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TOWARD A SYSTEMIC THEORY OF ORGANISATIONAL CHANGE

ROBERT KEITH ELLIS

Thesis Submitted for the Degree of Doctor of Philosophy

Faculty of Management
CITY UNIVERSITY BUSINESS SCHOOL
CITY UNIVERSITY
LONDON EC1V OHB
UNITED KINGDOM

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ABSTRACT

Change is the subject matter for this thesis which reports on a research programme that has investigated the issue of effective and sustainable organisational change.

Organisational change possesses an almost obsessive interest for many organisational and behavioural scholars. Nevertheless, it has been observed that a majority of organisational change initiatives fail, or fail to realise the promise intended by the managers who institute such programmes.

This research programme, and the associated thesis, has recognised that organisational change is both enigmatic and paradoxical as it is a 'constant' feature of organisational life. The research has been directed towards understanding the paradoxical and enigmatic nature of organisational change by developing a Systemic Theory of Organisational Change (STOC) that is, itself, grounded in Critical Systems Thinking (CST). This STOC will provide a sound theoretical underpinning as a necessary feature of organisational learning that, in turn, will create the sufficient conditions for effective and sustainable organisational change.

The research work has created an ontological and epistemological framework through which to understand the complex nature of organisational change. Additionally, the programme has attempted to explicitly incorporate the dynamic of time associated with change initiatives. Traditional approaches to managing organisational change have treated change in single event mode. This research has deliberately shown that change is a continuous process and must be dealt with as such if the output of a change programme is to be effective and sustainable.

The thesis has explored the phenomena of change in some depth. It has been shown that change is complex in terms of the 'order' of change. Indeed, it has been argued, and demonstrated during the research, that, as a phenomena it comprises first, second, and third order change. First order change is associated with internal system change; second order change is associated with radical total system change; and third order change is destructive in nature.

Having developed a systemic understanding of change, the thesis shows how this can be understood in terms of forms and paths of change using critical pluralist approaches. This led to the development of a Critical Pluralist Intervention Methodology (CPIM), grounded in the STOC, as meta-methodology designed to bring about first or second order change in organisational situations.

Both the STOC and the CPIM were developed and tested in action research mode in five interventions in complex organisational change situations over a period of several years. This thesis claims to make contribution to the subject fields of organisational analysis and systems thinking.

DECLARATION

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PREFACE

THE CALF PATH

To follow blindly where others have trodden, is not always appropriate. The need for a critically systemic approach to organisational change management is illustrated by this cautionary tale.

One day, through a primeval wood
A calf walked home as good calves should;
But made a trail all bent askew,
A crooked trail as all calves do,
Since then, three hundred years have fled,
And I infer the calf is dead!
But still he left behind his trail,
And thereby hangs my moral tale.

The trail was taken up next day
By a lone dog that passed that way;
And then a wise bell-weather sheep
Pursued the trail over vale and steep,
And drew the flock behind him too,
As good bell-weathers always do.
And from that day over hill and glade,
Through those old woods a path was made.

And many men wound in and out,
And dodged and turned and bent about,
And uttered words of righteous wrath
Because t'was such a crooked path;
But still they followed - oh do not laugh -
The first migrations of that calf!
And through this winding wood they stalked
Because he wobbled when he walked.

Now, this forest path became a lane
That bent and turned and turned again;
This crooked lane became a road
Where many a poor horse with his load
Toiled on beneath the burning sun
And traveled some three miles in one.
And thus, for a century and a half
They trod the footsteps of that calf.

The years passed on in swiftness fleet,
The road became a village street;
And soon, before men were aware
A city's crowded thoroughfare.
And soon the central street was this
Of a renowned metropolis;
And men, for two centuries and a half
Trod in the footsteps of that calf.

Each day a hundred thousand rout
Followed this zigzag calf about
And over a crooked journey went
The traffic of a continent.
A hundred thousand men were led
By one calf near three centuries dead.
They followed still his crooked way
And lost one hundred years a day!
For thus such reverence is lent
To well established precedent.

A moral lesson this I might teach
Were I ordained and called to preach;
For men are prone to go it blind
Along the Calf-Path of the mind.
And work away from sun to sun
To do what other men have done.
They follow in the beaten track,
And in and out and forth and back,
And still their devious course pursue,
To keep the path that others do;
They keep the path, a sacred groove
Along which all their lives they move.

Ah, how the wise old wood gods laugh,
Who first saw that primeval calf
Ah, many things this tale might teach -
But I am not ordained to preach.

Adapted from Sir Walter Foss 1895. Source unknown.

CHAPTER ONE

THE NEED FOR SYSTEMIC APPROACHES TO ORGANISATIONAL CHANGE

1.1 INTRODUCTION

A central concern for this thesis is that of the effective and sustainable management of the processes of organisational change. An associated and central thrust of this thesis is that, for change to be effective in an organisational setting, it must be sustainable. Furthermore, it will be argued that sustainability can only be achieved by using a systems based approach to change management that is itself grounded in appropriate and applicable theory.

