INSIGHT
	1b. CREATES VALIDITY AND STRUCTURE
2. NON-SSM FACTORS	2a. CULTURE
	2b. ORGANISATIONAL SUPPORT
	2c. MOMENTUM
3. PARTICIPATION FACTORS	3a. INTIMIDATION
	3b. OWNERSHIP/RELEVANCE (OF ICP)
4. FACILITATOR ROLE	4a. INTERVENTIONS
	4b. NEUTRAL FACILITATION

Table 20: Categories and Sub-Categories for Hereford Interviews.

Perception of Change

The encouragement of 'seamless' and integrated working via the creation of an Integrated Care Pathway for Stroke was considered by the client to be the desired outcome of this application. Although a substantial amount of modeling work had been completed before these interviews took place (see Chapter 3 - Methodology), an actual care pathway had not yet been produced, although agreement had been reached across the stakeholders regarding its content and form. This had emerged in diagrammatic form as the 'pathway model'.

As with Sandwell 1, these interviews revealed that the SSM application had produced an identifiable effect on organisational activity (the creation of a pathway model) which was being taken forward for development. It had also influenced to some degree the way that participants thought and behaved. However, unlike Sandwell, Hereford already had in place a robust Stroke Care Team that was working closely together regardless of the SSM application. The relevant stakeholders were, in a sense, pre-selected. What appeared to be lacking before the experiment were opportunities for the team to convene and reflect and debate on strategic aspects of care practice (such as the creation of a care pathway). The 'meetings' culture of Sandwell did not exist as such in the Hereford case study. The SSM application had thus given them the opportunity to meet together and devote a significant amount of time to discussion and reflection, apparently for the first time.

A dominant theme which emerged during these interviews was that participants

felt that the pathway model, which was the consequence of the SSM application, could have been derived from their normal working practices (that is, a few key individuals talking to each other). However, the process of discourse and debate which SSM demanded, although more time-consuming, served to validate and confirm the outcomes of any previous work on a Stroke pathway.

There were three sub-categories under Perception of Change:

- Creates Organisational Insight - Although the clinical staff involved in the delivery of stroke care operated as a team with good existing working links, the SSM application afforded them the first opportunity they had ever had to meet together and discuss the delivery of care at this level. This resulted in some comments relating to insights which had been acquired through this process of reflection and debate.

“(The application) helped me personally because it stopped me assuming... that people know certain things and then when I was working with the group (in the SSM workshop) and having to break things down so small, which at times I found irritating, I could see it made me suddenly realise that “no, not everyone is pitched at the same level as you are with this” and it levelled me off with everyone else which was good for me” (Stroke Team Co-ordinator).

This participant went on to observe that the SSM application had altered some of her own preconceptions about working in the stroke team.

‘It did make me look at things a bit differently... it made me question myself as well from picking up things, things that I’d assumed weren’t actually that way.’

The process had enabled her, in short, to surface assumptions. As the Team Co-ordinator, this participant would have had a central role within the team. However, the process of SSM also helped this participant to change her way of working: ‘(SSM) slows me down which is what I needed. I’m very impatient and I want to dive in and it stopped me from taking over’. She also saw the benefit of the process to those whom she termed ‘quieter people’.

‘I think the long sessions (the workshops) were beneficial to the quieter people....we did about three or four hour sessions, didn’t we, and I know it’s quite tiring and its difficult clinically to take yourself out for that period of time. I felt that it was more beneficial to the process because people that were quick to jump in had time to look at it and reflect’

This participant had also broadened her knowledge of her colleagues in terms of their roles and perceptions, where this was the product of ‘sitting together and wanting to do the pathway’.

Another participant, a Senior Physiotherapist, felt that the process was useful for exposing her to the outlook of people from beyond the customary working environment of a hospital.

‘I did get to meet people from outside the hospital that, you know, I hadn’t met before, somebody from social services, somebody from the voluntary sector, that I wouldn’t in my ordinary day-to-day activities come across, so I found it interesting to hear what they were saying... but

I wouldn't say I'd worked any closer with them as a result of it. I'm aware maybe a bit more of what they were saying and the problems they have.'

The Partnership Officer was persuaded that 'we make assumptions that we're all thinking the same and it's become fairly apparent that sometimes we're not'. This participant also thought that the approach had helped to surface the perceptions of other participants:

'I think it's been very good in making you assess your own approach to stroke and understanding that other people may be coming from a different perspective.'

The degree of difference between the various professions was clearly not fully appreciated prior to the SSM application. The Discharge Planning Sister for the Community Trust, based at Leominster, felt that the SSM approach was useful for revealing the degree of agreement:

'what was encouraging was to know that other people also understood my point of view and that there was agreement on many things... I think that healthcare professionals need to know that their colleagues are affirming things'.

The Partnership Officer also felt that the SSM process had demonstrated effectiveness in achieving an accommodation of views regarding the actual structure of the Care Pathway for Stroke.

‘I felt like it (the SSM application) consolidated (the pathway process) for me to the extent that I felt, “yes I can see where this is going now and how it is structured and you can actually fit things into various sets along the way and how presumably you can see if things aren’t happening and also that it is a consensus view”. So... I could see the way it would work and in actual fact I began to think about it (SSM) perhaps for other things.’

One participant (a Doctor) thought that the profile of developing a Stroke care pathway had been raised, but only among those who were already committed to providing a good service:

‘I think (the SSM application) just helped up the profile a bit of Stroke care but again the risk is, it’s amongst those that are already converts to providing a good service.’

Two participants had joined the application at the workshop stage. This meant that they had not contributed worldviews. One of these had, at the time of the interviews, become specifically responsible for taking the ICP Stroke work forward. Her view was that the SSM application had acted as a catalyst for beginning work on this pathway: ‘it certainly began some work on getting people together and discussing stroke care in Herefordshire, which was vital because that needed to be done’.

This participant also held the view that the approach had widened mutual awareness of participants’ responsibilities, so that ‘people were beginning to understand one another’s roles a lot better’. However, along with several others, this participant was uncertain that using SSM had created any added

value compared to the usual processes of pathway development.

‘It’s very difficult to separate the methodology from the pathway work... pathway development and the working together, the communication, the breaking down of barriers and the talking to one another would come through... conventional pathway development as well as soft systems. It may be that the soft systems consensus has meant for everybody that they’ve had a very fair input because you’re able to interview people individually. It probably has meant that they can voice their opinion and each person has been heard, because sometimes within groups it’s very difficult for everybody to get their opinion over.’

This participant went on to observe that the SSM application had created a controlled environment for debate; people felt ‘quite safe that they can put their opinion forward’.

Another participant thought that the value of the approach was in enabling her to see other perspectives.

‘I think it (SSM) has been a tool to see what people do and where they see their roles and their perceptions about other people’s roles and... I don’t know whether this would fit to using this or whether it was just about sitting together and wanting to do the pathway, and I have learnt quite a few things about the medical stuff that people assumed to be necessary’ (Speech and Language Therapist).

Participants were convinced that the SSM application had broadened their knowledge of other perspectives and roles in the Stroke care environment in Hereford. Hence, their levels of organisational knowledge had increased.

- Creates validity and structure - Several participants mentioned that the SSM application had enabled them to put forward a more logically structured, pathway model. The process of debate had given credibility to the consequent model: ‘...it made me feel like I’d ended up with something more valid’ (Stroke Care Team Co-ordinator). This participant also asserted that the approach had reinforced the assurance of some of her own views, by:

‘...giving more validity to my assumptions in a way. Some of them were wrong but some of them were right, but I felt that because of the methodology it has potential to be a more powerful tool than like (names Doctor) and I just sit down with a piece of paper’.

One participant felt that a particularly useful aspect of using the methodology was that it presented a top-down view at the outset (what was termed, the ‘big picture’).

‘I think the most useful bit of it was... where we all got together because previously when we’d talked about Stroke you start with the minutiae and you get so bogged down in that that you never get to the bigger picture: whereas with the methodology that you used, it was much more looking at the whole thing and then working backwards if you like from where you would normally do it and that did help initially to clarify thinking’ (Senior Physiotherapist).

The Discharge Planning sister thought that the application had helped the participants to reach a logical conclusion.

‘Certainly this was a very new way of developing a care pathway and that in itself was enlightening... I may sound quite negative in saying this and I don’t mean to be taken the wrong way, but I wonder whether we’ve

come up with anything different than we would have if we'd used our usual technique. I suspect perhaps not, because I think all the key things are there but... the examination of the process has been quite intricate and quite interesting... I think it helped us come to a logical conclusion.'

This view was shared by the Stroke Care Team Co-ordinator.

'I think it (the ICP) would have happened eventually, but I don't know if it would have been quite so logical. It gave structure to the whole process whereas we'd have probably called in lots of people, but it would have been a bit like a bullfight I think, whereas it was quite structured.'

The view that SSM had provided structure was also expressed by the ICP co-ordinator, in the sense that SSM had given people a mechanism through which to order their thoughts:

'I think that maybe the methodology gave people a structure to follow or a process to follow their thoughts through, really: so that things that they've maybe thought about that they couldn't perhaps articulate or demonstrate before, the methodology gave them a way of taking that forward and having some movement to the thoughts really' (ICP Co-ordinator).

Non-SSM Factors

As with the Sandwell case, the Hereford interviews also identified some factors which were not caused by or apparently connected to SSM, but which were considered to have impacted upon the application in some way. Although a pathway model had been produced and this was being taken forward for development as a care pathway, it was disappointing that the application had not been able, directly and in itself, to deliver a pathway. As in the case of the

Sandwell experiment, organisational conditions were considered to have played a role in compromising or otherwise reducing the impact of the SSM experiment.

There were three non-SSM sub-categories, all of which were beyond the control of the SSM analysis.

- Culture - Some participants made reference to the culture of Hereford Health Authority. There were several aspects to this. One participant was particularly vocal regarding the demoralised environment of the NHS:

‘I have a deep lack of faith in actually managing the National Health Service because my observations are that things change when they have to. In other words, when there’s a complaint that costs the Trust a million pounds, when something happens to a baby as an example or the flipside of that is that sometimes regional or central money becomes available in a big pot and they say “before the end of March or before the 1st of April please put in bids against this for developments” and the Trust puts in a bid, lo and behold they get a consultant... it isn’t as managed as managers like to believe. Well, it’s random, it’s fairly random, and you get pots of money for this but usually there’s a short deadline, you’ve to put a business case in in six weeks, or less than two weeks sometimes, and you may get a prize and it’s still like that.’ (Doctor).

One participant referred to the temporary nature of projects involving change which had influenced attitudes and commitment to the SSM project.

‘ This is a Hereford thing I have to say, that because things in the past have been like this there’s been a huge enthusiasm and you’ve rushed off and done loads of work and then, “oh yeah, but we’ve changed our mind about that now”. There was (referring to the SSM application) that kind of: “oh God, I haven’t been had again?” kind of feeling, which is absolutely nothing to do with this. It’s actually about history and feeling like, “yeah yeah yeah, she’s left now and she’s not interested”, do you

know what I mean? Those kind of things have occurred in the past, which have influenced my feelings about this I think' (Speech and Language Therapist).

This view was shared by another participant:

'...there's a terrible danger in the NHS that somebody comes in with an idea and sort of gets up a few people and it runs for a short while and then it just disappears' (Clinical Governance Co-Ordinator).

The SSM application was seen as an opportunity to influence events by one participant, in an environment which did not normally enable this to happen.

'We feel we're unable to influence the way things are going, but we can maybe see a different way of doing something or we know that if we just altered this a bit or provided that in the long term to the whole picture it would change the outcome. But we can't exert that influence, we can't get anybody to listen or anybody to say "okay, for 6 months try it that way, see what happens", because nobody's prepared to let us do that and that's what is frustrating because once your environment limits you... that demoralises people quicker than anything' (Senior Physiotherapist).

- Organisational Support - This sub-category is related to the sub-category 'Momentum'. Although the SSM application in Hereford took place over a period of two years, the momentum of creating an ICP for Stroke had been difficult to maintain. Some participants attributed this to a lack of organisational or logistical support for the implementation of the pathway. 'I think we struggled a bit because of administration problems' (Stroke Team Co-ordinator). At the beginning of this application, the client had assigned an in-house administrator to contact participants and arrange interviews,

workshops and the like. However, this arrangement had proved to be problematic and had resulted in some delayed or cancelled appointments over a period of time.

The Clinical Governance Co-ordinator recognised this and its consequences for the Facilitator.

‘I felt that you were put in quite a difficult position... and you did have a terrible time making appointments and things and I think people didn’t put themselves out to come to meetings and things.’

Comments such as this suggest a lack of organisational commitment. A crucial pre-requisite for any application of SSM is that the organisation must support it. In both the Sandwell and Hereford case studies, this support appeared evident at the beginning of the applications. Yet, its continuation would seem to have depended upon the physical presence of the facilitator, because the organisational environments were not naturally participative.

Two participants believed that the application should have been operationalised as a formal project. For example:

‘if the trust had said, “we’re going to spend £50K developing a stroke care pathway and it will be completed in six months and the following people are co-opted onto it and will have to drop their clinical duties”, then that would have worked’ (Doctor).

Although the Clinical Governance Co-ordinator thought that the application had been successful in bringing people together from across Trusts, she did not believe that the effect of this would be felt immediately:

‘...because I think it took a while to work out how the Health Authority was actually involved in this, because there was a bit of a problem with the Health Authority not speaking to the acute (care personnel) and not really speaking to the primary care trust... (the client) was sort of working slightly on her own... That was a bit of a problem to begin with’ (Clinical Governance Co-ordinator).

- Momentum - several participants considered the two-year timescale of the application to be problematic.

‘I don’t think it would have taken me as long to find it useful, but I was irritated by the time thing and that blinkered me to the (benefits of) the SSM itself’ (Stroke Care Team Co-ordinator).

However, she also believed that this pace gave participants more time for reflection:

‘...because it (the application) took so long I think that gave the opportunity for people who wouldn’t... like I dive in straight away, but not everyone works in that way, and I think perhaps it gave people like that the opportunity to have their say’.

The Senior Physiotherapist believed that people expected to get something more tangible out of the process, at a much earlier stage.

‘There was quite a lot of discussion of terminology and where you put certain sort of critical events and how they linked into that and we had to decide where those events went and it seemed to take an awful long time to do that.’

This participant noted that the outcome of the first workshop meeting (where all the worldviews and models were discussed) had been an agreed overview of the pathway. Given this, there was possibly a perception amongst participants that an actual pathway would quickly follow: this had not happened. The view that the application had taken too long was echoed by other participants:

‘I think it’s fair to say it’s been a bit of a frustration that it’s taken so long and progressed so slowly, I’m not quite sure why that is’ (Speech and Language Therapist).

‘It did seem to me a laborious way of probably getting perhaps to the consensus view that maybe I had done a lot quicker, but not to say that the way I did it was better, because it’s very hard to keep everything moving along with ICPs. People are interested in the beginning and then they drop off you know, how to keep everybody on board all the time’ (Clinical Governance Co-ordinator).

This participant felt that the momentum was lost when the facilitator was ‘off-site’.

‘I don’t think people got together outside (of) the times of seeing you and doing this together. I think people were waiting for their next instructions, because we’re a bit like that... we’ll wait till the next meeting.’

As far as the Speech and Language Therapist was concerned, the application had appeared to have lost momentum. This prompted the rhetorical question:

‘...are we starting again? Have we stopped doing this?’

‘I found it quite complicated and quite a complex way of coming to the point that we’ve got. This is the first time I’ve ever done anything like this... I think the disadvantage is that it’s been over a long period of time and it seems to have been a very time-consuming exercise, but that’s partly due to the fact that the meetings have been spread out.’

A Doctor believed that long timescales were normal in the culture of the organization.

‘I’m not surprised it’s taking so long because, well, things in Hereford do take a long time anyway.’

The Team Manager for Adult Social Services also did not think that the long-term development of a care pathway was unusual, since ‘....the Cleveland Children Act pathway took eight years.’

Participation Factors

As with Sandwell, cultural conditions appear to have inhibited full participation in the Hereford application, although they were of a different nature. This category contained four sub-categories:

- Intimidation - The initial stakeholder group included voluntary workers and carers. One participant believed that this may have created some inequality in

the workshop debates.

‘When you look at who you brought in from outside, maybe they’re only dealing with it some of the time... so they may have felt more tentative about saying stuff - especially on our territory, where we kind-of feel we know what’s going on... the gentleman who came in who was from the Carer’s Association, he had some very important points to make, but I think he probably would have struggled because there was a lot of medical jargon and technical stuff’ (Senior Physiotherapist).

The implication here would seem to be that different levels of both technical and organisational knowledge affect participation. The Senior Physiotherapist clearly felt that the non-medical people were in a minority and this put them at a disadvantage in the workshop meetings. This is similar to the exclusion felt by the ‘outsiders’ in the Sandwell application.

In addition, the organisation was going through a period of ‘downsizing’ at the time of the application.