Change is an endemic and constant feature of organisational management. That 'change is constant' reveals the enigmatic and paradoxical nature of organisational change. This research programme has been directed at understanding this paradox in an attempt to bring about a Systemic Theory of Organisational Change. This theoretical development is a necessary feature of sustainable change because, without a sound theoretical underpinning, appropriate organisational learning cannot be brought about as a sufficient condition for sustainable change. The argument shall be advanced that learning based solely on managerial pragmatism cannot create sustainable change; sound theory is the only real basis for the achievement of sustainable change through organisational learning. The thesis will show that sound theory, in the form of a Systemic Theory of Organisational Change (STOC), will provide the knowledge base for effective organisational change through the development of a Critical Pluralist Intervention Methodology (CPIM) used within the framework of reflective Critical Systems Thinking (CST). (Jackson, 1991; Flood and Jackson, 1991(a); Flood, 1995).

1.2 DISCUSSION

Organisations operate in the immediacy of the 'here and now' in a mode intended to effect stability and control. Organisational managers attempt to achieve this stability and control by maintaining critical operating parameters within limits which are conducive to organisational stability and thereby success. Measurement of this stability is effected through the use of critical success factors such as profit, return on investment, market penetration, technological diffusion, cash flow, product life cycles, customer satisfaction, etc. A successful organisation - in systems terms - may exhibit the emergent property of 'complacency'. This property, which is associated with success, can inhibit the change necessary to address the unknown future. Therefore, the drive for stability and success in an organisation can prevent the creation of conditions necessary for the successful management of change.

Notwithstanding the operational 'here and now', organisations exist for the future. The gap between the 'here and now' and the 'future', if success is to be achieved and then maintained, involves the effective management of that gap. This gap is the change situation that must be managed through individual and organisational learning such that the change can be sustained. This is essential if the complacency associated with success is to be minimised. Such minimalism is a critical success factor in the measurement of sustainable change.

The future is uncertain, whereas the present is familiar and it can be comfortable. Any move into the future necessitates the bridging of the gap between certainty and uncertainty; between security and insecurity. All of these factors are, more often than not, managed in a pragmatic and ad hoc manner. Pragmatism alone will fail to create the necessary and sufficient conditions to facilitate the learning associated with effective change, and it will be argued that pragmatism will fail to bridge the gap of change. It will also be argued that for the gap to be bridged through learning, a Systemic Theory of Organisational Change (STOC) is an essential feature that will help to create the necessary and sufficient conditions for the learning, associated with effective change, to occur.

This thesis will develop and test that Systemic Theory of Organisational Change (STOC) and then demonstrate the validity of that theory, by creating a Critical Pluralist Intervention Methodology (CPIM), through actual casework in the 'real world' of organisational change interventions.

The development and testing of the STOC and the CPIM will be grounded in the branch of systems science known as Critical Systems Thinking (CST) (Jackson, 1991; 2000) which will be explored in detail in Chapters Five, Six, and Seven.

Change within an organisational setting is frequently associated with problem formulation. This thesis will examine the actual nature of change as part of the development of the STOC and the CPIM. In this context, the cybernetics of change will form a part of the investigatory process. Recognition shall be given to the fact that:

> "...there are two types of change: one that occurs within a given system which itself remains unchanged, and one whose occurrence changes the system itself. The first type of change permits maintenance of an identifiable system and can be thought of as state maintaining or... *first order change*. The second type of change causes a ...change to an altogether different state. This kind of change...[can]...be referred to as *second order change*. Second order change is thus change of change." (Watzlawick, et al, 1974; 10-11) (Italics in the original).

This thesis will advance the argument that a major factor in the study and understanding of organisational change, which is associated with problem structuring and resolution, is that of second order change. However, first order change is also important in that identity-maintaining change, which is homeostatic in nature, needs to be included in the development of the STOC and will form an important part of this thesis. The STOC will assist in

"...clarify[ing] and utiliz[ing] those intriguing phenomena of change...and thus find...ways of intervening effectively in human problem situations." (Watzlawick, et al, 1974; xv).

1.3 THESIS STRUCTURE

This thesis shall be constructed through separate but closely linked chapters that will provide a coherent and systemic treatment of the argument and analysis associated with the theory and practice of organisational change.

There will be ten chapters, plus appropriate appendices, forming the body of this thesis as follows:

Chapter One will provide an intellectual and structural **Introduction** to the thesis. This chapter will establish the basis of the thesis; state the objectives which the thesis intends to achieve; provide an overview of the analytical and intellectual framework; discuss the research questions and hypothesis being examined by the research programme and outline the structure of the thesis.

Chapter Two will set out the **Methodological Approach** followed during the research programme that forms the basis of this thesis.

Chapter Three provides a comprehensive discussion of the **Nature of Organisational Change**. It is necessary to create a clear picture of the structure, nature and processes associated with complex first and second order organisational change as a precursor for the development of an **Epistemological and Ontological Framework for Organisational Change**. This is a necessary step, which will establish a grounding theoretical base for the development of a Systemic Theory of Organisational Change within the framework of Critical Systems Thinking in Chapter Six.

Chapter Four is intended to provide the first of two perspectives of systems thinking. This chapter will set out a **Perspective of Traditional Systems Thinking** as a basis from which the development of contemporary systems thinking can be considered in Chapter Five.

Chapter Five is the second perspective of systems thinking that will help to establish the theoretical basis for a systems based process of inquiry. This will be achieved through a detailed consideration of a **Perspective of Contemporary and Critical Systems Thinking**. This discussion will form an important aspect of this thesis in that a stated objective of the thesis is that of the development of a Systemic Theory of Organisational Change through which to create a framework for the effective management of change within contemporary organisations.

Chapter Six will form a central pillar of the thesis in terms of using Critical Systems Thinking as a basis for the development of a **Systemic Theory of Organisational Change**. Such a theory will not only make a significant contribution to knowledge but also establish the basis for effective change management through critical pluralism, paradigm diversity, complementarism, and organisational learning.

Chapter Seven will use the work carried out in Chapters Three, Four, Five and Six as the basis for the **Development of a Critical Pluralist Intervention Methodology for the Effective Management of Organisational Change**. This chapter will create the linkage between the theory and practice associated with the management of first and second order organisational change.

Chapters Eight and Nine are concerned with **Testing the Systemic Theory and the Critical Pluralist Methodology** outlined and developed in the earlier chapters. Several interventions carried out as part of the research programme in organisational change will be reported in the form of Case Studies. **Chapter Eight** will set out and discuss the first three of five Case Study interventions as the first iteration in the development and testing of both the STOC and the CPIM. **Chapter Nine** will then use two further Case Studies to show how the STOC and CPIM were finalised and tested. These interventions will be discussed in some depth such that important conclusions can be drawn out in Chapter Ten.

Chapter Ten adopts a reflective approach by carrying out an **Assessment and Critical Reflection** of the research programme and its outcomes. Critical reflection is an important and vital aspect of any rigorous research programme if a properly constructed contribution to knowledge is to be achieved. This chapter will also draw out the **Conclusions and Contribution to Knowledge** that have been made during the research programme and developed during the thesis. It is this chapter which will show that the hypothesis has been addressed, that the research questions have all been answered, and the objectives for the research programme have all been met. The chapter will also review the research methodology adopted and make suggestions for further work.

1.4 RESEARCH HYPOTHESIS AND QUESTIONS

This thesis will advance and test the Hypothesis that:

Effective and sustainable organisational change is predicated upon the need for a Systemic Theory of Organisational Change that is grounded in Critical Systems Thinking (CST). Such a basis is necessary for the development of a Systems Based Intervention Methodology (SBIM) designed to bring about the management of second order change based on organisational learning.

This Hypothesis will be tested through the following Research Questions:

RQ1. What is the nature of organisational change such that an epistemological and ontological framework for organisational change can be created?

RQ2. Can Critical Systems Thinking form a basis for the development of a Systemic Theory of Organisational Change?

RQ3. Using Critical Systems Thinking, and the epistemological and ontological framework for change, what are the necessary and sufficient conditions for the development of a Systemic Theory of Organisational Change?

RQ4. From the developed Systemic Theory of Organisational Change, what will be an appropriate Critical Pluralist Approach through which effective and sustainable organisational change can be brought about?

RQ5. From the interventions carried out in complex organisational change situations, is the developed Critical Pluralist Approach effective in terms of creating sustainable organisational change?

1.5 OBJECTIVES

The research programme, which has formed the basis of this thesis, was developed around the following objectives:

O1. To create an understanding of the complex nature of first and second order organisational change.

O2. To formulate the understanding of organisational change within the framework of Critical Systems Thinking (CST).

O3. To produce an epistemological and ontological framework for organisational change as a precursor to the creation of a Systemic Theory of Organisational Change (STOC).

O4. To develop a Critical Pluralist Intervention Methodology (CPIM) through which to bring about effective and sustainable organisational change.

O5. To carry out a rigorous programme of testing of the Systemic Theory of Organisational Change and the Critical Pluralist Intervention Methodology within actual situations of complex organisational change.

O6. To critically evaluate the Systemic Theory of Organisational Change and the Critical Pluralist Intervention Methodology in terms of the management of effective and sustainable organisational change.