‘You were interviewing people at a time when the hospital was downsizing staff, nurses have lost their jobs since you started this process, so there is a background of that. So the timing may have been wrong from that point of view, low morale’ (Doctor).

The point about participants feeling free to participate with entire candour is important. This participant clearly thinks that some of them may have been constrained by the fear of losing their jobs, but also by an awareness of real-world limitations.

‘They might have been more truthful if you really allowed them to relax and free-think about the real world, you might have got a truer ideal.’

As with the Sandwell case study, none of the participants was willing to declare that they had felt inhibited to any degree. However, the Speech and Language Therapist believed that there may have been some intimidating personalities among the group.

‘I think that if I have to be completely honest, which is my way, I have to say that there were one or two personalities within the team who I’m sure quite unintentionally inhibited other people from the discussion... I think it’s actually to do with their personality.’

It should be noted that no other participant referred to this aspect. Rather, the ICP Co-ordinator believed that the application had provided a secure environment for debate.

‘It may be that the soft systems consensus has meant for everybody that they’ve had a very fair input. Because you’re able to interview people individually, it probably has meant that they can voice their opinion and each person has been heard, because sometimes within groups it’s very difficult for everybody to get their opinion over.’

This participant went on to refer to participants ‘feeling quite safe that they can put their opinion forward’. This view was echoed by the Senior Physiotherapist:

‘...it was held on hospital premises... so people that worked in the hospital probably felt very at home and very comfortable anyway and it’s

our major caseload’.

The Senior Physiotherapist believed that SSM gave people the opportunity to contribute to decision making, which was in contrast to the non-participative culture that they were working in on a daily basis.

‘....at least it (the SSM application) gave us the idea that somebody viewed (Stroke) with some importance... everybody (was) positive and excited to be given the option to say what they felt should be happening; that was good’.

- Sense of Ownership/Relevance (of ICP)

Although the participants had shown a strong commitment towards developing a care pathway for Stroke during the SSM application, it became apparent during these interviews that there was some disagreement among the participants regarding the efficacy of care pathways in general. This view had existed before the SSM application occurred and had persisted in spite of it. Only one participant, however, articulated this directly.

‘I’m just fearful that care pathways are some way of paying lip service to quality or to providing a stroke service: “we have a pathway, therefore we have a service”. So I’m not committed and I haven’t been from the outset, because I think a number of other things need to be done’ (Doctor).

Furthermore, this participant perceived a lack of ownership across the team.

‘Well, what happens is that people like (the ICP Co-ordinator) are appointed to drive these things forward and their jobs clearly depend on there being a result at the end of the day, but that doesn’t necessarily mean that people on the ground own the product.’

It should be noted that no other participant expressed such strong reservations concerning the practical efficacy of a care pathway. Further comment by this Doctor made it clear that concerns were felt regarding the whole tenor of ‘managerialist’ change in the Health Service.

‘If you look at all the stuff on change related to the public sector and the NHS a lot of it is about managerialism, it’s assumed that managing something is good and a lot of the characteristics of change in the NHS is to do with having things imposed from higher levels - which the care pathways are an example of and it’s about a pragmatic realistic approach. “Okay, we’ve got to do it so we’ll make something look like it’s working, but in reality, underneath all this, we’ll get on with what we know we can do”.’

This Doctor, at least, had evident reservations regarding the development of a care pathway and regarding its value in subsequent use. It is interesting that this was the view of a Doctor, who may have believed himself to be (and may indeed have been) largely free from managerial constraints. He referred to his colleagues as:

‘...ground down by heavy workloads over the years and (they) don’t have a great deal of job choice either, so there may be a fear of institutionalised retribution’.

One other participant also exhibited ambivalence towards care pathways and *realpolitik* regarding their implementation: 'there's a *lot* of resistance from clinicians to care pathways.' (Stroke Team Co-ordinator, her emphasis). Her conclusion on the value of pathways was more positive, notwithstanding these caveats.

'I think... and these pathways have come from America ...to me it's valid because what I've wanted to do is offer some uniformity and some equity.'

The Partnership Officer offered a similar view. She felt that the SSM application had enabled her to clarify her own views about what pathways should be aiming to achieve. They should not aim to provide a 'gold standard', but rather, should provide equality of care to all stroke patients across the area.

'There are certain points along the pathway in my view that you need to make sure you address... and that you get kind of equality... I think particularly in a rural county where you can have sort of anomalies between what happens maybe to people in a busier part of the county compared to the rural part, making sure that they get equity across the service.'

Facilitator Role

As with the Sandwell application, participants were asked how they perceived the role of the facilitator. Comments were grouped under two sub-categories: 'interventions'; and 'neutral facilitation'.

- Interventions - most participants, not surprisingly, expected the facilitator to provide expertise concerning the approach (that is, the process). Unlike Sandwell, no participants believed that the facilitator had influenced the content, while all expected the facilitator to provide expertise on SSM.

The view of one participant was that the facilitator used the information provided and sought to 'fix it into the model'. This suggests that the facilitator did not see the approach itself as being understood and used by the participants and sought to provide that bridge to implementation herself. This participant went on to say that the specialist (SSM) knowledge of the facilitator was an important motivator for involvement.

'But if I had not perceived that you had specialist knowledge and information to put in, albeit about what you were using, then we wouldn't have played the game at all, wouldn't have given it the time.'

Other participants shared this view:

'I would imagine that this process was new to all the people that were involved, I don't know whether any of us had done anything like this before, so that puts you in a very influential position... So I think we've all been guided by your knowledge and expertise in this field' (Discharge Planning Sister).

One participant thought that the facilitator could have intervened more to keep the discussion focused.

‘Did we spend too long on bits that really weren’t that important? At that stage we needed to note them and mention them, but we didn’t need a full discussion on the politics of why they happened or things that didn’t happen’ (Senior Physiotherapist).

- Neutral Facilitation - the facilitator’s level of political and contextual knowledge emerged as an issue with some participants, although there were different views regarding this.

‘I thought your lack of knowledge of the subject was good, because it made us have to explain things more and break things down into more detail than perhaps we would have been inclined to do’ (Stroke Care Team Co-ordinator).

This was echoed by the Speech and Language Therapist, who argued that ‘I think it’s very helpful that you were outside the culture’. This participant also thought that it was beneficial for the facilitator not to have subject knowledge.

‘I think it was quite useful for you not to know much about that at all because that helped us to be clearer about communicating and what we needed to do and what we shared, and to rub away some of the assumptions and change the assumptions, I think that was very helpful.’

Neutral facilitation was felt to be important by the Partnership Officer.

‘We tried to do something several years ago when I was working in the acute unit about Stroke... and everyone got involved in fighting their own corner... and so I think if there’s someone facilitating this who can let everyone vent their feelings, but somehow pull it together then, yes, to me that’s quite important.’

This view was echoed by the Stroke Care Team Co-ordinator:

‘I saw your role to be... providing the framework like a “Help” button on a computer... Like you were the talking manual, because we would never have got there without that facilitation, would we? Because it made you very impartial, because of your lack of knowledge of the subject, but your great knowledge of the methodology, you were able to be impartial because you weren’t coming down on one side or the other and whenever there was an argument, you took us through it but you never took sides. So I did feel that although you were involved I did feel that you were removed’

5.3 Observation Data

During the interviews and workshops for both case studies, the author made observational notes during the applications, in particular with regard to the role and interventions of the facilitator. These observation notes are discussed below in relation to both Sandwell and Hereford.

CATEGORIES	SUB-CATEGORIES
FACILITATOR ROLE	1a. INTERVENTIONS
	1b. NEUTRAL FACILITATION

Table 21: Category and Sub-Categories for Observation Data

The category, ‘Facilitator Role’ and the sub-categories ‘Interventions’ and ‘Neutral Facilitation’ are used to present this data.

Facilitator Role

Participants in both cases, quite naturally, expected the facilitator to provide expertise regarding the use of the SSM, and its allied modeling techniques. Participants in both applications had received both group-based and individual explanations of the approach in verbal and written forms, prior to the process proper. It was clear, though, that there was some variation in the levels of knowledge and understanding of the approach amongst the participants. The facilitator noted that the process of constructing the conceptual models improved levels of understanding among participants.

- Interventions - A major observation concerned the nature of the role played by the facilitator during the workshops in both case studies. This was particularly noticeable in the Hereford case study. The logical relationship between the activities, for example, became very clear during the construction of the models. Though the conceptual models are not linear, these logical dependencies between the activities enabled participants to make the required shift from holistic SSM modeling to linear pathway modeling more easily.

The cultural independence of the facilitator is almost a prerequisite for any successful application of SSM. Strictly interpreted, this implies that the intervention of the facilitator is largely confined to providing expertise and guidance regarding the process of SSM and the modeling techniques. This

cultural independence was strained at particular points, especially:

- During the early stages of the application when worldviews are being gathered, along with information about the organization.
- During the cultural stream of analysis where political and cultural issues are explored.

As the facilitator becomes more aware of organisational processes and issues within the problem situation, it is almost certain that a 'facilitator's worldview' will be formed. However, this in itself may not actually constitute a problem, as long as it is 'buried' as a worldview *per se*, throughout the application. There are ethical issues here, though. In this research, the author's notes indicate that during the workshops in both cases, participants were requesting advice and guidance on the content (that is, the activities) of the models, in addition to the process (how the models worked). This occurred several times during the Sandwell case study, and particularly during the construction of the operational level model. The participants appeared to be more confident during the construction of the strategic level model. Although this occurred to a lesser extent in the Hereford case study, the author's notes categorically speak to the practical impossibility of facilitating SSM modeling without referral to content (the activities and their relationships to each other). In some cases, this author suggested activities (which were considered, and sometimes accepted) by participants.

Furthermore, in both cases the 7-stage process of SSM was not followed in sequence. That is, Mode 2 (not Mode 1) was adopted. This requires the facilitator to intervene and make judgments about which stages of the methodology should be used, and when. This judgment is based on knowledge (about tasks and processes, but also about the politics, culture and operational climate) of the organisation. However, the very act of exercising choice about how to use the approach is likely to be based, possibly in large part, on cultural knowledge. It is this author's view that the cultural independence of the facilitator is seriously compromised through the actual act of facilitation, particularly in Mode 2.

- Neutral facilitation - The neutrality of the facilitator was recognised by participants in both case studies as being valuable, if not essential, to the success of the applications. However, the author's notes identify a factor which may have undermined this in both cases. It concerns the organisational status of the client. In both Sandwell and Hereford, the clients occupied roles at senior management level. In the Sandwell case, the client took part in the application as a participant, but this was not the case in Hereford. Here, the client's role was situated in the IT and Systems Management function and did not involve clinical work. Author's notes indicate that participants associated the application with Senior Management. This may have helped to gain participation in the applications, persuading people to make time available to be interviewed, and to attend workshops. It may also have acted against truly uninhibited and committed participation, though, which is

required by SSM.

Additionally, the politically charged environment at Sandwell may have resulted in some well meaning but potentially detrimental interventions by very senior managers. They were supporting the application both strategically and financially, but were not taking part in the application as participants. These interventions were clearly meant to provide encouragement and support, but they could also have been seen as instructions or orders to succeed. These interventions took place without the knowledge of the facilitator. The author's notes make a number of points in relation to this. First, this author believes that such interventions further undermined the neutrality of the facilitator. It was possible that the facilitator may have been seen as an instrument of powerful managers. Second, the process of determining who is to participate (a definable stakeholding role) is crucially important. Often, this is done at the beginning of an application, when the facilitator may not know a great deal about the organisation, and there is a reliance on the advice of the client. Political and cultural factors may militate against a truly representative or otherwise appropriate stakeholder group. Third, although in both cases the facilitator was able to gather political and cultural knowledge, the author's notes indicate some gaps in this knowledge (the downsizing of staff which was taking place at Hereford, for example). The apparently *ad hoc* interventions of senior management at Sandwell may well have been politically motivated. The collection of political and cultural knowledge in an SSM application is not

formal (nor, arguably, can it be), but this would appear to be problematic. Unless the SSM facilitator is extremely politically astute, it seems inevitable that this cultural knowledge will be incomplete.

5.4 Conclusions

The Hereford application produced a pathway model which was taken forward for development by the ICP Co-ordinator. However, the client had hoped that the application would also encourage seamless and integrated working, and there was little evidence to suggest that this had been improved significantly by the application. The core Stroke Team were a cohesive unit prior to the application, and other than an increased awareness of colleague's roles and perceptions, the SSM application had had little impact on this.

As with the Sandwell analysis, the data analysis suggests that problems were caused by a lack of institutional ownership, and the existing structures of power and influence, and the *modus vivendi* of the organisation, were not changed by the application. There were also political events (such as the downsizing of staff) which were unknown to the facilitator. These factors appeared to militate against candid participation. The long time scale of the application also proved problematic because SSM was not transferred into the organisation when the facilitator was not active. The placement of the Stroke Pathway work within the SSM project meant that little work was carried out for long periods when the facilitator was not there to move things forward.

Although the Stroke Care Team was robust and cohesive, Hereford demonstrated aspects of a non-participative culture. As with Sandwell, SSM proved too weak to impact upon this, and its effectiveness to influence the process of change has been undermined by the tenacity of existing political and cultural factors.

This research suggests that the neutral stance of the facilitator is compromised in a number of ways. The strong likelihood that the client will be a Senior Management figure immediately associates SSM applications, and the facilitator, with executive activity. The use of Mode 2, and the ambiguity between process and content which occurs in facilitator interventions, suggests that to some degree at least the cultural and political perspectives of the facilitator will influence the applications.

Finally, it can never be assuredly ascertained that all political and cultural nuances and issues are accurately perceived by the facilitator. In the Hereford case, for example, there was no evidence of staff downsizing activity which was actually taking place at the same time as the application. Rather remarkably, this appeared to be a very well kept secret. The facilitator therefore had no way of knowing that this may have influenced candid participation.

The cultural stream of analysis is too loosely done to guarantee comprehensive cultural awareness. In any case, such awareness would always be problematic for the facilitator, since their interpretation of it will be value-laden.

This research has demonstrated that two fundamental, underlying principles of SSM can not be assured. These are:

- a. That the open and candid participation of stakeholders can not be assumed, nor evaluated, and
- b. The absolute neutrality of the facilitator is compromised by the methodology itself, which requires active facilitator involvement and cultural and political knowledge.

CHAPTER SIX

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DISCUSSION

6.1 Introduction

This Chapter presents a critical evaluation of the key issues emerging from the analysis of the case studies, set against the wider insights to be drawn from the research literature. It is the author's contention that the case study work has demonstrated some critical weaknesses in the SSM approach. These principally relate to stakeholder or participant issues and the likelihood that participation will be affected by organisational factors, such as politics; the feasibility of an 'ideal speech situation' which is required by SSM; and issues of facilitation. These last concern the degree to which the facilitator, rather than the methodology, enables a change process to take place. A central concern in these factors is the apparently very weak evaluative process in SSM research. The argument presented here is that there is a need for an evaluative framework that respects the communicative norms and the hermeneutic principles that are vital elements of the SSM process. These naturalistic elements in SSM – explicitly so in Checkland's interpretation – must not be violated in any evaluative regime that is appropriate to SSM and sympathetic to its core principles. This research has demonstrated that the use of SSM may produce changes in attitude and thought, as well as achieve process outcomes. Therefore, to be useful, any evaluative process must meet cognitive and emotional needs in addition to any measurement of process outcome achievement. As the Literature Review

demonstrated, proposals for incorporating evaluative concerns within SSM have not been shaped with this principle in mind.

An evaluative framework is proposed that is designed precisely to respect this naturalistic principle. The framework is an attempted reconciliation and consolidation of Fourth Generation Evaluation and SSM. Its incorporation in future SSM research would constitute a major strengthening in the investigative and learning processes that reside at its heart. The approach taken to this ambitious task is iterative. First, the major deficits and issues of concern in the two applications described in preceding chapters are resumed. A critical examination of each of these deficits is then undertaken. The Chapter begins with reflections on agency. This is followed by sections which cover stakeholder issues, including selection and power structures, the Ideal Speech Situation (Habermas, 1984), difficulties associated with the role of the facilitator, and the problems associated with the assessment of SSM in the change process. As such, SSM applications are exacerbated by the ambiguity posed by conjoint change and the difficulty in attributing causal changes to SSM. A central theme is the tenacity and influence of issues of politics and power. The problems associated with the meaningful evaluation of SSM are then discussed, and Connell's Participation and Success matrices are briefly examined. These culminate in a requirement to strengthen the evaluative framework surrounding SSM. A framework for evaluation is proposed which combines the constructivist approach of Fourth Generation Evaluation (Guba and Lincoln, 1989) with SSM.