CHAPTER TWO

METHODOLOGY: CONSIDERATION OF AND APPROACHES TO THE RESEARCH PROGRAMME

2.1 INTRODUCTION

Research of any form is a complex process which can be triggered from a variety of sources or interests. In Chapter One the hypothesis, research questions, and objectives that have guided the research programme were set out.

This research programme has its origins in the turbulent industrial environment of the late 1970's and early 1980's. Technological change was becoming increasingly significant and dominant in terms of the management of organisations. Technological change was so rapid that organisational strategy was difficult to formulate in a technology-based industry. Indeed, technology and its development determined the course of events in such organisations. Human needs and expectations and the social aspects of organisation were rarely considered to be important. Technological determinism was the dominant dimension and the human dimension was neglected creating what Jackson (1991) refers to as a single dimension approach to management.

Such was the dilemma facing managers operating at the 'sharp end' of organisations. The concern of the author of this thesis, at that time, was simply to understand the sources and likely consequences of technological change. Technological change came from a bewildering variety of sources and it emerged both as new products, which affected the design, and the operational processes through which these products were manufactured. Attempts to gain control of this problem were typically that of a systems engineering response via an algorithmic 'straight line' thinking procedure searching for cause and effect. There was an assumption that the problem had been defined and understood, when the reality was that it had neither been defined nor understood in context of the totality of the problem situation.

An organisation, in which the author was a senior manager, embarked on an ambitious programme of advanced new product design based on the assumption that the production of technologically advanced products would satisfy customers. What was not taken into account were the changes taking place in customer needs. The managers had been systematic in the pursuit of technological excellence in product design but had failed to recognise the environmental influences on the organisation in systemic terms.

Managerial action concentrated on the 'here and now' because that was where the problem seemed to be. The managers did not gather intelligence, nor did they think strategically and then develop policies through which understanding of the systemic nature of the change situation could be developed. The organisation was consuming its 'seedcorn' and there was a failure to recognise the consequences of such activity. In other words the emphasis on

pragmatism inhibited systemic thinking. Furthermore, actions were not based in appropriate grounding theory with the result that organisational learning did not occur.

In short the managers did not pursue a methodology through which they could understand and then manage the complex change situation which faced them as (ir)responsible managers. 'We' were systematic but 'we' were not systemic, 'we' did not consider our organisation as an open system related to its environment. That was the most fundamental mistake.

Reflecting on that experience during the ensuing years has led the author to the conclusion that it is necessary to develop a Systemic Theory of Organisational Change (STOC) as a basis for a practical intervention process that will assist organisational managers in their efforts to effectively manage complex change situations. It will be argued that such a framework, which will link theory and practice, will provide the necessary and sufficient conditions for the management of both first and second order change.

Given the hypothesis, research questions, and objectives that were set out in Chapter One, it is a fundamental requirement that the process of inquiry, or methodology, to be followed is appropriate in terms of designing that framework. This thesis will attempt to show how the theory/practice dialectic has unfolded. The research work, which has been undertaken in producing this thesis, has adopted a systemic methodological approach that will now be discussed and set out.

2.2 DISCUSSION

"Observing and trying to interpret what we observe is...[normal]...human activity....[It] is the foundation for our survival...however, we are often casual and semiconscious in both our observations and our interpretations, with the result that we make mistakes in both." (Babbie, 1995; 3).

Semi-conscious behaviour is clearly evident in the introductory remarks to this chapter. Managerial semi-consciousness is the result of:

- Lack of time;
- Inability to conceptualise a problem situation in terms of system changes;
- Failure to understand the organisation as a system;
- Non recognition of the interdependency between system components;
- Incomplete understanding of the complexity of the relationships between system members;
- Action based on partial information and understanding;
- Non reflective intervention(s) in poorly understood change situations;
- Fear of failure;
- Pragmatic action unsupported by appropriate theory causing learning failures.

Managerial inquiry is often carried out 'after the event' as a process of inquisition into the reasons for failure with the intention of allocating blame for the failure. Such a process of enquiry is wasteful of both time and talent and does little to stimulate learning. This process is a direct result of managerial semi-consciousness before the event.

> "Practically all people...exhibit a desire to predict their future...[often]...using *causal* and *probabilistic* reasoning. First, we ...recognise that future circumstances are somehow caused or conditioned by present ones....Second...[we]...also learn that such patterns of cause and effect are probabilistic in nature: The effects occur more often when the causes...[are present]...than when the causes are absent..." (Babbie, 1995; 18-19) (Italics in the original).

Managers operate in organisations in a 'here and now' mode trying to create control and order from, at best, 'organised chaos'. Managerial decisions and the resulting actions made in the 'here and now' will have a direct bearing on the future. If managers attempt to predict the future in a semi-conscious mode then that prediction will invariably fail. Even when using probabilistic patterns as assistance devices there will still be the probability of unforeseen consequences which means that the learning is less than effective.