6.2 Issues of Agency

Data analysis of the Sandwell and Hereford evaluation interviews revealed a number of issues which have been categorised in this section as ‘Issues of Agency’. Agency is understood here to mean the capacity of an agent to act in the world, to make choices about their actions and to impose those choices on others. The underpinning concern here is the structure of power. The effects of power were evident at two distinct conceptual ‘levels’ (Hill and Hupe, 2004), reflecting agents’ differing stakes in the issue at hand. Power was manifest both within the SSM application process itself and in the wider structures that framed the case study environment, where these preceded the application and shaped its implementation and subsequent fate. What is at issue here is the substantive capacity of SSM to address tenacious political cultures which appear to be inimical to the participative and non-hierarchical functioning of SSM. This is in spite of the will of many of the individuals in both problem situations to adopt such a participative approach, also manifest in their very selection of SSM as the approach of choice. There are five ‘Agency’ issues identified: the process of stakeholder selection; the structure of power underpinning the stakeholder analysis; the ensuing power structure within the problem situation; the degree to which an ‘Ideal Speech Situation’ (Habermas, 1994) may then be said to prevail; and the role of the SSM facilitator. Each of these is now discussed in turn.

6.2.1 Stakeholder Selection

Freeman (1984) provides the following, influential definition of a stakeholder.

‘A stakeholder in an organisation is any group or individual who can affect or is affected by the achievement of the organisation’s objectives.’ (1984:46)

This definition acknowledges the bilateral nature of stakeholding, which in effect moves within and without the problem domain. In SSM theory, the process of stakeholder selection is not recognized as such or formalized as a distinct ‘stage’ in the analysis. Yet, participants must be chosen at the outset of any analysis – whether through self-selection or assignment. In SSM, this is addressed through an articulation of the roles of potential participants in relation to the SSM analysis. There are three of these roles: the Client (the person or persons who cause the analysis to take place); Problem Owners (actors within the problem situation); and Problem Solvers (actors who may take action to resolve the problem situation). The terms used in SSM to categorise participants are clearly generic in nature. Yet, they are also more categorical than the definitions offered in stakeholder management research, such as those proffered by Clarkson (1995). It is possible that SSM theorists eschew the term, ‘stakeholder’ because it implies a relationship between an entity and the organisation, rather than between an ‘actor’ and the problem situation. Thus, the roles recognised in SSM are those that are recognisably problem-oriented, or that stand immediately proximate to that problem. The nature of the problem matters, however, to both the range and numbers of likely stakeholders. Socially important issues will

typically attract secondary personnel (such as Chief Executives) whose immediate interests and roles are rarely apparent.

SSM models do not clearly prescribe exactly how the process of participant selection is done - or indeed who does it. However, that process necessarily takes place before worldviews are collected (logically, since this selection process will define the contributors of worldviews), perhaps at the stage where the facilitator gathers organisational intelligence and constructs rich pictures. The implication is that the selection of participants is a negotiated process which includes advice from the facilitator regarding whom should take part, and client perspectives. The process of determining who is to participate is crucially important, as noted, because it defines the personal perspectives that are pooled for the worldviews. Given that this is done at the beginning of the application, there is a likelihood that the facilitator may not know enough about the organisation and client views may predominate in that selection process. Political and cultural factors may militate against a truly representative or otherwise appropriate stakeholder group. Data analysis from this research suggests that participant and stakeholder analysis in SSM can be problematic and certainly greatly influenced by cultural and political factors at work in the problem situation.

In both of the case studies, the client played a leading role in the definition of participants. In Hereford, the original stakeholder group was widely defined and it was then not practically possible to include all of these participants. Therefore, representative groups were arranged by the client, with these being based on the

key elements of an existing and already robust Stroke Care Team (that is, it became a self-selecting group). However, because the client was not a clinician, she did not form part of the stakeholder group herself. She was based at the Health Authority which, at the time of the application, did not have strong links to the acute trust or the Primary Care Trust. This meant that she was working largely on her own in terms of defining the participants. Her status as outsider was thus equivocal; doubly so, given the apparent strength of professional groups in the conduct of medical care. Although the client in Hereford commanded organisational status and power at the level of the Health Authority, this was not echoed at the clinical level, where therapeutic interventions held sway.

The effects of these initial partialities in stakeholder selection were intensified as the analysis progressed. In Sandwell, the initial selection of participants included all staff who were considered to be part of the IM&T strategy at operational and strategic levels. In both Sandwell and Hereford, some stakeholders were 'lost' during the application because they left the organisation, or changed roles and left the problem domain, or simply could not devote all the required time to the analysis. In the Hereford application, new stakeholders were added to the team over the course of the initiative, as staff were assigned roles within the Stroke Care Team during the process of the analysis phase. This 'churn' in personnel is again an issue that is barely addressed in SSM theorizing. It is likely to correlate positively with the duration of the experiment, the effects intensifying as the process extends over time. This constitutes a substantial

dilemma. On the one hand, knowledge transfer is a key principle in SSM theory – and this takes time. On the other, personnel turnover is likely to present severe problems of amnesia or knowledge loss (Pollitt, 2000) – especially in situations where organizations are changing rapidly. This was certainly the case in the local NHS at the time.

In the Sandwell analysis, one participant mentioned ‘main players’ who had not been involved in the SSM application. It became apparent that this was because there had been changes in personnel since the application began and these had appeared to shift the structure of power at the senior level. Such shifts and changes were not known to the facilitator. One consequence of this was that the ‘new arrivals’ in the Sandwell case were not included in the analysis.

Practically, it became difficult for the facilitator in both cases to influence or control this movement within the stakeholder groups. Some considerable time was spent in both organisations prior to the applications. Notwithstanding this, she did not have sufficient cultural and political knowledge at that early stage to identify all relevant stakeholders. Neither were the limitations that became evident subsequently in the stakeholder groups attributable to any deficiencies in clients’ efforts to secure representativeness. Rather, it is likely that they were inevitably influenced by cultural conditions which were integral to and deeply lodged in these working environments. This would make their choices susceptible to a degree of subjectivity. Jawahar and McLaughlin (2001) suggest that as an organisation progresses through a putative life cycle, certain

stakeholders will assume more importance based on their ability to satisfy critical organisational needs at that point in time. Further, Mitchell et al (1997) contend that managers should pay attention to specific kinds of stakeholders to achieve certain ends. White (2006) believes that the question of who is involved in PSM applications and the reasons for this involvement are crucial, and Shaw et al (2006) consider that the widest possible selection of stakeholders in PSM interventions is important. These arguments suggest a high degree of ephemerality and partiality in stakeholder selection. This may have been the case at Sandwell, where politically powerful actors were included in the stakeholder group, even while their specific understanding of the problem situation was questionable. There is some support for these observations in research into SSM. Thus, Flood and Jackson (1991) maintain that including the widest representation of stakeholders in SSM projects is usually infeasible and therefore problematic. On the other hand, they note, genuine participation is not possible in SSM unless stakeholders are represented in the widest possible sense. This is clearly an unresolved dilemma.

The difficulties in selecting participants for the purposes of SSM experimentation do not end there. There is no formalised process for assembling or inserting the political and cultural knowledge of context within its structures of problem-solving. Unless the facilitator is extremely politically astute, it seems inevitable that knowledge about cultural and political issues within the problem situation may to some degree be incomplete. In any case, making this knowledge overt or explicit may undermine the facilitator's role as a culturally independent

agent and unleash potentially disruptive cognitions within the problem situation.

6.2.2 Power structure of the stakeholder group

In Sandwell 1, the stakeholders could be divided into Partnership insiders and Partnership outsiders. Insiders are defined as people at the centre of and strategically connected to the Sandwell Partnership, who perceived that the application had had some impact on the problem situation. Partnership outsiders are those on the periphery of Partnership activity, who were largely of the opinion that no change had occurred. This divergence in view must surely have been influenced by the fact that the daily areas of concern and activity of the outsiders were external to the Partnership core; that is, structural location in relation to the problem. Different levels of accountability in joint decision making activity in multi-organisational settings is referred to by Franco (2007).

The Partnership insiders were generally people with senior roles and they contributed understanding pertaining to strategy and organisational dynamic. They were also, as one would expect, articulate and confident participants, considered by others to have substantial organisational power. This was generally based on their status (for example, the Chief Executives and Directors) and their resource power. In particular, resource power (demonstrated through the verticality of a silo culture) was much in evidence in the Sandwell environment, investing the directors of the largest projects with high status as participants. This conforms to the broad lines of resource dependence theory

(Pfeffer, 1981).

In the politically-charged environment of Sandwell, this situation almost certainly affected the interpersonal dynamics of the stakeholder group, particularly when they were together at workshop meetings. This confirms Jackson's (1991) contention, which is that less privileged stakeholders feel threatened by the resources that can be mobilised by the more powerful. He discusses a framework of domination, in which a given structure of power can potentially overwhelm the democratic and inclusive elements of SSM. In the wider context of PSMs, Jackson (2006) acknowledges the effectiveness of these methods in surfacing coercive elements whilst at the same time offering scant guidance on how to address the consequences. Additionally, the apparently ad hoc interventions of very senior management at Sandwell may have been politically motivated. These individuals were not part of the stakeholder group and their interventions were not discussed with the facilitator. Their interjections served to reinforce the power structure of the organisation against the internal decision-taking capacities of the SSM group, but they also compromised the neutrality of the facilitator. This would seem to confirm the view of Beeson and Davis (2000), which is that the SSM analysis is often dominated by analysts and management.

The Sandwell Partnership as an organisational entity carried political weight and kudos and it became clear that some participants attempted to use the SSM application to consolidate or achieve personal power and influence. For example,

during the application process, a number of participants referred to a 'jockeying for position'. Professional reputations may have been at stake, to some extent, in this.

The dynamic of resource and political power was less obvious in the Hereford application, but the impact of knowledge power did appear to have an effect on the overall power structure of the stakeholder group. The initial stakeholder group included voluntary workers and carers. One participant believed that this created some inequality in the group, because participants from outside the NHS may not have understood the medical and technical references used in the debate. This argument attests to the power of the prevalent system (Hardy, 1996). Extra NHS stakeholders may have been excluded in the debate, because of their lack of knowledge power (Handy, 1999). Status power, however, appeared to have less influence here, although some dominating personalities were considered to be inhibiting. Gregory's (1995) observation, that there will almost inevitably be different levels of literacy among participants, also appears to be relevant here. This view is supported by White (2006) who contends that participants will not have the same ability to articulate problems. Mitchell et al (1997), writing about stakeholding in private firms, categorise stakeholders in terms of three factors: These are their power to influence the firm; the legitimacy of the stakeholder's relationship with the firm; and the urgency of the stakeholder's claim on the firm. Clearly, these factors if applied to the cases would imply a much wider range of participants than the roles identified in SSM research. Indeed, these attributes could be used to help define a more robust participant group within an

SSM analysis.

The findings of this research indicate that the process of stakeholder or participant selection in SSM must be informed fully by these issues in an attempt to mitigate the negative influences of organisational power in the ensuing analysis. In highly politicised environments, however, this may not actually be possible. The impact of these factors on the participation of stakeholders in the process is discussed below in the context of the 'ideal speech situation' (6.2.4).

6.2.3 Ensuing power structure

The SSM approach seeks to acknowledge the importance of the cultural dimensions of the problem situation through the 'cultural stream of analysis'. However, as noted earlier, the process of gathering cultural and political information is not formally prescribed. There is no explicit guidance regarding how this information should mesh with the analysis, or how it should inform the modeling itself. Indeed, this point is underscored by Flood and Romm (1996), when they claim that insufficient guidance is offered to the SSM facilitator on exactly how to manage political and social system analysis. In spite of the stakeholders' commitment shown in both cases to SSM, as a participative and open approach, this research demonstrates that the actions of participants may be influenced substantially by covert political factors. These include the need to survive in an environment heavily influenced by robust and relentless internal competition; the coping and adaptation required in the face of continuing

restructuring; or, the threat of imminent redundancy. Participants may not be entirely candid regarding these factors, during the analysis process. Such behaviour confirms Mumford's (1983) view, that a fear of job loss could have a negative impact on a participative change process.

Checkland acknowledges that organisations are in a continual state of flux and change, but the role of political action within this dynamic requires attention – and this must go beyond mere acknowledgement. Checkland conceives organisational politics as reflective of dispositions of power and this is persuasive, given the experiences recounted in the case studies. The ubiquity of power effects arising from what might be termed 'politicisation' nonetheless appears understated in SSM research. This dimension appears to shape the ebb and flow of organisational life. It is a powerful undercurrent, which could become destructive if exposed. In the Sandwell case, organisational politics impacted severely on the effectiveness of the application and largely prevented the 'actions for improvement' (implementation of problem-solving measures) from taking place. The political dominance of the 'quick win' culture was such that it substantially countered the long term achievement of an Information Strategy.

In both cases, the SSM application appeared to have made very little impact on the existing power structures of the respective problem environments. These power structures were widely apparent in the actions and responses of participants during the SSM applications. In Sandwell, the IT Group (which had

been charged with putting an IM&T Strategy in place) was regarded as an operational group, ironically without the strategic power to discharge its mandate. This position was not affected by the SSM application. The group remained powerless and relatively ineffective, both during and after the application. Shaw et al (2003) discuss the phenomenon of 'monolithic thinking' in relation to the application of Soft OR modeling (Journey Making) to group problem structuring. It is possible that some 'monolithic thinking' existed amongst participants at Sandwell with greater status power, which may have reinforced some deeply held preconceptions about the problem situation once the application had ended. In Hereford, organisational or strategic change was considered to be a millennial goal, unless it was supported by funding or potential funding, or was initiated by an urgent need to address complaints or problems. Neither of these conditions prevailed in the Hereford application, while the stakeholders did not have the resource power, or sufficient status power, to influence change within their 'real world'.

SSM was not transferred as a methodology into Sandwell or Hereford and the single application in both cases was not sufficient to change organisational culture and politics. In Sandwell, the SSM application appears to have become an instrument of political power in itself; it was captured by a dominant coalition of agents. This only served to distort its impact on the change process. It could be concluded that the egalitarian, participative and non-partisan requirements of SSM posed a challenge or threat to the Sandwell environment. Given the evidence, it is equally possible that it may have been too weak to affect the

tenacious political culture. These findings confirm Callo and Packham's (1999) observation to the effect that genuine debate is difficult to achieve in corporations with strong hierarchies of power.

6.2.4 The Ideal Speech Situation

The influence of power structures and political dynamics in both applications appear to militate against creating the conditions for an Ideal Speech Situation (ISS) (Habermas, 1984). The SSM approach is inherently participative. It requires candid, open contributions from all participants, regardless of their organisational status or position. ISS is dependent upon an equality of opportunity to contribute, which is not constrained or inhibited by more powerful or confident participants. Thus, there appears to be a correlation between ISS and the conditions for debate expected in SSM. In both cases, there are normative criteria about what ought to be. Habermas (1991) is explicit that the ISS constitutes a moral test: the discursive framing in SSM is not dissimilar in intent. Callo and Packham (1999) contend that the conditions for achieving this open discourse are the responsibility of a competent facilitator, rather than secured by a particular methodology. Yet this research has demonstrated that SSM acting in politicised environments may fail to achieve this. This is because there is no method by which the facilitator can reliably confirm that participants are contributing without restraint, while declared stances of 'free speech' are questionable in highly politicised environments. In both of the case study environments, participants associated the SSM application with senior

management. This attribution may have helped to gain (formal) participation in the application, but it may also have militated against truly uninhibited and committed participation. Franco (2008) refers to the detrimental impact of power relationships upon effective dialogue in collaborative engagements.

The comparison with ISS is worth pursuing further here. The five conditions, or principles, of ISS are as follows:

Mutual Understanding: This implies that the participants understand one another in terms of both the content of speech and language structures. In the Sandwell application, one 'outsider' participant felt that she did not comprehend the workshop discussion. Others may have shared this feeling, but were reluctant to admit it in the company of their peers. There is also evidence that language may have been deliberately manipulated by 'insider' participants to reinforce a claim on the SSM application, placing them in a superior position compared to others, particularly 'outsiders'. Two participants repeatedly referred to the word 'systemic' during evaluation interviews, possibly to signal or reinforce their understanding of SSM techniques to the facilitator. Language is the currency of SSM, and these participants could have been exploiting this (albeit benignly) in order to reinforce their status and political power. In the Hereford application, one participant was from a non-medical organisation external to the NHS. Another participant was persuaded that this social position must have put him at a disadvantage in the process. These observations on the use of language attest to its specific power for the purposes of inclusion or exclusion (Hardy, 1996). The

capacity of technical language to impede mutual understanding is precisely why both Habermas and the SSM theorists have focused so much attention on language and its use. In both applications, there is evidence that discursive and intellectual abilities were varied, confirming Jackson's (1982) contention, that intellectual resources are unequally distributed among participants. This inequality inevitably created difference in the workshop debates. The importance of language in SSM suggests that robust mutual understanding of its principles and modeling techniques is essential to its operational effectiveness. However, Gregory (1995) points out that language is itself interpretive and this therefore implies that mutual understanding in its fullest sense can never be achieved.