> "In looking at...human inquiry, it is important to distinguish between prediction and understanding. Often we are able to predict without understanding....And often, even if we don't understand why, we are willing to act on the basis of a demonstrated predictive ability....without knowing, or caring, why it works out that way." (Babbie, 1995; 19).

Indeed, in terms of effective human inquiry, Checkland (1981) argues that 'systems' and 'systems approaches' must aspire to the status of a serious academic discipline as a means through which human beings, enveloped in organisational change, can manage the associated complexity. For 'systems thinking' to be accepted as useful practice supported by theory that has been developed in a scholarly manner, it must:

> "...show that within the subject...[as a discipline]...there is a cycle of interaction between the formulation of a theory relevant to serious problems or concerns, and the testing of that theory by the application of a methodology appropriate to the subject matter." (Checkland, 1981; 7)

This thesis recognises the views expressed by Checkland (1981) as valid. However, it will be argued that it is necessary to extend and develop such views within the context of methodologically sound systems based practice which is supported by a Systemic Theory of Organisational Change (STOC).

The conclusion which can be drawn from the preceding argument is that for managers to effectively manage complex organisational change then a sound methodological approach based in a grounding theoretical framework is essential. The methodological approach developed in this thesis will be conceptualised as a Critical Pluralist Intervention Methodology,

or process of inquiry, that will facilitate learning in terms of managing both first and second order change. It will be argued that this is essential if organisational change programmes are to be both effective and sustainable over time.

It is also clear that the development of sound theory, on which to base a systemic methodology for the effective management of organisational change, must itself be predicated on a sensible and well grounded research methodology.

Checkland (1981) has developed a conceptual model, set out in Figure 2.1, of such a process of inquiry that is useful as a starting point for the ensuing discussion related to the research methodology employed in this research programme.