Truthful: This implies that participants consciously provide accurate and veracious knowledge and deliberate misinterpretation does not occur. It would be difficult, and certainly naïve, to assume that these conditions existed in heavily politicised environments. Habermas' criterion is, as previously noted, a moral assertion. The experience of the case study suggests, though, that a truthful state will be difficult to negotiate and maintain. There are two facets to this issue. First, the facilitator is poorly disposed to judge whether the 'truth' is being advanced by participants. As previously discussed, the cultural stream of analysis is apparently not a robust enough device to unearth all relevant political and cultural issues. Second, SSM applications do not take place in an organisational vacuum. Actions and concerns which are beyond the scope of the analysis, but which may influence participants' behaviours, press in on most applications. In the experiments, these included the creation of the Primary Care

Trust and the political manouvering which is part of a silo-led culture. In Hereford, the impact of staffing cuts was more diffuse, but it is nevertheless probable that this factor affected participation.

Sincere Expression: This implies that participants express themselves in a way which is perceived by others to be sincere and believable. In both of the SSM cases, the participants knew each other, albeit to varying degrees. Most participants worked closely with each other. This was especially the case with the 'insiders' in the Sandwell application, and the Stroke Care Team in Hereford. It has been suggested here that political and cultural conditions, some of which were not known to the facilitator, were influential both during and after the applications. It is likely that some participants perceived others as speaking through a political or cultural frame, at least to some extent. Yet, this was understood and indeed accepted by others as a social norm. This suggests, in turn, that prior familiarity may enable and enhance an agent's capacity to judge another's sincerity. The constraints on sincerity were widespread and structural, however. The Sandwell application was marked, as noted, by 'jockeying for position'. Some participants hoped to gain power and advancement through the IM&T strategy. They may not therefore have contributed openly to the SSM process. Similarly, in Hereford, participants may have been attempting to preserve their positions and jobs. Others may have perceived this, accepted it, and perhaps made allowances for this bias in their discourse and debate. The culturally independent facilitator would not, though, have been aware of these fluid, implicit nuances of meaning and understanding. As argued, some

participants were probably articulating an espoused theory of action rather than a theory-in-use (Argyris and Schon, 1974). Given this, it is hard to see how the facilitator could perceive this, unless fully immersed in the political and cultural context of the organisation. The gap between espoused theory and theory-in-use can be great and is one that may profoundly shape the explanations that an individual gives.

‘When someone is asked how he would behave under such circumstances, the answer he usually gives is his espoused theory of action for that situation. This is the theory of action to which he gives allegiance, and which, upon request, he communicates to others. However, the theory that usually governs his actions is his theory-in-use’ (Argyris and Schon, 1974: 6-7).

The grounding of debate in such espoused stances of participants conforms in every respect with SSM guidance, but the putative gap with theories-in-use could have contributed significantly to SSM’s inability, in both cases, to penetrate the deep political and cultural practice of the organisation.

Right To Speak: In Habermas’ ISS, all participants have an equal right to speak and to be seriously listened to and considered. Again, this correlates directly with the egalitarian, non-hierarchical nature of SSM. In Hereford, some powerful personalities were considered by other participants to be inhibiting: that is, to constrict this right to speak. It was asserted that non-clinical staff were particularly disadvantaged. In Sandwell, Partnership ‘outsiders’ felt less able to contribute. Politically powerful participants were considered to be more adept and articulate in debate. These factors may have served to discourage some

participants from contributing openly to the SSM application. Again, this conforms to Callo and Packham's (1999) contention that genuine debate is difficult to achieve in corporations with strong hierarchies of power. It is unclear whether formalised systems of values that include a right to voice were present in either case. If they were, it is equally unclear whether they had any noticeable affect.

Legitimacy: Contributions are placed in the context of normative or legitimate social order. In both cases, it is suggested that some participants considered that they had too little legitimacy (through lack of power, status, or knowledge for example) to make entirely confident and candid contributions. In both Sandwell and Hereford, powerful hierarchies existed. In Sandwell, the 'pecking order' of the hierarchy was demonstrably in evidence during the workshop. In that workshop, politically powerful participants were perceived to dominate the debate. Similarly in Hereford, powerful personalities were regarded as inhibiting. In both applications, only a few participants were willing to admit that these influences could be seen as intimidating to others.

In summary, it appears that SSM assumes that negotiation and debate takes place within a dialogical environment that, in many respects, converges on the ISS ideal-type. Yet, attaining this ideal is problematic in practice. The combined influences of the interpretive paradigm of discourse within which SSM takes place, and the political power structures which are commonplace within organisational life, will always militate against this. Franco (2006) contends that

PSMs in general can affect forms of conversation amongst participants by enabling inclusion and balance, thus closely conforming to ISS. However, he also believes that this impact is undermined when participants impose vested interests and controlling agendas, and offers a theoretical model of conversation for deployment in PSM in an attempt to address this.

6.2.5 The role of the SSM facilitator

An objective of this research has been to assess the role of the researcher as a facilitator within the change process. It has been previously discussed that the issue of intervention in both process and content is particularly emphasised when Mode 2 is deployed, as was the case here in both the Sandwell and Hereford applications. This research has demonstrated that participants expected the facilitator to provide expertise with regard to the use of SSM. However, the very act of providing this expertise meant that it was sometimes difficult to disaggregate advice regarding process (that is, the modeling conventions) from that regarding content (that is, suggesting that certain activities should be included or excluded from the models). There is a danger in the latter, because the social and cultural constructs of the facilitator may influence how the methodology is used. Within SSM, models must be wholly owned by the participants, but this may be compromised through facilitator interventions regarding content. It should be noted that the process/content issue highlighted here is different to the treatment of these concepts by Winter (2006). Winter makes a distinction between SSMc (content) and SSMp (process) but this refers to the dual application of SSM to both planning the process of activity (eg

workshops) and to exploring the content of the problem situation.

The importance of facilitator-participant interaction was demonstrated in both applications carried out here. Ironically, the development of rapport and understanding, and the communicative action which underpins this, also has the potential to decrease the cultural independence of the facilitator and increase the likelihood that facilitator 'constructs' will influence, or even dominate, the analysis. Additionally, as O'Pala contends (2003), there is insufficient guidance for the facilitator at stages 5, 6 and 7 (where debate and negotiation takes place). This too was borne out by this research. In both applications, participants required help in reconciling worldviews during the modeling stages. Although the general level of disagreement and conflict was not high, helping participants to understand the required process was difficult and actually demanded more than the 'light touch' which Checkland advocates (1999). Again, these interventions involved issues of content as well as process. As Brown (1996) observes, moreover, worldviews are inaccessible to outsiders. Given this, participants may have placed too great a trust in the facilitator's capacity to understand the nuances and complexities of multiple worldviews. Furthermore, it has been demonstrated here that this limitation may be worsened where the facilitator's co-optation into the organisation and its processes and issues proceeds apace. Political and cultural issues, which may be essential to understanding particular worldviews, could be deliberately under-stated by participants and therefore remain unknown to the facilitator. Hengst et al (2007), in their discussion of Soft OR principles for collaborative simulation, contend

that in addition to knowledge of method, facilitators must be receptive to the changing dynamics of values and interests amongst participants.

The capacity of the facilitator to influence the effectiveness of the analysis is further compromised by the participants' apparent and continuing confusion concerning the role of the facilitator and the nature of this role. In both applications, the facilitator was certainly seen as a 'helper'. The roles of 'consultant' and, to a lesser extent, that of 'researcher', although less formally expressed, were nevertheless also implied by the context of these SSM applications. That is, both applications were presented essentially as consultancy exercises. Furthermore, the consultant in this case happened to be an academic researcher. These roles each imply something quite different to that of 'facilitator', and there was considerable ambiguity in negotiating them. Keltner (2006) has discussed the ambiguities and multiple functions surrounding the concept of facilitation in group problem-solving situations. His distinctions between process-facilitation and 'leader-trainer' facilitation are supported by the experiences reported here. Papamouchail et al (2007) also discuss participant's lack of understanding of the role of the facilitator in PSM and Soft OR applications.

This research has demonstrated that the methodology has, as a participative and systemic approach to problem-solving, great potential power to facilitate user-led change. This outcome depends, though, on the participants possessing a mutual and sophisticated understanding of the methodology. It also assumes their

capacity and willingness to engage in the process with complete candour, free from political and cultural constraints. In other words, the analysis must take place within a constructed arena that is distanced from everyday communicative conventions. The Author contends, based on this research, that these conditions are almost always unachievable in their fullest sense. One profound consequence of this is that the influence of the facilitator, rather than the methodology, becomes the main driver for the change to take place. However, this too is beset with difficulty. Too little guidance is given in SSM regarding the participative action required and the specific role of the facilitator. The impact of facilitation on process versus content interventions, explored by Miranda and Bostrum (1999), is relevant here. They concluded that facilitation is more successful when it is applied to process interventions. This mirrors, in turn, the assumptions of SSM. However, an investigation of the components of facilitation (for example, relationship development, participation, issue-based conflict, interpersonal conflict) may have real value for the further development of SSM. It is surely the case that impacts – whether on process or content – may vary depending on precisely which of the various social roles that comprise the facilitation function are actuated at any given moment.

Giddens's Structuration Theory (1976) may shed further light on the interplay between facilitation and the workings of a decision system. He contends that structure and agency should be seen as a mutually interacting duality. Hence, social structure both influences the actions of human agents and is reciprocally influenced, formed and reformed by human activity. This interpretation resonates

with Checkland's view of the flux and transformation of organisational life which underpins SSM's explicit cycle of learning. Giddens's exploration of the relationship between human agency and social structures provides more insight into the actions of participants in SSM applications. This current research suggests, however, that an expanded role for the facilitator, marking greater weight for agency, tilts the axis of change away from structure. SSM facilitators, rather than the methodology itself (its structure), may have a dominant impact on the change process in applications where there is a lesser degree of knowledge, understanding and commitment among participants. This is problematic and may impact substantially on the effectiveness of the methodology.

6.3 SSM and systemic change

The aim of this research has been to examine the effectiveness of SSM in the process of systemic change within NHS authorities and local partnerships. This section examines the problems associated with establishing causal links between the SSM applications and the organisational events and changes which were taking place during or subsequent to the analysis.

6.3.1 Conjoint change in the Problem Situation

The factor of conjoint change occurring in the problem situation, in relation to both applications, serves to make any accurate assessment of the impact of SSM

on change processes problematic. In Sandwell, several participants referred to the difficulty of attributing a marginal movement towards a greater partnership culture to the use of SSM. This was because other events were also happening at the same time, which could have contributed to this cultural shift. There were, of course, some participants that did not perceive that any change had taken place at all. In Sandwell, the implementation of the Primary Care Trusts (PCTs) became a major pre-occupation for the Health Authority during the application and most probably served to distract attention away from the IM&T strategy. The PCT development could also and at the same time have helped to engender a further sense of 'joined-up' working. This general trend was reinforced by the fusing of Birmingham and Sandwell Health Authorities, which was also taking place at the time. The conjoint effects of these structural changes may have exerted profoundly contradictory effects on the SSM experiment. Operational distractions may have resulted, but so too could challenge to the dominant silo mentality. Adding to the mix, the visit by some participants to Tampere, Finland, appeared to have had a major impact at the time, perhaps by providing tangible evidence that substantive partnership relationships and a coherent IM&T strategy could work. This may have contributed further to a shift towards partnership working.

The Partnership was being continuously promoted within Sandwell, and a stream of events and initiatives was concerned with this. There were also attempts to facilitate 'joined-up' working through other projects and initiatives within Sandwell MBC. These had in fact been taking place before the SSM application.

Discussion had been dominated by the theme of e-Governance, which incorporated both IT and the concept of structured interaction between agencies.

In Hereford, the application took place over two years, during which there had been some organisational restructuring. Staff had been appointed to posts concerned with Integrated Care Pathways, and there had been some downsizing in numbers of nursing staff. The appointment of a member of staff with specific responsibility for ICPs helped to continue the momentum of the SSM work, although the appointment itself was not attributable to the SSM application. The ICP co-ordinator was a latecomer to the application but was enthusiastic about SSM and used the pathway model for the development of the Stroke ICP. Without the specific intervention of this participant, it is doubtful that SSM would have had any further impact on the implementation of an ICP for Stroke other than the production of some well researched and debated models. Indeed, even these may well have been set aside in the absence of anyone taking a leading role internally for the work.

As noted, SSM applications do not take place in an organisational vacuum. In both applications, participants were attending meetings and workshops. They were also examining models, as well as carrying out their daily work. It was the latter, quite naturally, that was their primary concern. Yet, because the applications addressed areas of real concern for the participants, it is inevitable that these concerns would be interwoven with their everyday work. Further, if the application concerns a strategic entity which has already been accepted (such

as the Sandwell Partnership), there is likely to be an additional investment of time and money forthcoming from elsewhere in the organisation. These 'out-of-system' (Dahler-Larson, 2001) investments occlude any straightforward or linear causal relationship.

Attributing a direct causal link between the events and factors discussed above, and the SSM applications, is difficult. For example, the visit of Sandwell Partnership insiders to Finland would probably have taken place notwithstanding the SSM application, and those who visited drew lessons on the merits of joint working. At the same time, the SSM application appeared also to engender integrated working between projects. These were truly conjoint processes. Even when they were asked, participants were unable to gauge the extent to which SSM was responsible for increased partnership activity, because other factors were also contributing to this. However, SSM may have created an attitudinal shift among some participants, with the consequence that they demonstrated more commitment to the process.

Checkland refers to the flux and transformation of organisational life. Situations are continually changing, while the behaviour of people within those situations undoubtedly contributes to this fluidity. SSM applications are capable of changing or transforming the belief systems of participants, through the creation of insight, clarity and exposure to the logically expressed and interpretable worldviews of others. The results of the evaluation interviews in both applications demonstrated that use of the methodology had created insight, and

had enabled the problem situations to be perceived more clearly by structuring them. This supports the findings of Franco (2007) in his application of PSMs in multi-organisational settings. It is entirely possible that the organisational behaviour of some participants changed as a consequence of this, although this change may not have been a radical one. It may have manifested itself only in a psychological or attitudinal change, which was not immediately obvious within the everyday working life of the organisation.

Any evaluative framework for SSM must include an assessment of the strength of causal links between use of the methodology and change or improvement within the domain of the problem situation. This would enable conjoint change to be more thoroughly investigated in terms of its origins and motive.

6.3.2 Causal attribution of the change process wrought by SSM

The evaluation interviews from both applications revealed that some changes, or events, had occurred which participants believed were a direct consequence of SSM. In Sandwell, the use of SSM modeling enabled participants to agree on a direction for the strategy and produce a Business Case. This led directly to the job description and advertisement for post of Executive lead of the IM&T strategy. Some participants felt that it legitimised action. These were direct consequences which were attributable to SSM. Other participants believed that SSM had produced a confidence to act and (at least temporarily) removed a logjam. The use of SSM also enabled time to be allocated for reflection, to move

away from the constraints of bureaucracy and to investigate the problem situation more deeply. The application had also engaged more people and had made clear the distinction between the technical and strategic factors within the problem situation.

In Hereford, a pathway model was produced which was taken forward by the ICP co-ordinator for development as an ICP for Stroke. Participants did not believe that SSM added value to the actual content and detail of the pathway model. Some participants were persuaded that the same result could have been achieved much more quickly by a few members of key clinical staff working together as a team. Yet, the process of discourse and debate which was required by SSM was felt by many to have made the model more valid and legitimate. In this case, therefore, although a tangible outcome had been achieved (the pathway model), it was the process of using SSM which seemed to have created other benefits for the organisation. As with the Sandwell application, it enabled participants to surface assumptions and provided a reflective environment for debate. It broadened colleagues' knowledge of each other and gave people a chance to influence events in an environment where that did not normally happen.

Checkland discusses issues in the evaluation of Mode 2 use of SSM. The target of the evaluation (the evaluand) is, he argues, the learning process which it enables. He maintains that it is this which leads to agents taking action to improve or change (Checkland, 1990). Checkland also contends that managers

(as opposed to academics) will seek out pragmatic solutions based on their understanding of contextual factors. Although it is not made explicit, the implication is that this context-specific process of searching will be informed by the SSM learning cycle. This appears to have been demonstrated in the Sandwell application. The models in themselves did not result in a change of organisational activities. They were rather used to produce a Business Case and formed the basis for the job description for the IM&T Strategy Leader role. Similarly in Hereford, the pathway model was not immediately implemented, but it was taken forward by the ICP co-ordinator as a credible and validated ICP model. In these terms, the SSM experiment and the revision in beliefs that it may have induced lent legitimacy to the product.

Checkland's analysis emphasises the intangible consequences of the SSM process. It is, as already noted, a complex and time-consuming technique and many of its anticipated benefits flow directly from its careful and methodical approach. Given these characteristics, though, the questions of feasibility and appropriateness clearly present themselves. Checkland does not directly address the circumstances in which SSM – with its inherent complexity and thus, expense – may be justified. Research into the innate qualities of distinct classes of issues provides some insight on this matter, though. One would expect most problem situations to which SSM is applied to conform to what Scherpereel (2006) terms either second or third-order problems.

Second-order problems are marked by probabilistic uncertainty and innate

complexity. These problems are labeled with terms like 'complexity, stochastic, probabilistic, optimizing, efficient, frequent, irreversible, medium risk or medium term' (Scherpereel, 2006:126). Second-order problems are best addressed through inductive logic, utilising axioms, computer simulations, and economic models. Third-order problems and decisions tend to command substantive uncertainty, complexity and chance-like dynamics. The synonyms for these problems are 'complex, irrevocable, ambiguous, high-risk, important, big, long-term, subjective, or tacit' (2006:129). Abductive logic and heuristics are used to reach acceptable and effective results. Whilst it may be possible to define probable outcomes for most second-order problems, even this becomes more problematic in third-order situations, where there is a far greater degree of uncertainty. First-order problems are characterized by a high degree of certainty and simplicity and it is clearly unnecessary to apply soft approaches to their exploration and resolution.

In both applications, tangible outcomes may be defined and they are, indeed, remarkably similar. These tangible outcomes appear to belong to the domain of second-order problems. In Hereford, the aim was to produce an ICP for Stroke; in Sandwell, an IM&T strategy was required. These outcomes were fulfilled, albeit only partially, indirectly and with considerable conjoint change. This partial failure cannot unambiguously be attributed to SSM. The methodology had not been transferred into either organisation, while the momentum of work slowed when the facilitator was not on site. There were, in fact, strong prevailing cultural and political conditions within both organizations which prevented the

work from moving forward so that second-order outcomes could be achieved.

Both cases also contained elements of third-order problem management, which added complexity to the problem situation. In Hereford, a secondary aim was to promote inter-professional collaboration. In Sandwell, there was a recognition that an integrated IT strategy could not be achieved without a more robust commitment to substantive partnership working. This required, in turn, an attack on the prevailing silo culture. In terms of these third-order problems, again some progress could be demonstrated, but the same issues remain with regard to causal links to SSM. In Sandwell, the silo culture was under (mild) attack, but would this have occurred in spite of SSM? In Hereford, the application brought the members of the Stroke Care Team together for the first time. It also produced models which were agreed and validated through a process of accommodation, but this team was already working effectively in a close network. Under these circumstances, it is particularly difficult to measure the degree of improvement, if any. Such evidence is most likely to take the form of subjective (typically, perceptual) measurement. This would not, of course, preclude quantification (see for example, Veenhoven, 2002), but there is a continuing dispute over the accuracy and validity of such measures (Higgins, 2005). Finally, in the face of other organisational events taking place, a clear causal link to SSM would also be difficult to quantify, even if hard evidence could be produced.

6.4 Evaluation

As has been previously noted, there is little formalised or convincing evaluative evidence available concerning the effectiveness of SSM to influence change in concrete applications. Scherpereel's (2006) classification of the nature of problems certainly assists in segmenting the problems that the SSM experiments sought to address. The limits to conventional forms of evidence like performance measurement have also been noted in relation to the more complex of these problems, though. The fact that the evaluative process in SSM research is poorly specified may be related to this innate complexity. SSM has been developed through a process of action research, but the focus of this development has been, understandably, on the evolution of the methodology itself as a tool for systemic analysis. The evaluation of change and the degree to which that change has been brought about by an SSM application is a distinct issue, requiring a different focus. SSM applications are concerned with problem exploration in circumstances where the problem itself can only be ambiguously defined. If it could be categorically interpreted, the issue would be a first-order problem and the need for soft analysis would not exist. One implication of this is, though, that the outcomes, or deliverables, of the analysis are similarly ambiguous or open-ended. This presents an immediate problem in relation to evaluative approaches that seek singly to measure the achievement of outcomes: a goal achievement paradigm is not wholly suitable here. What is instead required is an evaluative approach that reflects key desiderata that the case studies indicate as necessary. These desiderata are:

- Sensitivity to stakeholder selection and management issues. This research has demonstrated that the process of selecting stakeholders (or participants) in an SSM analysis is crucially important. Yet, it is beset with difficulties which are inadequately addressed in the methodology. It is unclear who carries out the selection, while the process of selection is vulnerable to cultural and political bias. The ubiquity of power, in its many forms, in most organisations results in 'unequal power in the debate' among stakeholders. Stakeholders may leave the organisation during the analysis and new roles may be assigned which are relevant to the analysis.
- Conformance to the ideal Speech Situation. SSM assumes an equality of contribution to the processes of debate and negotiation, which approximates to the conditions of an Ideal Speech Situation (Habermas, 1974). This research has demonstrated that attaining this is heroic and the very possibility, perhaps naïve. Stakeholder groups will be characterized by different levels of literacy, knowledge and understanding. These differential endowments will influence the quality of the debate. Political and cultural agendas may intervene so that espoused stances characterise debate. Language, the currency of SSM, is interpretive and value-laden and full understanding can not be guaranteed. Freewheeling participation will be blocked wherever strong hierarchies of power exist.
- The capacities and modus operandi of the Facilitator. The primary role of the

SSM analyst is to facilitate use of the methodology. The cultural independence of the facilitator is central in delivering this role. As noted, there is a fundamental tension between maintaining cultural independence and facilitating use of the methodology. This requires that the facilitator develops a sophisticated understanding of the problem environment, so that worldviews can be interpreted. This research has shown that, particularly with regard to Mode 2 use, there is also ambiguity surrounding issues of process and content. It is this Author's contention that the interactive discourse between facilitator and participants which characterises this approach will in likelihood undermine the cultural independence of the facilitator. Thus, the social and cultural constructs of the facilitator may influence how the methodology is used, particularly if interventions regarding content are taking place. Another consequence of this is that it is the influence of the facilitator, rather than the methodology, which may actually enable change to take place. The problem here is that the approach requires facilitator objectivity and cultural immunity, but the social demands of the role militate against this.

It is these three factors that inform the concrete proposals for a more appropriate evaluative framework for SSM applications that follows. This analysis begins, though, with an appraisal of a rare instance in SSM theorizing in which evaluative themes have been explicitly considered: namely, the work of Connell (2001).

6.4.1 Connell's Participation Matrix

Connell's Participation Matrix (2001) is helpful to the evaluation process in that it identifies different categories of participants and acknowledges different levels of commitment and participation. This approach recognises that the SSM debating process is in reality highly segmented and marked by inequity. Thus does it acknowledge the often unattainable nature of the Ideal Speech Situation. The abstract form of the Participation Matrix is set out in Figure 7 below.

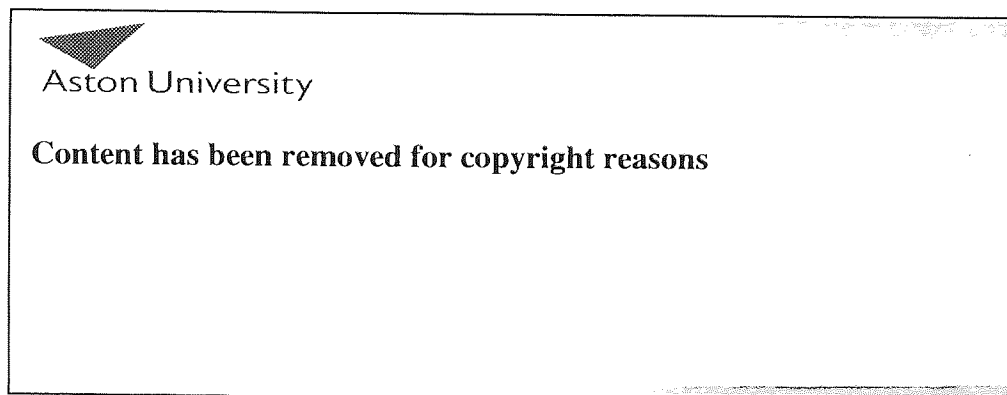


Figure 7: Connell's stakeholder participation matrix (2001)

Figure 8 aligns participant groups by apparent attitude within this Participation Matrix. This abstract matrix is now applied to the two case studies. The exercise is based on the Author's notes, plus the results of subsequent interviews with participants.

<i>Involvement of stakeholders in the modelling process</i>		
<i>Apparent commitment of users</i>	HIGH	LOW
	1 <i>Sandwell Insiders. Hereford Stroke Care Team (majority).</i>	3 <i>Both direct clients. Senior Execs, both appns.</i>
	2 <i>Hereford Clinical Staff.</i>	4 <i>Sandwell Outsiders. Hereford Non-clinical staff.</i>

Figure 8: Connell's Stakeholder Participation Matrix Applied to Case Studies

The process of identifying levels of stakeholder commitment is challenging here. The Sandwell application demonstrated that the enthusiasm and engagement of some insiders may have been motivated by political power, symbolic factors, personal advancement and empire building within the context of an (at points) rhetorical partnership. These participants may have been less concerned with the ultimate success of the application than their positional power, but would not make any of this explicit.

Indeed, this research has demonstrated that what needs to be included in any stakeholder analysis is an attempt to identify the underlying causes for different levels of stakeholder participation and commitment. The issue of measuring commitment is problematic, because each stakeholder's level of participation is

influenced by a complex layer of factors which may be difficult to discern. For example, a stakeholder's involvement may appear to be low, but this may not be because they have a correspondingly low level of commitment to the process. It could be rooted in insecurities arising from lack of understanding of the process, or an inability to express oneself in a socially required or persuasive manner. Finally, this research has indicated a deeper level of differentiation among stakeholders which extends beyond commitment. Essentially, this concerns the stakeholder's position in the power hierarchies.

If participants are to play a robust role in the evaluation of SSM applications, Connell's participant/stakeholder matrix would need to be extended to show both formal and informal roles and how these roles interact with the domain of the problem situation. These factors would require the incorporation of:

- Measurement relating to declared versus realised agent positions as they develop over time. Such an emphasis would properly address Scherpereel's (2006) legitimate concern with the dynamic of problem-solving. The gap between espoused and realised positions would approximately register the effects of hypocrisy (Huzzard and Östergren, 2002).
- Measurement that gauges the relation between conditions in the decision domain and the (organizational) context and the temporal interaction between them. This recognizes the essentially 'open-system' nature of many decision domains.

These considerations require a higher level of detail concerning the participants, their working relationships with each other and with the problem domain, together with a robust identification of their actual interest in the problem situation. To be truly effective, this process of identification must surface issues of power in all its forms (political, resource, status, and knowledge, for example). Inevitably, these areas will interact and there may not be strong distinctions between them. What is therefore required is a capacity to identify if and how individual participants influence events. The cultural stream of analysis which runs through Checkland's interpretation must be developed to make explicit this dimension in human affairs. This research has demonstrated that the influence of political power has the potential seriously to impede the success of SSM applications.

6.4.2 Connell's Success Matrix

Connell's (2001) research also provides a basis on which to pursue the evaluation of the outputs and outcomes of an SSM intervention: its degree of goals achievement. Connell argues that SSM applications may be evaluated according to the extent to which they enable the organisation to 'gain insight' or 'manage change' through the process of structuring and/or implementing success. There are subtle differences between the two measures of insight and change. For example, Managed Change posits that the approach was viewed as successful insofar as it helped to navigate a cultural dynamic. Resolution through

the SSM Process is, contrarily, a claim that the problem situation was successfully resolved, with SSM providing a problem-solving capability that would not otherwise exist. Connell's so-called Success Matrix provides a means of picturing these relationships and is set out in Figure 9 below.

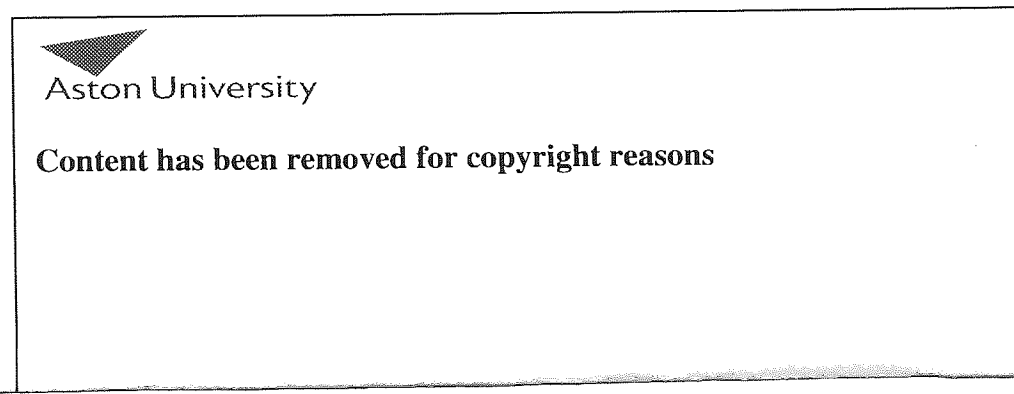


Figure 9: Connell's Success Matrix (2001)

This logic is again applied to the case studies. In both applications, SSM helped to create pertinent insights and clearer understanding of the problem situation. In neither application can it be claimed that there was a successful resolution of the problem situation through SSM use, since neither a complete ICP for stroke, nor an IM&T strategy was produced. However, the question of whether a managed change was achieved in terms of structuration is more ambiguous, and certainly complicated by the issue of conjoint change in both applications. The results are plotted in Connell's Success Matrix in Figure 10 below.

		SSM USE	
		Gaining insight	Managing change
SSM SUCCESS			
‘Structuring’ success (evaluation of success)		1 <i>Sandwell & Hereford both generate pertinent insights</i>	2 Managed change
‘Implementing success’ (evaluation of outcomes)		3 <i>Sandwell & Hereford both attain clearer understanding</i>	4 Resolution through SSM process

Figure 10: The Success Matrix and the Case Studies

Connell’s matrices certainly provide a potential way of characterizing the overall level of participation of segmented stakeholder groups. They also begin to categorise differing kinds of outcomes arising from a SSM process. The limits of these approaches have already been noted. They do not address changes in status (dynamics) or the strength of agents’ feelings, for example. Addressing these and the many other subtle effects of in-group socialization that were clearly at work in the cases requires one to move beyond Connell’s somewhat bald categories. Language is central to the construction of concepts in SSM and it might logically also form a basis for a more nuanced evaluative effort. Fourth Generation Evaluation uses human language as a key part of its evidence base and may hold potential in this regard. It is to this body of work that discussion now turns.

6.4.3 Fourth Generation Evaluation

Research literature in the area of evaluation indicates an orientation to the positivist paradigm; that is, a focus on measurable goals, defined objectives, and tangible programme components (O'Connor, 1995). There may also be a unilateral focus on economic objectives. This positivist stance has been widely criticised, as it does not address issues such as values, ideas, or the socio-political context of programmes and projects. Brandon (1998) argues that stakeholders should be involved in the evaluation process so that the evaluation itself becomes more relevant to issues which are important to them.

The 'Fourth Generation Evaluation' approach (4GE) of Guba and Lincoln (1989) demonstrates a Responsive Constructionist approach, where the boundaries of the evaluation are not pre-determined. These are negotiated with stakeholders through a paradigm of enquiry. The evaluation subject (that is, the programme or project) is the 'evaluand', and 4GE focuses on surfacing stakeholders' claims, concerns and issues (CCIs) regarding the evaluand, where claims are positive views, concerns are negative, and issues are areas of disagreement. Each stakeholder will have a set of CCIs. The notion of the 'hermeneutic dialectic circle' is the focus of 4GE, where each stakeholder is exposed to other stakeholders' CCIs, thus enabling them to consider different perspectives and constructions. The ideal outcome is a consensus construction of the evaluand, or at the very least a mutual understanding of different constructs.

The central principles and values of 4GE converge closely with those of SSM in the following areas:

Stakeholder Participation: Both 4GE and SSM are participative and collaborative, and the different perceptions of stakeholders are taken into account.

Equal Empowerment: Stakeholders are considered to be equal and empowered through their involvement, thus reducing the influence (in theory at least) of formal power structures.

Mutual Education: Stakeholders are exposed to other constructions (CCIs or Worldviews). Through these, their own understanding of the evaluand, or problem situation, becomes more robust, defensible, and sophisticated. Both approaches represent a learning process for stakeholders.

Ownership of Information: Stakeholders accept the information produced by this process as relevant and therefore more likely to be useful than information from exclusive, typically elite groups (for example, managers).

Emergent Constructions: In both 4GE and SSM views and constructs are generated during the process of evaluation/enquiry. Outcomes and deliverables are not defined at the outset, but emerge through a process of exploration and negotiation.

It must be acknowledged that 4GE and SSM do not set out to do the same thing. They evidently exhibit a high degree of convergence regarding the process used, though. There could therefore be said to be a strong symmetry in the ways that

they operate. Yet, the comparison must be regarded with caution, since they differ in other important respects. The two techniques have different foci and are applied in different functional fields. 4GE is concerned with evaluation and learning; SSM is concerned with problem exploration and learning. A more convincing synergy may be observed regarding the constructivist beliefs shared by both approaches. The convergence appears to be virtually total in this area. There are three areas in which this convergence appears most stark:

Relativist Ontology: In 4GE, realities are multiple and socially constructed, not governed by natural laws, causal or otherwise. Truth is the best informed and most sophisticated construction on which there is consensus between the agents. It is possible for multiple constructions to exist simultaneously. In SSM, worldviews are the individual perceptions of reality held by each participant about the problem situation. Reality is taken to be a social construct. Reflecting this, worldviews form the basis of all modeling within the methodology. The worldview of each participant in an SSM application may be different, but all are considered valid.