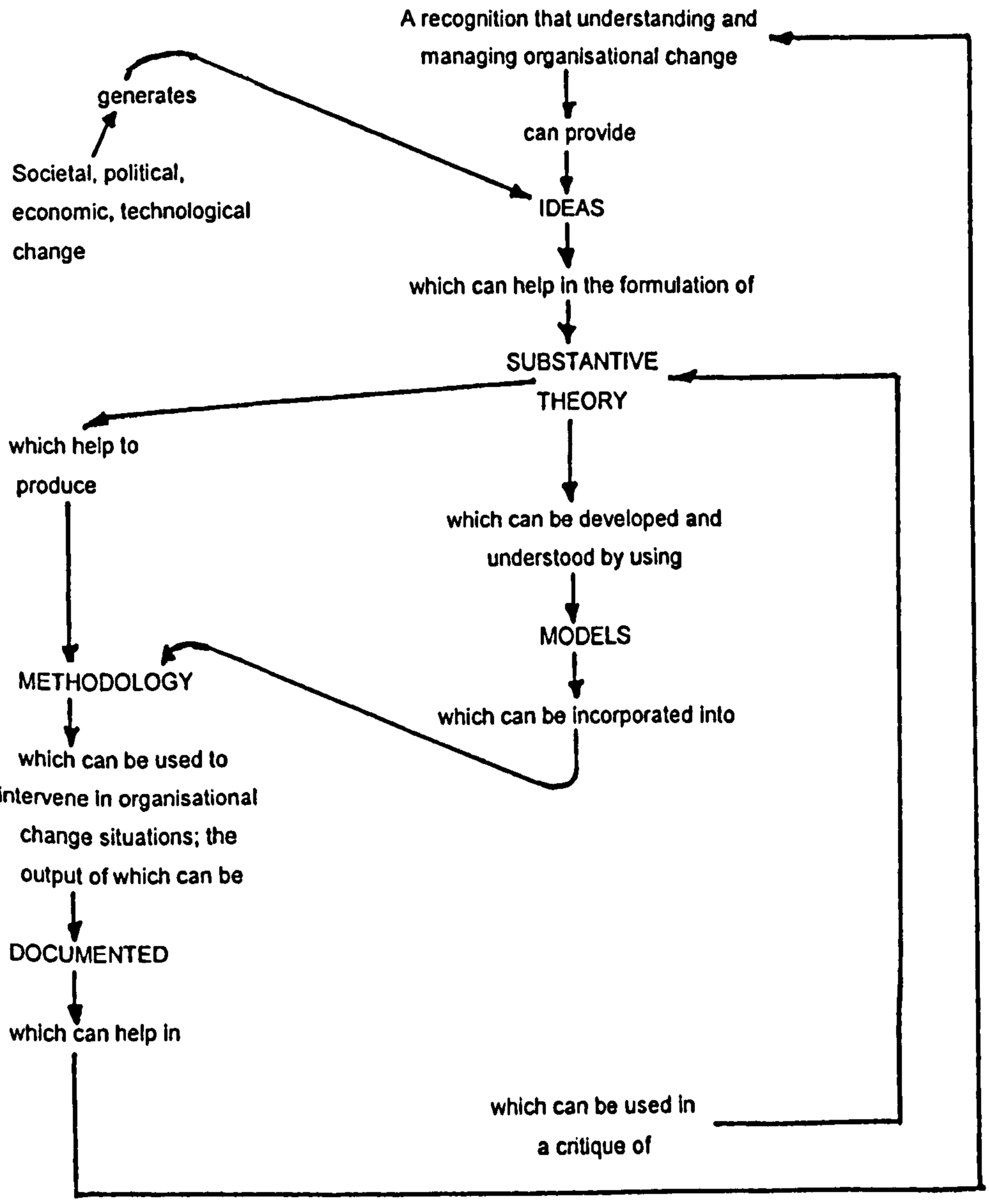


Figure 2.1: A Systemic Process of Inquiry

(Adapted from Checkland, 1981; 8; Fig 1)

2.3 RESEARCH METHODOLOGY

Research design is the process of establishing a framework within which a research programme can be structured and then managed. The research design occurs at the start of the programme but it also "...involves all the steps of the subsequent project." (Babbie, 1995; 100).

Research design "...is the overall configuration of a piece of research: what kind of evidence is gathered from where, and how such evidence is interpreted in order to provide good answers to...basic research question[s]." (Easterby-Smith et al, 1991; 21).

2.3.1 Philosophical Aspects of Research Design

Easterby-Smith et al (1991) argue that consideration of the philosophical issues associated with research design is important for three basic reasons:

- Research design(s) can be clarified;
- Recognition of which research designs will work can be achieved;
- Identification of research designs that may be outside the experience of the researcher can be realised.

It is also suggested that it is necessary for a researcher to understand and therefore gain:

> "...a balanced view of the philosophical positions underlying different research methods...[such that]...the implications...[of]...a number of fundamental choices in research design...[and]...the way different research contexts and disciplinary structures may affect research methods." (Easterby-Smith et al, 1991; 22).

Easterby-Smith et al (1991) go on to discuss two basic philosophical research traditions which form the basis of debate concerning social science research. These two basic traditions are:

- Positivism;
- Phenomenology.

Each of these research traditions have their own underlying epistemological, ontological and methodological assumptions, and contain specific views associated with the nature of human behaviour. (Burrell and Morgan, 1979). It is useful to briefly review each of these traditions as a precursor to outlining the methodological approach taken in this research project.

2.3.1.1 Positivism

A fundamental concept associated with positivism "...is that the social world exists externally, and that its key properties should be measured through objective methods, rather than being inferred subjectively through sensation, reflection or intuition." (Easterby-Smith et al, 1991; 22).

"August Comte (1853)...said: 'All good intellects have repeated...that there can be no real knowledge but that which is based on observed facts.'" (Easterby-Smith et al, 1991; 22).

In epistemological terms positivism:

> "...seek[s] to explain and predict what happens in the social world by searching for regularities and causal relationships between its constituent elements...[and is]...based upon the traditional approaches which dominate the natural sciences." (Burrell and Morgan, 1979; 5).

Positivism adopts an ontologically realist perspective in that "...the social world...[is seen to exist]...independently of an individual's appreciation of it." (Burrell and Morgan, 1979; 4).

In terms of research methodology, positivism utilises a "...nomothetic approach...which lays emphasis on the importance of basing research upon systematic protocol and technique...epitomised in the...methods employed in the natural sciences." (Burrell and Morgan, 1979; 6).

The 'model of man' associated with positivist social science is that of determinism "...which regards man and his activities as being completely determined by the situation or 'environment' in which he is located." (Burrell and Morgan, 1979; 6).

2.3.1.2 Phenomenology

Phenomenology starts from the premise:

> "...that reality is socially constructed rather than objectively determined. Hence the task of the social scientist should not be to gather facts and measure how often certain patterns occur, but to appreciate the different constructions and meanings that people place upon their experience." (Easterby-Smith et al, 1991; 24).

Epistemologically, the phenomenologists are "...firmly set against the...search for laws or underlying regularities in the world of social affairs....the social world...can only be understood from the point of view of the individuals who are directly involved..." (Burrell and Morgan, 1979; 5).

The phenomenological position of nominalism provides an ontological perspective grounded in an "...assumption that the social world external to individual cognition is made up of more than names, concepts and labels which are used to structure reality." (Burrell and Morgan, 1979; 4).

Phenomenologists argue:

"...that one can only understand the social world by obtaining first hand knowledge of the subject under investigation." (Burrell and Morgan, 1979; 6). Therefore an ideographic approach "...which one generates by 'getting inside' situations...which stresses the importance of letting one's subject unfold its nature and characteristics during the process of investigation." (Burrell and Morgan, 1979; 6).