Subjectivist Epistemology: In 4GE, the inquirer and the focus of enquiry are linked so strongly that the findings of an investigation are literally the creation of the process of enquiry. The distinction between what is real and what is known about that reality becomes blurred. In SSM, the 'problem' which prompted the application is not taken as given at the outset; it is only acknowledged that a problem does exist, but that problem cannot be defined. The process of using the

methodology becomes a process of enquiry into the problem situation. SSM is therefore a learning cycle based on process outcomes (Greene, 1999). The activities of the 'real world' may in fact change in response to the process of enquiry.

Hermeneutic Methodology: In 4GE, the method is one of continuing reiteration, re-analysis and re-interpretation, concluding with the emergence of the joint construction of a case. All the stages of SSM are iterative and the approach is not generally used linearly or sequentially in the strictest sense. The learning which takes place during the application may cause participants' worldviews to change. The final stages of SSM are concerned with debate about those actions that must be taken to achieve organisational change or improvement. In Wilson's SSM, a process of consensus modeling takes place.

Both approaches reject the concept of a single worldview, or construct of a situation, thus accommodating different perceptions non-judgmentally. Such perceptions are regarded as subjective, value-laden, and context-bound. That is, they cannot be understood in isolation from the local context of the evaluand or problem situation. Each application of 4GE and SSM is therefore unique. Both approaches are intended to be egalitarian, eschewing the dominance of managers or organisational hierarchies of power and influence. Finally, both approaches represent a system of enquiry in which knowledge is generated through the process of carrying out the approach, principally through interaction with other individuals and exposure to their constructs or worldviews.

It is proposed here that the synergy and convergence between 4GE and SSM is so striking that an SSM Evaluation Framework, based on 4GE, would be a powerful tool with which to evaluate SSM applications in the context of change. Clearly, it would not be practicable simply to combine the two approaches. There are, as things stand, issues of sequencing in the parallel use of the two techniques. It is clear, moreover, that the substantial work required to carry out 4GE would divert the purpose of an SSM application away from its main focus (to bring about change or improvement in problem situations). Additionally, it may not always be necessary to evaluate SSM in this way. In the context, though, of action research, the impact of SSM on the change process requires more robust substantiation. The promise is also evident. A combined approach would allow factors which are weak in SSM, such as stakeholder analysis and facilitator issues, to be more rigorously addressed. This can only serve to strengthen the approach. A framework is presented below which aims to integrate evaluative capability into the SSM 7-Stage approach of Checkland. This framework is expressed as a series of hypotheses, with a degree of further explanation of these set out in tabular format. These tables seek to articulate the stages of SSM with corresponding evaluative activity.

H1: there is a need to enhance the entry of an SSM analyst into the problem domain.

H2: the problem definition needs to be bolstered to acknowledge cultural and organizational-political issues.

SSM Stages	Evaluative Stages
1. Enter situation considered problematic	1. Classify 'problem' as 2 nd /3 rd order
2. Express the problem situation (rich picture)	2. Identify initial process outcomes if possible
	3. Identify (with client) SSM participants to include Problem Owners, Problem Solvers
	4. Identify (with client) formal and informal roles of participants
	5. Begin Cultural Stream of Analysis (through information gathering for rich pictures) to identify cultural/political issues
	6. Facilitator conducts stakeholder analysis to identify primary and secondary stakeholders
	7. Facilitator refines range of SSM participants

Table 22: Evaluative framework for H1 and H2

H3: changes in both personnel and facilitator roles need to be captured over time.

H4: the nature of change processes need to be tracked and mapped against intended process outcomes.

H5: causal analyses need to specify the nature of change processes.

SSM Stages	Evaluative Stages
3. Formulate worldviews and root definitions of relevant systems of purposeful activity 4. Build conceptual models 5. Compare models with real world	1. Log facilitator activity (i.e., process versus content interventions) 2. Revise cultural stream of analysis 3. Facilitator revises stakeholder group if appropriate 4. Stakeholders identify organisational changes if any since Stage 1 and cross check to original problem classification. Classify change as process, structural, attitudinal. Cross-check to process outcomes. Update process outcomes if relevant. 5. Stakeholders identify causal links to SSM application. Classify as strong, weak, ambivalent 6. Stakeholders attribute causal links to facilitator intervention. Classify as strong, weak ambivalent 7. Identify conjoint change 8. Revise problem classification 9. Use Connell's Participation Matrix to assess stakeholder commitment. Compare with cultural analysis

Table 23: Evaluative Framework for H3,4,5.

H6: SSM as an agency for change will be enhanced by fuller stakeholder involvement.

SSM Stages	Evaluative Stages
6. Define changes required 7. Take action to improve the problem situation	1. Stakeholder assessment of change already achieved which has been wrought by SSM and influence of conjoint change if any 2. Classify above as process, structural, attitudinal 3. Stakeholder assessment of change wrought by facilitator; classify as process, structural, attitudinal 4. Stakeholder assessment of problem situation improved.

Table 24: Evaluative Framework for H6

In these tables, evaluative stages which require stakeholder involvement are presented in bold type. Any application of this combined approach would need to

be mindful of certain desiderata. It would be important, for example, for the evaluative stages to remain unobtrusive over the course of the application of SSM. This is because they are likely to impinge on stakeholders' views and affect the main application. As with 4GE, the framework assumes a leading role for stakeholder in the evaluation process. This is desirable in SSM, in order to retain its integrity as a user-oriented approach, as well as maintaining the cultural independence of the facilitator. The stages above, however, also enable the facilitator to achieve greater exposure to stakeholders and to gather cultural and political messages which will strengthen understanding of the political climate of the situation. The framework requires a more robust classification of stakeholders, which in turn allows the facilitator to gather more knowledge about their roles and the organisational actors who frame their actions. The proposed framework appears, also, to strengthen certain of the noted weaknesses in the received versions of SSM. It may provide a more structured approach to the cultural analysis of the host organisation. It also deepens the process of participant/stakeholder analysis, and provides evidence to link degrees of participation to stakeholder positions in terms of power, status, and knowledge. Views on causal links between organisational change, in all its forms, and SSM are also formally solicited, as are perspectives on the contribution of the facilitator.

As previously noted, not all SSM applications will require or benefit from greater evaluative scrutiny. The evidence collected through a strengthened evaluative function may, however, contribute substantially to a better

understanding of the main issues and criticisms highlighted by this research, namely: stakeholder analysis and its relationship to the impact of SSM; the ultimate feasibility of the Ideal Speech Situation upon which SSM depends; and the intertwined role of the facilitator and the methodology in propelling the process of change.

How, finally, does this proposed framework measure against the key desiderata for an evaluative approach, identified in Section 6.4. To recap, these desiderata are:

- Sensitivity to stakeholder selection and management issues. The framework clarifies the agents in the stakeholder analysis which takes place over SSM stages 1,2, and 3. Furthermore, the process is informed by an overt cultural analysis which enables political and cultural context to be understood by the facilitator – at least, to some degree. Formal and informal roles are identified and stakeholders are further classified as primary or secondary participants.
- Conformance to the Ideal Speech Situation. The symbiotic relationship between the cultural and stakeholder analyses and the early refinement of the latter, will enable the facilitator to translate participative action from political and ‘role’ perspectives in a more effective manner. While it may never be possible to create complete convergence with the conditions for an ISS within SSM, hierarchies of power in the debate environment will be more clearly understood.

- The capabilities and ways of working of the Facilitator. The evaluative stages enable the Facilitator to acquire a more robust understanding of the political and cultural context of the analysis. This is done through the mechanisms of: cultural analysis (explicitly carried out), stakeholder identification and stakeholder involvement in the assessment of change outcomes. The danger that the cultural neutrality of the Facilitator may be undermined is mitigated by positioning these activities in the Evaluative Stages, thereby creating a distance between the process of evaluation and the use of the methodology itself. Whilst Facilitators will almost certainly develop a ‘worldview’ of their own, greater political and cultural knowledge will enable this to be self-recognised as an ‘issue’, and explicitly excluded from the process of facilitation in both Modes 1 and 2.

6.5 Conclusions

The aim of this research is to examine the effectiveness of SSM to enable systemic change to take place within NHS Authorities and Trusts. A number of conclusions can be drawn from the work carried out here, which are presented as being concerned with the process of change itself and the difficulties of attributing this to SSM in politically complex environments, factors inherent in the problem domain which are concerned with power and influence, stakeholders and their involvement, the myth of the Ideal Speech Situation, and the role and influence of the SSM facilitator. The following chapter presents these conclusions in more detail.

CHAPTER 7

CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

This Chapter presents the conclusions drawn from the research carried out here, followed by recommendations for further research. The conclusions are set against the original objectives of the research and are compared, where appropriate, to the findings of the Literature Review (Chapter Two). The final section of this Chapter presents suggestions for further investigation. The specific objectives of the research are discussed in turn below.

7.2 To examine the evolution and development of SSM and to contribute to its further development

This research was carried out by applying Checkland's SSM in Mode 2, to two practice-based cases in a process of action research. It then assessed the effects of the SSM application in each case and its contribution to the process of change. These exercises have provided further confirmation of observations and findings that appear in the research literature concerning SSM. It is a major finding of this work that organisational politics appear to have a substantial impact on an SSM application, in many ways. This confirms Checkland's (1999) own recognition that elements of organisational culture are important to the process of

systems modeling, an acknowledgement that triggered the development of the stream of cultural analysis in the first place. However, this work demonstrates that carrying out the cultural analysis that Checkland then advocated is itself problematic. The way that the process of cultural analysis as it currently stands in the methodology is interpreted may not be 'fit for purpose', if its purpose is to surface deep cultural and political influences in the problem domain. Flood and Jackson (1991) have gone further with this criticism, by suggesting that SSM is an intrinsically weak modeling tool. In their view, it is essentially idealist and slights the influence of conflict and coercive power relationships in shaping stakeholders' worldviews. The process of change is in fact influenced by what they describe as social and economic circumstances. The stream of cultural analysis is clearly intended to surface such circumstances, but in this research it manifestly did not. The facilitator remained unaware of organisational factors such as redundancy throughout the Hereford application, for example.

The methodology provides inadequate guidance to the facilitator regarding the gathering and interpretation of cultural, political and social information. In any case, this research has demonstrated that such a process requires the facilitator to be very politically astute and to have highly developed interpersonal skills. The facilitator is in fact required to be consistently attentive to the socio-cultural nuances of the problem domain whilst at the same time following the logical steps of the methodology. This is a demanding requirement indeed. It has been shown here that participants can be less than candid about such influences on their worldviews. They may withhold (albeit not deliberately) such information

from the facilitator, as they express worldviews based on espoused views rather than theories-in-use (Argyris and Schon, 1978).

Further, Keen and Gerson (1977) assert that political problems and power struggles between different groups could inhibit progress towards change. More recently, Franco (2008) refers to the negative impact of power relationships in PSM engagements. The Sandwell case demonstrated the pervasive influence of position and resource power. There were also strong indications that the SSM application itself may have been regarded by some as a vehicle for furthering their own organisational positions. These factors clearly impeded the process of appointment to the post of strategic lead of the IM&T strategy. This would appear to confirm Flood and Jackson's (1991) contention, that SSM is unworkable in highly political or coercive contexts, because it is vulnerable to manipulation by powerful decision makers. It is suggested here that the principles of participative action could have important implications for the effectiveness of SSM.

This research has also demonstrated that political forces affect the process of stakeholder identification and facilitation. Stakeholder identification takes place in the very early stages of an application and it is consequently susceptible to client interference (however well meaning). At this stage, the facilitator may have insufficient organisational knowledge to influence the process effectively, while the political imperative may drive clients' selection of participants. The client in these early encounters was clearly playing a pivotal role. Brown (1996)

suggests that the selection of participants could be problematically influenced by the perceived purpose of the application and by the embodied values of the organisation as a whole. These factors strictly limit any cognitive or behavioural independence of the problem domain itself (which may be a sub-system of the whole). Thus, the prevailing organisational culture shapes participation, sometimes so subtly that even the most insightful of facilitators cannot perceive that influence.

The evaluative framework presented in Chapter 6 has been framed in part with these issues in view. A number of hypotheses were outlined there. Of these hypotheses, two (H1 and H2) seek directly to address the issues set out above. Those hypotheses were:

H1: There is a need to enhance the entry of an SSM analyst into the problem domain.

H2: The problem definition needs to be bolstered to acknowledge cultural and organisational-political issues.

These hypotheses are expressed through seven evaluative stages (Tables 22-24) that parallel the logic of Mode 2 SSM. They require the problem situation to be more closely classified as either a second- or third-order problem (in Scherpereel's [1996] terms). They also argue that the initial process outcomes should be identified and classified, if possible. It is contended here that this task,

coupled with the explicit involvement of the facilitator in stakeholder identification, plus the additional identification of formal and informal roles, raises the profile of the facilitator in the early stages of any application. Furthermore, the process of cultural analysis is explicitly linked with stakeholder role identification - indeed, both activities are likely to be integrative and symbiotic in nature. These strengthen the political and cultural knowledge of the facilitator. Importantly, both stakeholder identification and the cultural analysis continue until the modeling is complete. This increases the likelihood that hidden cultural and political influences are surfaced as events unfurl. Any churn in personnel is also more likely to be identified. Taken together, these propositions imply that the definition of stakeholders is not a once-and-for-all event.

7.3 To apply the Soft Systems Methodology to change processes within the NHS

In both case studies, the problem situation implied potential outcomes that were equally concerned with process and attitudinal change. The prevailing organisational culture in both cases was tenacious. In Sandwell, this tenacity affected a host of process outcomes and also appeared to impede progress towards breaking down the traditional silos that blocked integrated working approaches. In Hereford, a strong and cohesive Stroke Care team already existed, but the transfer of the SSM work into the organisational environment was halting and uneven. In both cases, participants claimed to gain deeper insights into the problem situation, due to SSM and the opportunities for problem exploration,

reflection and debate which its application created. Such opportunities were acknowledged to be scarce in both environments. These observations confirm Beeson and Davis' (2000) central emphasis on the human element in their reading of soft approaches to systems analysis. Though change is constitutive of organisational life, its direction and terminus is not pre-figured, automatic or teleological. Instead, it involves processes of negotiation, invention, perception and participation.

A significant concern in this research is the difficulty of attributing change outcomes unambiguously to SSM. A principal factor here is the issue of conjoint change. This and other issues concerning SSM and the wider change process are discussed in the following section.

7.4 To evaluate the potential role of SSM in this wider process of change

As has been previously stated, the difficulty of assessing the role of SSM in the change process lies in the very nature of its philosophical stance as a continual learning system. This position does not take Stage 7 (action to improve the situation) to be the ultimate end point, since human affairs will be subject to continual transformation. The case studies reflect these assumptions, since a definitive 'resolution' to the problem situation could not be discerned in either case. It was clear that both continued to experience transformations connected to their problem situations, even after the facilitator had exited. Yet, much of this activity may have resulted from conjoint change, rather than from SSM and its

continuing influence. This research has demonstrated the difficulty of attributing causal influences to the SSM application.

Checkland (1981) has asserted that SSM does not typically produce, and should not be associated with, non-radical or incremental change outcomes. SSM is, by implication, linked with radical change. Jackson (1982) challenges this view when he claims that SSM and other soft approaches over-estimate their ability to enable radical social and organisational change. Mingers (1984, 2004) also challenges SSM's non-positivistic and subjective stance and its feasibility in real social interventions, such as organisational change. Flood and Jackson (1991) have contended that SSM is in practice managerialist, serves dominant (manager) groups, while worldviews reflect existing social inequalities. The Sandwell case has demonstrated that Jackson's (1982) 'framework of domination', whereby powerful participants are seen to drive the process, is an observable phenomenon in highly politicised situations. Similarly, the lack of tangible process outcomes in both cases may confirm Flood and Jackson's (1991) contention: that the cultural feasibility of change is in fact bounded by conformance to the dominant culture and the dominant coalition (of power). Jackson (1982) also alludes to this in his claim that facilitators may be forced to abandon radical systems which do not fit the social and cultural realities of the situation. Radical change could not be said to have been achieved in either application. The express wish of both organisations to move towards seamless, integrated working could be interpreted as a radical departure from both Sandwell's silo culture and Hereford's influential hierarchy of expertise.