The 'model of man' adopted by the phenomenological approach to social science is that of a "...voluntarist view that man is completely autonomous and free willed." (Burrell and Morgan, 1979; 6).

2.3.1.3 Comparison of Features

The outlines presented above contain the fundamental features of positivism on the one hand and phenomenology on the other. It must be stressed that these are absolutist positions adopted by social scientists who work within these paradigms. These positions, or beliefs, are, on the face of it, incompatible particularly when considering the design of a research programme and the methodological approach to be used in that programme. However, it is argued that it is possible to approach managerial research using a research design that bridges the gap between the two polarised positions through the use of the complementarist principles which are embodied in Critical Systems Thinking (CST). (Jackson, 1991; Ellis, 1995(a)).

It is useful, and necessary, to provide a summary of the two polarised positions as a basis from which the argument can be advanced that it is indeed possible to adopt a complementarist and critical approach to research into complex management issues.

Figure 2.2 provides such a summary of the fundamental tenets that can influence a researcher in terms of the preferred methods for carrying out research under either the positivist or the phenomenological paradigms.

Aspects	Positivist Paradigm	Phenomenological Paradigm
At the philosophical level the basic beliefs are:	The World is external and objective. Observer is independent. Science is value free.	The World is socially constructed and subjective. Observer is part of what is observed. Science is driven by human interest.
At the social level the researcher should:	Focus on Facts. Look for causality and fundamental laws. Reduce phenomena to simplest elements. Formulate hypotheses and then test them.	Focus on meanings. Try to understand what is happening. Look at the totality of each situation. Develop ideas through induction from data.
At the technical level the preferred methods include:	Operationalising concepts so that they can be measured. Taking large samples.	Using multiple methods to establish different views of phenomena. Small samples investigated in depth or over time.

Figure 2.2: Key Features of Positivist and Phenomenological Paradigms.

(Adapted from Easterby-Smith et al, 1991; 27; Figure 3.2)

2.3.2 Issues and Choices in Research Design

The design of a research programme is the activity associated with establishing a framework within which the programme can be organised and then managed.

Research activities, which are likely to be undertaken during a research programme, will include:

- Establishment of research hypotheses;
- Derivation of research questions from the hypotheses;
- Setting of objectives for the research;
- Collection of primary and secondary data;
- Creation of information from data interpretation;
- Devising theory and models;
- Designing test methods for the hypotheses, theories and models;
- Drawing conclusions and making recommendations;
- Critical reflection concerning totality of the programme.

A general outline of the activities associated with a research programme is shown in Figure 2.3 below. These activities are those which are likely to be found in social science and action research programmes irrespective of whether the positivist or phenomenological paradigms are predominant.

Clearly there are issues and choices associated with the way in which the research programme is organised. These choices are also "...allied quite closely to the different philosophical positions, and an awareness of this can at least ensure that the different elements of a research design are consistent with each other." (Easterby-Smith et al, 1991; 33).

Easterby-Smith et al (1991) argue that there are five significant choices facing a researcher in the design of a research programme. These are:

- Involvement of the researcher;
- Sampling;
- Theory and data;
- Experimental designs and fieldwork;
- Verification or falsification of research hypotheses.

These choices and their implications are now briefly reviewed.