Ormerod (1996), Paloudi and Whitley (1997) and Lehaney and Paul (1996) all emphasise the significance of the selection and involvement of participants to the success of softer approaches to problem resolution. In a similar vein, Callo and Packham (1999) and Franco (2008) suggest that genuine debate is particularly difficult to achieve in situations with strong hierarchies of power, and which therefore feature deep inequalities of power. The objective of ensuring genuine debate is an essential aspect of Critical Systems Thinking, with which SSM has been linked (Flood and Jackson, 1991). This research has demonstrated that genuine debate is difficult to measure. It may not be possible in many cases to gauge whether a stakeholder is proffering an espoused view or a theory in use. Factors which may not be known to the facilitator could impact upon the candid and open participation of stakeholders. Mumford's (1982) claim that fear of job loss or redeployment could negatively impact upon any participative change process may also have been demonstrated in the Hereford case. The 'jockeying for position' which stakeholders claimed to have taken place in Sandwell may also have had a negative effect on participation and genuine debate. It cannot be claimed with confidence, though, that either case demonstrated a scenario in which participation was the clear result of resistance to change (Connell, 2001).

Additionally, factors connected to dispositions of power also affected genuine debate in this research. Jackson (1982) believes that Stages 5 and 6 of the 7-stage SSM, where discussion about change occurs, must conform to the 'communicative competence' of Habermas (1970, 1976), if substantive

accommodation of differing interests is to be achieved. There is a clear convergence between the factors required for Habermas' Ideal Speech Situation and the ideal conditions for debate within SSM. SSM is, however, adversely affected by a number of factors, all evident in the cases researched here. In both cases, the level of knowledge among stakeholders regarding SSM was variable. As has been previously stated, SSM requires a deep understanding among participants. The practical challenge posed by this may be underestimated in the literature. Gregory (1995) refers to different levels of literacy among participants and the allied fact that language is interpretive. Language, and in particular the precise meaning of verbs, is the currency of SSM. Jackson (1982) highlights unequal intellectual resources among participants. Franco (2008) goes further to suggest that the transferability of 'PSM craft skills' may be problematic. In both case studies, it was clear that some stakeholders grasped the methodology more quickly than others. In Sandwell, senior managers were considered by other stakeholders to have a superior grasp of SSM from the outset. The terminology of SSM was not generally grasped to a high level in either case, although some stakeholders adopted it more readily than others. This may not have been the result of greater understanding, however. In both cases, confident and politically powerful stakeholders may have inhibited candid participation by others, although this was not explicitly declared. In the Sandwell case, the participation of some stakeholders was affected by their commitment to the establishment of an IM&T strategy, which was not a priority for everyone.

Flood and Jackson (1991) identify what they claim as a fundamental weakness of

SSM in the context of Critical Systems Thinking. They contend that genuine participation is not actually possible, because obtaining the widest representation of stakeholders is problematic. This suggests that power is more or less affirmed from the outset, at the pre-modeling stage. Checkland and Scholes acknowledge that the freedom to define stakeholders (participants) is crucial in an holistic approach, but achieving access to the whole of an organisation is actually infeasible. The problem of stakeholder identification and accompanying issues posed for the facilitator, were addressed in Section 7.2 above.

These research findings have contributed to the formulation of hypotheses 1, 2, 4 and 5. The rationale for Hypotheses 1 and 2 were set out in Section 7.2.

H4: The nature of change processes needs to be tracked and mapped against intended process outcomes.

H5: Causal analyses need to specify the nature of the change processes.

These hypotheses were expressed through nine evaluative stages (see Tables 21, 22, and 23) and they principally concern, taken together, the tracking of change processes and enhanced causal analysis. There are a small number of key propositions that lie at the heart of these hypotheses. Alongside of the continual revision of stakeholder identity and cultural analysis, stakeholders identify changes in the problem domain and classify these changes as process, structural or attitudinal in nature. Most important, stakeholders are asked to identify the causal links that such changes may have with the SSM application, and the

strength of these links. Ambivalent change is also identified, and other changes which are taking place in the problem domain are explicitly noted. Process outcomes may be cross-referenced and revised if necessary. The likelihood that stakeholders' contributions to these tasks will be entirely candid remains difficult to anticipate. Yet, it is likely that a more robust process of cultural analysis would enhance the use of Connell's Participation Matrix.

7.5 To assess the role of the researcher as a facilitator within this process

This research has demonstrated the considerable complexity surrounding the role of the facilitator in SSM, which appears to be seriously underestimated in the relevant literature. SSM and the Problem Structuring Methods marked a shift of research emphasis from problem solving to problem structuring approaches. This brought with it a corresponding change in the role of the modeller from 'analyst' to 'facilitator'. These then-novel methods advocated a participative, user-centred approach which required a facilitator to help users navigate their way through the process. There was a further implication here: that (given the consensual, user-focussed nature of the methodology) SSM facilitators are also required to enable negotiation and accommodation of differing interests. Callo and Packham (1999) contend that the relationships between the facilitator and the participants are important in enabling this participation. The placement, by Checkland, of SSM in the action research paradigm also implies a strong facilitator-participation element. The term implies a juxtaposition between action (practice) and research (theory) which requires the researcher to become actively involved (McKay and

Marshall, 2001). This suggests, in turn, that the facilitator's contribution in SSM concerns both process and context. These considerations place considerable onus on what was deemed to be a culturally independent SSM facilitator. Both the political and social system analysis are value-laden endeavours. Flood and Romm (1996) contend that the methodology does not offer the facilitator sufficient guidance on how to manage these elements, thereby compromising facilitator neutrality. In particular, this research has demonstrated that the use of Mode 2 is highly interventionist and the facilitator may contribute to both content (of models) and process. It has been previously noted that, in Mode 2 use, the social and cultural constructs of the facilitator may influence how the methodology is used. Such an activist interpretation accords with Beeson and Davis' (2000) reading, which is that analysis in SSM is actually largely conducted by the facilitator alone. This research has demonstrated that this process/content tension exists for the facilitator and suggests that that in some applications (namely Mode 2), the facilitator may become more influential in the change process than the methodology itself.

O'Pala et al (2003) have noted the lack of specific guidelines for facilitators during stages 5 and 6 of the 7-stage SSM, where negotiation is required. Romm (1996) believes that there are problems concerning the assumption in SSM that change can be achieved through a process of accommodation and that issues of confrontation are ignored. Checkland recommends what he terms a 'light touch' in terms of facilitator steering, but there is scant treatment of the very real tensions likely to be experienced by the facilitator. As has been previously noted,

SSM assumes that acceptable accommodation can be reached and that the facilitator can direct debate to achieve this, including enabling participants to understand each others' worldviews. This may not be possible, for two reasons. First, accommodation may transmute into a poor compromise, as stakeholders seek to find a resolution to the problem situation that lies within the bounds of their individual satisficing criteria. Whilst this pragmatism may be acceptable in many circumstances, it does not sit comfortably within SSM, as an outcome of an approach which claims to bring about radical change. Second, the imperfect political and cultural knowledge of the facilitators may cause them to misinterpret worldviews. The latter has been demonstrated in this research.

Inconsistent terminology in the SSM literature suggests some confusion of understanding regarding the role of the facilitator. The terms 'analyst', 'researcher' and 'facilitator' are often used as synonyms – but there are major differences in meaning between them. This research confirms that such confusion can exist in practice. A dynamic alchemy of these roles in fact emerges, but this alchemy results in tensions and misunderstandings for stakeholders and facilitator alike. It is suggested here that SSM practitioners may find value in exploring theories of facilitation. These promise a more refined definition of possible roles, but the issue of exactly how these might change over the extended life-cycle of an SSM application remains under-researched.

These research findings have contributed to the formulation of hypothesis 3:

H3: Changes to both personnel and facilitator roles need to be captured over time.

During the research carried out here, facilitator activity was logged and observation data was collected, which included reflection by the facilitator on the role as it emerged during the SSM application. It is contended here that facilitator activity should be logged (that is, process versus content interventions over time) as a dedicated aspect of evaluative activities. Furthermore, stakeholders should be explicitly asked to assess whether any change in the problem domain can be attributed directly to facilitator (not methodological) intervention, and to classify this as strong, weak, or ambivalent in effect. An example of a strong causal link would be the inclusion of activities in facilitator-instigated modeling which were subsequently adopted in the real world. A weaker link may be judged if such interventions resulted in changed perceptions about the problem domain resulting in modifications to models wholly constructed by stakeholders. Ambivalent effects would suggest indirect causal links. An example of this might include the facilitator's skill in transferring knowledge about SSM, or participants' ability to understand world views.

7.6 To develop a critical framework through which the impact of SSM on change might be understood and assessed

The critical framework, based on a juxtaposition of 4GE and SSM, is presented in Chapter 8. This recognises the limits of positivistic evaluation as both SSM

and 4GE approaches are essentially phenomenological. It is claimed here that the inherent ambiguity involved in SSM evaluation is accommodated by utilising aspects of 4GE, which is based on Responsive Evaluation. When SSM is applied (particularly in its Mode 2 interpretation), the concern is with the learning process enabled by the methodology. It is this learning that will lead to agents taking 'purposeful action to improve the problem situation' (Checkland, 1981). This means, as noted, that it is the agents who ultimately address the ill-defined issue. The facilitator does not substitute for them. Therefore, evaluation must be carried out in the context of both problem and process, since both are of significance. The framework proposed here attempts to address this. Chapter 6 (Section 6.4) indicates three key desiderata, drawn from the research carried out here, which should be included in an evaluative approach. These are:

- Sensitivity to stakeholder selection and management issues
- Conformance to the Ideal Speech Situation
- The capacities and *modus operandi* of the Facilitator

These three factors have informed the evaluative framework presented in Chapter 6 and based on 4GE principles. In addition, the framework has been influenced by the three criteria for effective SSM evaluation identified by Connell (2001). These are:

- That the evaluation should explore the strengths of the approach itself.
- The features of the domain in which it was applied.

- The way in which it was used – the process efficacy.

In particular, Connell emphasises that SSM should be evaluated in terms of its contribution to both structuring the problem domain (providing clarification, for example) and in terms of the outcome of the approach.

O’Pala et al (2003) have tabled further evaluative questions which they deem to be fundamental to effective measurement of the outcomes of SSM. These questions include:

- What is the problem situation?
- Which actions have been taken in relation to this situation?
- What is the new situation?
- To what extent was improvement the result of action taken?

It should be noted that these questions all concern the problem domain itself, not the logic of the problem-solving processes used to alter that situation. The first stage of the evaluation framework proposed here involves classifying the problem situation more specifically as a second- or third-order problem, where the meaning and qualities of such problems have been quite precisely identified by logicians. The framework also prompts stakeholders to identify whether, in their judgment, any change outcomes are concerned with process, structure, or attitude. The last of these, for example, would identify whether the methodology had influenced that stakeholders’ perceptions or revised their beliefs about the

problem situation.

7.7 Further Investigations

The purpose of this research has been to assess the impact of SSM on the process of organisational change. The findings of the primary research carried out here have stimulated the design of a more appropriate evaluative framework for SSM than that to be found in the research to date in this field. This attempts to address some of the problems encountered in the measurement of the contribution of SSM to change processes. These problems include: a partial acknowledgement of the combined process – product nature of SSM; and the use of highly obtrusive positivistic approaches to a methodology that wholeheartedly embraces relativist ontologies.

Additionally, this research has confirmed the very strong influence of organisational politics on SSM applications and posits that the ability of SSM as designed to accommodate this influence is weak on a number of fronts. It is proposed here that these findings may form the basis for further investigations regarding the future development of SSM. They are:

- a. That the role and influence of the facilitator is ambiguous, particularly when Mode 2 use is pursued.
- b. That the analysis of intervention (where stakeholders/participants are

identified) lacks rigour and is susceptible to political and cultural bias.

- c. That the methodology does not assure that the Ideal Speech Situation is attained or maintained among stakeholders.

With reference to the above, it proposed that stakeholder analysis, and theories of participative action and facilitation, may have relevance for the future development of the methodology.

Further, it is proposed here that some of the hypotheses set out in Chapter 6 should not, indeed could not, be further researched by the facilitator-researcher acting alone. This limitation arises from the very nature of the evaluative object suggested by these hypotheses. The hypotheses to which this observation applies are:

H2 The problem definition needs to be bolstered to acknowledge cultural and organisational – political issues.

The process of ‘bolstering’ referred to here is an approach which is led by the facilitator. Therefore, the facilitator becomes the subject, not the agent, of evaluation. In effect, the facilitator is the evaluand. Self-assessment procedures are evidently likely to be of limited utility here.

H4 The nature of change processes needs to be tracked and mapped against

intended process outcomes.

H5 Causal analyses need to specify the nature of change processes.

Whilst the facilitator may be involved in the evaluative processes implied by both these hypotheses, other agents of evaluation would also be essential. The most crucial of these are the participants/stakeholders themselves. Additionally, consideration should be given to the involvement of neutral or distanced agents in the evaluation of SSM applications, those who have no active involvement in the SSM application itself. Action research has dominated the evolution of SSM – as well, obviously, as the current research - and this may have obstructed the development of an affective evaluation of the approach, with its emphasis on facilitator involvement. This research has shown that SSM facilitators may not be able to maintain the cultural independence required for objective evaluation to take place. This loss of independence is implicit in the variety of more or less interventionist roles required of operating in a politicised environment. Perversely, the conventionally defined facilitator may also remain ignorant of those political and cultural factors which are crucial to the process of evaluation. It is, finally, contended here that further research which considered the relationship between the evaluator and the evaluand in SSM applications would make a valuable and substantive contribution to the assessment and development of the methodology as an approach which enabled organizational change to take place in the problematic environments to which it is applied.

Yet, the overarching contentions remain: that SSM is an attractive method for addressing inchoate problems. Its functioning in practice needs to be strengthened by enhanced evaluation approaches. This process should respect the epistemological and ontological assumptions that lie at its heart. The partial synthesis of SSM and constructivist evaluation advocated here provides one option for achieving this. The testing of that proposal awaits the efforts of others.

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APPENDIX ONE

WRITTEN MATERIAL ABOUT SSM SENT TO SANDWELL

Background to SSM

SSM is one of the most well-known of a group of alternative information system methodologies which have been designed to take into account the human and social factors of organisations during systems design. Its development began at Lancaster University during the 1960's. Researchers there, including Peter Checkland, were working with the traditional systems engineering approach to systems analysis. This approach is fundamentally rationalist, assumes the minimum of risk and uncertainty, and focusses on optimal solutions. It is systematic in that it takes organisations to be well-defined and unambiguously structured, hence the activities and functions can be broken down and systematised separately. It is aligned with Taylor's view of organisation and the machine-age approach which regards the whole organisation as being equal to the sum of the parts. The research team at Lancaster discovered that this kind of approach is not suitable to all environments, particularly those experiencing some kind of organisational "problem" which could not easily be defined. Any information system based on a flawed environmental analysis would itself be flawed. SSM was therefore initially developed to provide a structured methodology which could be used to carry out organisational analysis as a precursor to more effective information systems design.

Over the thirty years of its development two approaches to SSM have been developed. Checkland's approach takes SSM to be, fundamentally, an organisational learning process which gives considerable significance to the sociology, politics, and culture of a situation during organisational analysis. The approach developed by Wilson is more specifically aimed at information systems development, although it too places a strong emphasis on socio-cultural analysis. Both approaches share modelling stages and techniques and take a systemic view of organisation/information analysis. A systemic view of organisation implies that the whole is greater than the sum of the parts ie the whole will exhibit emergent characteristics which are not present if its constituent components are regarded separately. A systemic view of information analysis comprises a modelling process which derives operational information requirements from strategic activity models.

Additionally, both approaches "legitimise" the open examination of organisational factors (such as culture) which are not normally explicitly acknowledged in conventional systems analysis. Not only does this increase the likelihood of system credibility (because the systems designed will be culturally acceptable) but this kind of "front end" analysis could itself be an agent of organisational change, including cultural change which is arguably the most difficult to achieve.

The process of using the methodology, which is highly participative and non-linear, can help to "unfreeze" traditional structures and hierarchies. Participants construct strategic activity models which may in fact challenge existing structures and cultures. As the analysis develops these models engender a strong sense of ownership and gain credibility as "the way things should be happening". Actual activities begin to change, so that the "real" world begins to mirror the "modelled" world.

The methodology is not designed to be applied to technical or clearly defined problems but has been developed for "fuzzy" problem situations such as those arising from issues of influence and responsibility, structural or cultural change and effective leadership. These concerns are often rooted within the informal structures of organisational life, hence the emphasis on human and social issues within SSM. Additionally, the notion of a generally accepted social reality is not taken as given in SSM, instead it is assumed *"that social reality*

in human groups is continuously socially created in never-ending social processes, and hence is not an absolute but will change through time" (Checkland and Holwell, 1998).

SSM is not positivistic. It is an approach based on interpretation and learning; as human beings we are free to interpret our world in any way we choose and by exploring these individual perceptions (or worldviews) we learn more about the contexts to which they apply and consequently are able to effect more meaningful organisational change. The cycle is never-ending, since participants will then have a "new" organisation to think about and interpret.

The notion of the worldview as a base for systems modelling is one of the most powerful in soft systems thinking, since it demonstrates the systemic top-down approach which is placed at the opposite end of the spectrum to the systematic, machine-age epistemology of hard systems thinking. A individual's worldview generally expresses their perception of the emergent characteristic of a situation, or that particular feature which represents the added value of the whole. In many situations it is likely that a variety of worldviews will be presented, although some if not most of them may be very similar. Declared worldviews are developed into more explicit descriptions of how the participant views the organisation, through the construction of root definitions. Root definitions essentially define the transformation process (the transformation of inputs into outputs) which articulate the purpose of the system and how the worldview can be achieved. This concept of transformation is embedded in all systems thinking but is particularly important here as it helps to establish systemic integrity and enables system boundaries to be drawn. A conceptual model is then constructed from each root definition. The model is a logical and systemic model of activities which would need to be carried out in order to bring the system described in the root definition into being. Therefore, by constructing a number of conceptual models based on participant's worldviews and debating these within the context of the situation, the methodology provides a structured logical approach to organisational learning and change. Furthermore, the models can be presented as a hierarchy of top-down activity models, beginning at the strategic level and ending at the most operational level of detail. The model's information requirements are derived by considering the information produced by each activity AND the information required to carry out each activity. Finally, the methodology enables a comparison to be made between these and any existing data or information systems already in use, as part of the process of system change and development.

APPENDIX TWO

SELECTION OF SANDWELL CATWOE'S AND CONCEPTUAL MODELS

MODEL 1

C = The Sandwell Partnership

A = Partnership Project Manager

T = Need to 'programme manage' the Partnership/Need met via a dedicated role

W = The over-arching concerns of the Partnership (ie activating a cohesive, strategic agenda which pulls together individual projects; reprioritisation of resources) require a dedicated champion at the level of programme management.

O = The Sandwell Partnership

E = None specified

MODEL 2

C = The general public of Sandwell Borough

A = The Sandwell Partnership

T = The need for Borough-wide 'joined-up' service/Need met through establishing a dedicated single agency to provide a co-ordinated approach to achieving the Partnership strategy

W = A 'joined-up' service can be provided by a single agency approach

O = The Sandwell Partnership

E = The 'partnership culture'

MODEL 3

C = The Sandwell Partnership

A = The Sandwell Partnership

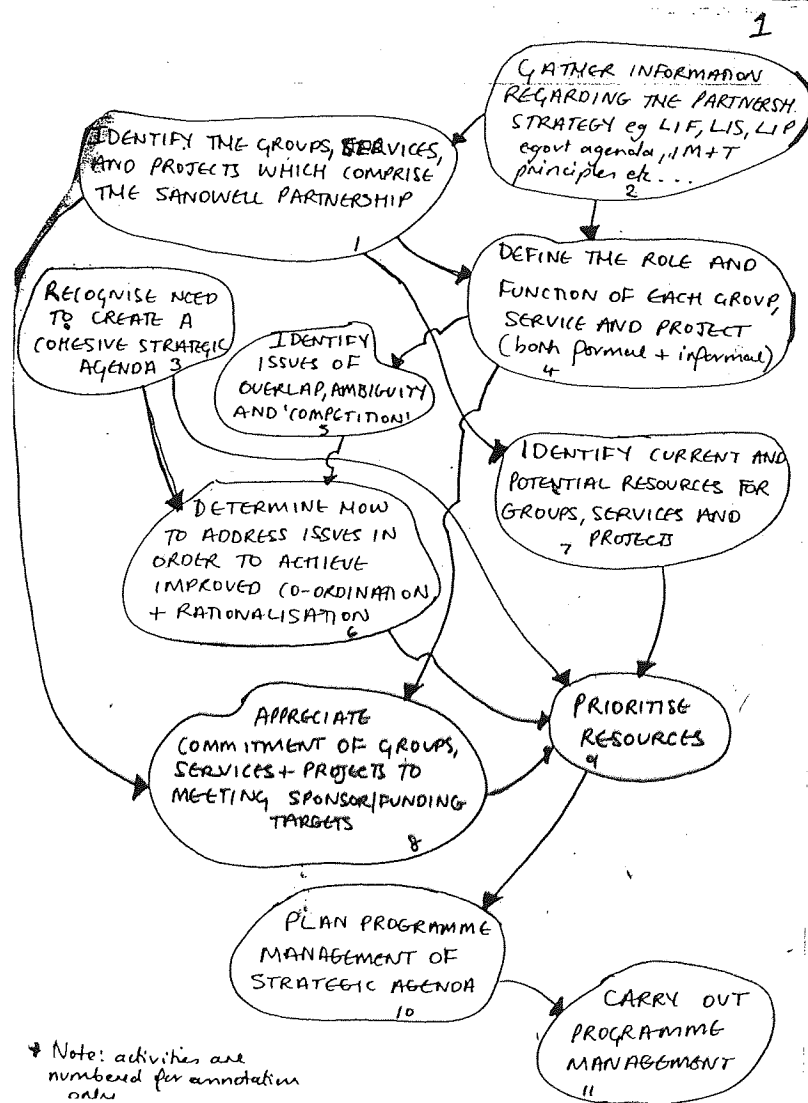
T = Need for affective knowledge management/Need met

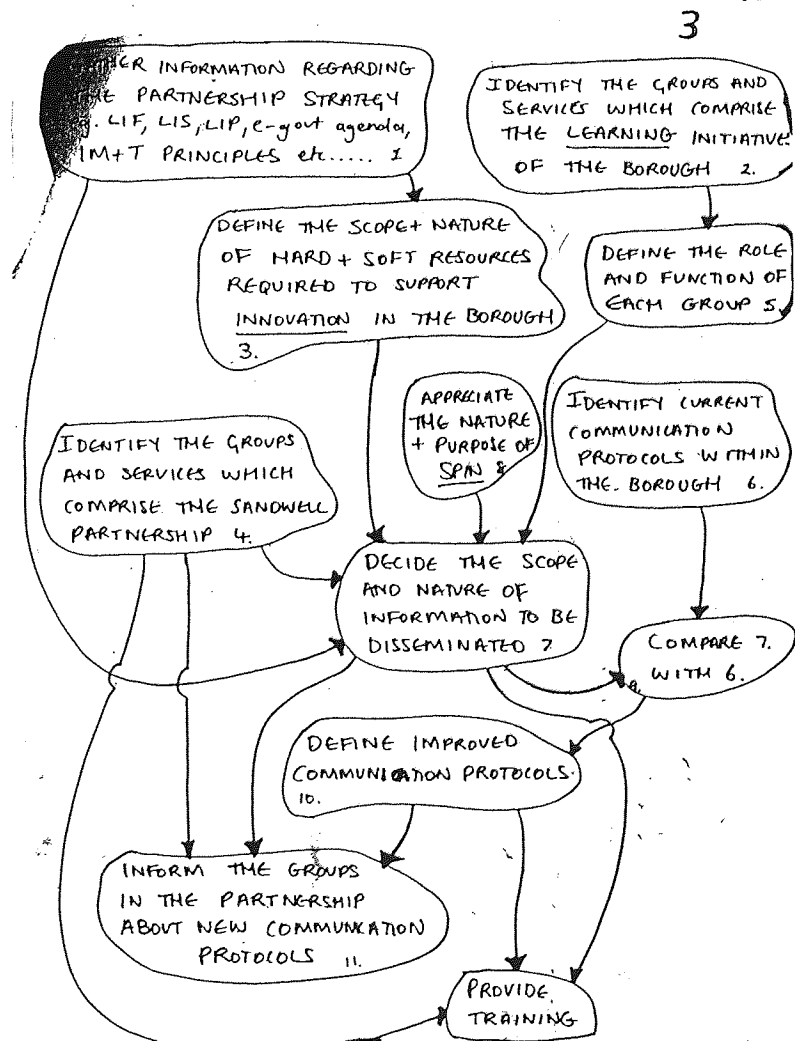
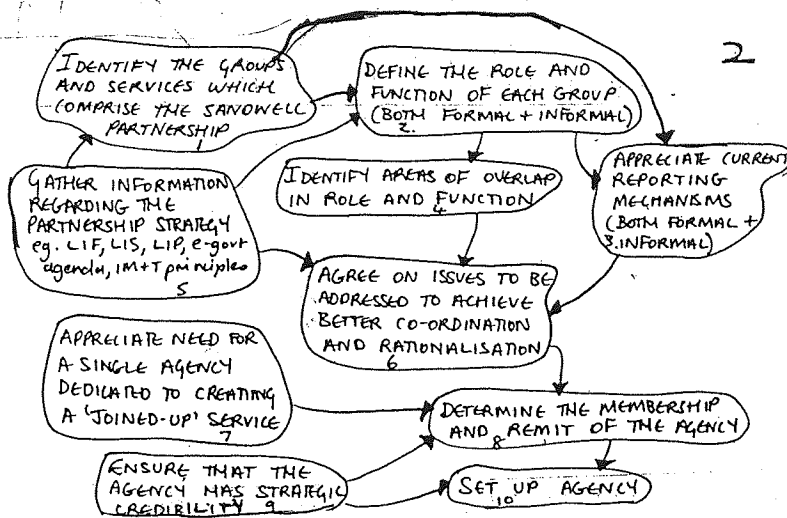
W = A clearer vision of the Sandwell Partnership will be enabled through an effective (ie relevant and timely) information and communication strategy which will support the

Partnership intelligence, public engagement, and learning and innovation strategies of the Borough.

O = The Sandwell Partnership

E = None specified





APPENDIX THREE

SELECTION OF HEREFORD CATWOE'S AND CONCEPTUAL MODELS

MODEL 1

C = Stroke patients

A = Stroke Care Team

T = Need to provide both individual, tailored care and equality of standards for all stroke patients/Need met through the effective operation of a stroke care team

W = Strokes require individualised care but we must also ensure equality of care for all patients.

O = Hereford Hospitals NHS Trusts

E = Available resources

MODEL 2

C = Stroke patients

A = Stroke Care Team

T = Need for equality of access to a specialist stroke care service/Need met through the operation of a multidisciplinary team

W = care for stroke patients should be consistent whatever their age and whenever they have the stroke.

O = Hereford Hospitals NHS Trust

E = None specified

MODEL 3

C = Stroke patients

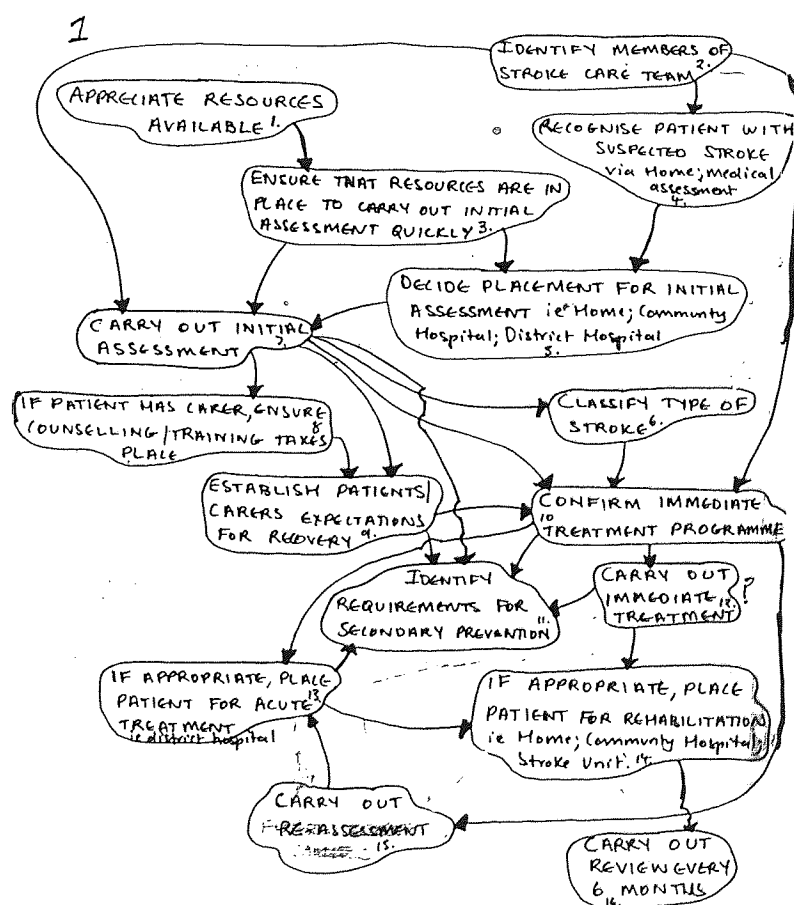
A = Carers, Stroke care team, support groups

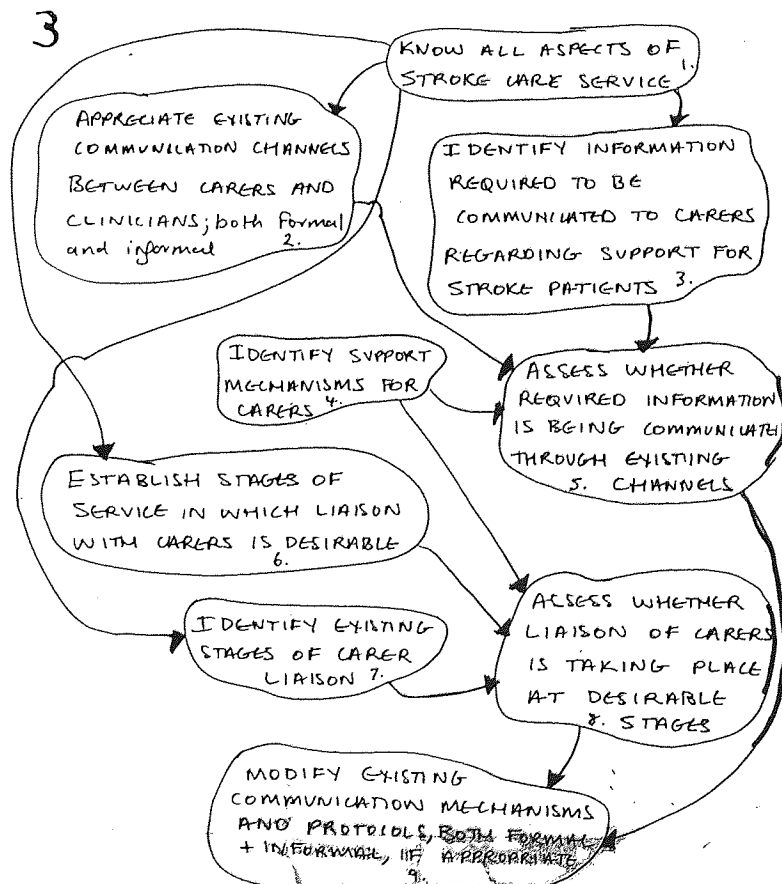
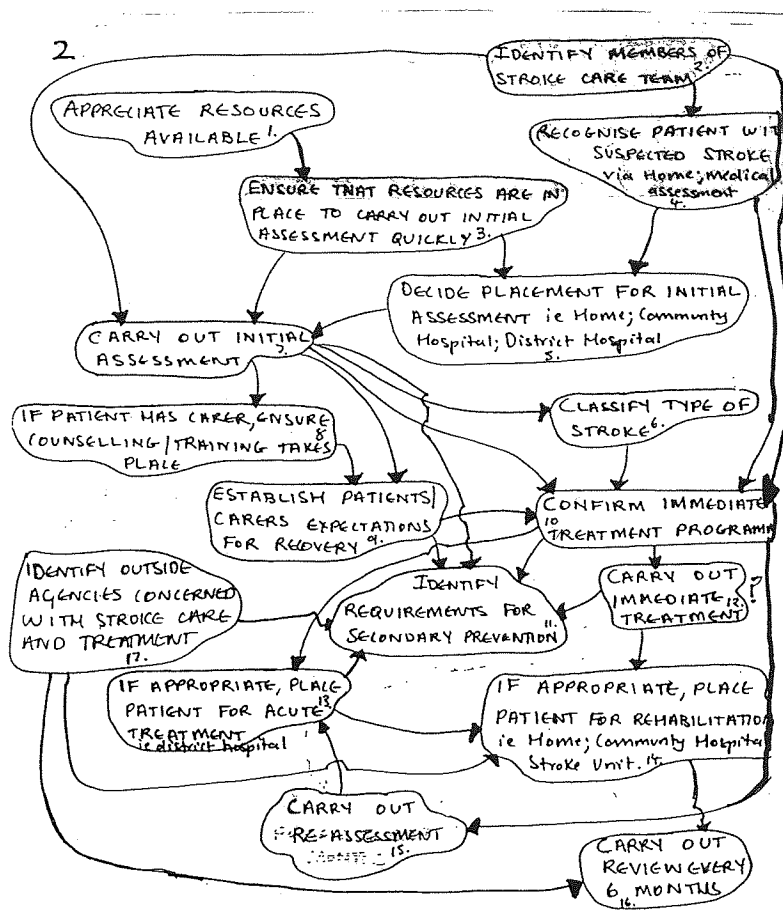
T = Need for carer and stroke care team liaison/ Need met through effective communication mechanisms.

W = Stroke carers need to be included at the ground level and in the delivery of the service

O = None recognised

E = None specified





APPENDIX FOUR – EXAMPLE OF HEREFORD PROCESS MAP