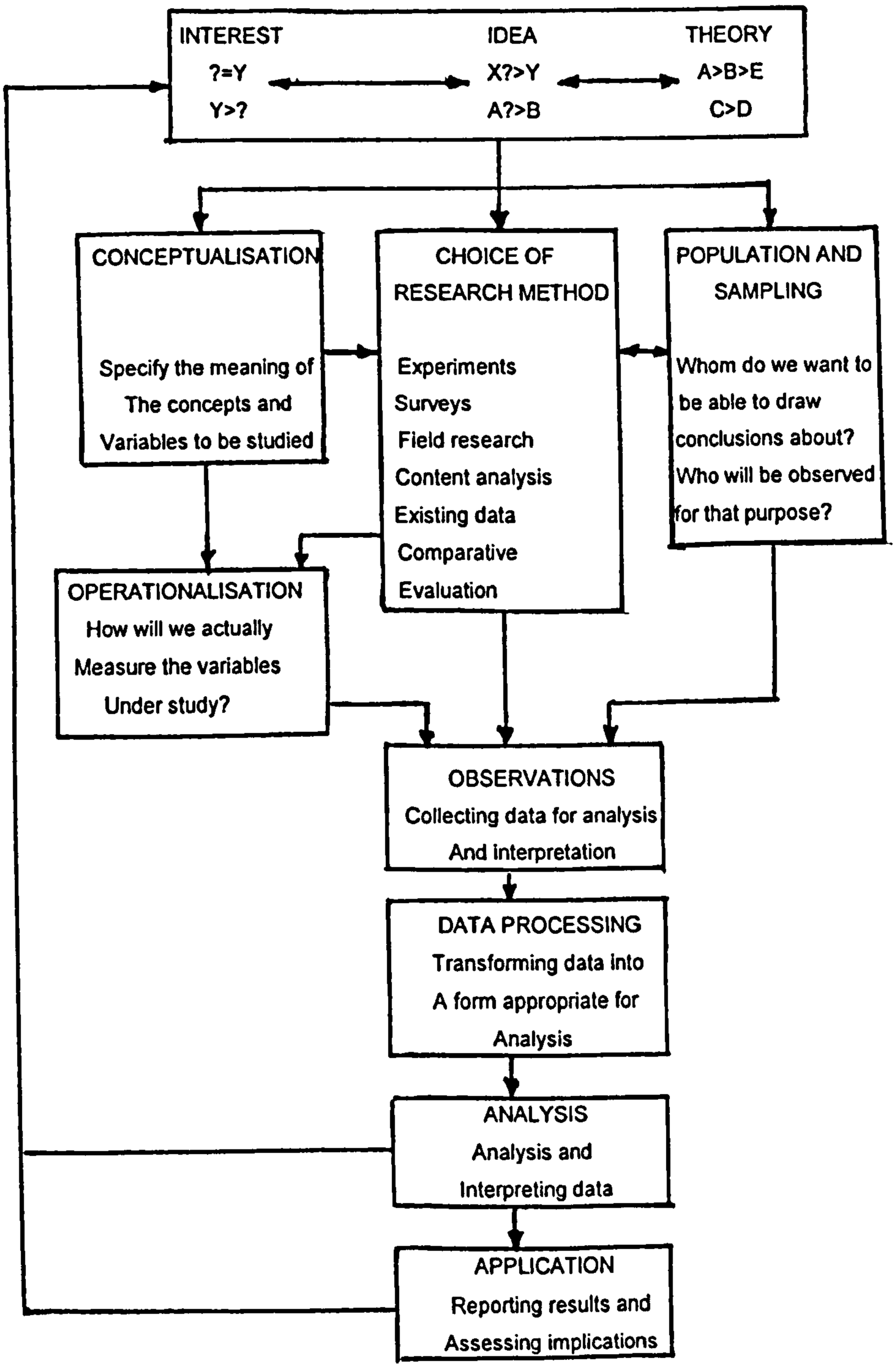


Figure 2.3: The Research Process

(Adapted from Babbie, 1995; 101; Figure 4.2)

2.3.2.1 Researcher Involvement

According to Easterby-Smith et al (1991) the choice is whether the researcher should operate at a distance, or become actively involved in the research project. The positivist paradigm advocates that the researcher should "...remain independent from the phenomena being observed." (Easterby-Smith et al, 1991; 33). It is argued that such an approach will prevent the act of observing from distorting the results and thereby maintain the phenomena unaffected by the values of the researcher.

In this particular research programme this approach was neither practical nor desirable. This is because the programme is a social science project investigating organisational change. Therefore, as the phenomenon of second order organisational change is about the nature of change itself it was considered important to adopt a phenomenological posture with regard to the research programme. "This is the tradition of *action research*...[which] assumes that...social phenomena are continually changing...and the researcher...[is]...seen as part of this change process itself." (Easterby-Smith et al, 1991; 33) (Italics in the original).

2.3.2.2 Sampling

The choice involved in sampling is associated with sampling across large numbers of organisations or focusing on a small number of situations over a longer period of time. "This is essentially a choice between *cross-sectional* and *longitudinal design*." (Easterby-Smith et al, 1991; 34). (Italics in the original).

In this research programme the longitudinal approach of focusing on a small number of organisations over a period of some four years was adopted. This has the advantage of the "...research...[focusing] on change processes within the broader social, economic and political context surrounding each organisation...[permitting]...time series data over periods of time significantly longer than the immediate focus." (Easterby-Smith et al, 1991; 35). This was thought to be particularly important in the development of a Systemic Theory of Organisational Change because of the second order change implications involved with the project. An important "...practical advantage...is that it can produce significant results from a very small number of cases and this can reduce the problems of *gaining access if the research is to be carried out in organisations*." (Easterby-Smith et al, 1991; 35) (Italics added for emphasis).

2.3.2.3 Theory and Data

Here there is an important question associated with "...which should come first: the theory or the data." (Easterby-Smith et al, 1991; 35).

Such a choice is also concerned with the paradigmatic differences between positivism on the one hand or phenomenologically related with respect to "...how the researcher should go about his or her work." (Easterby-Smith et al, 1991; 35).

According to Easterby-Smith et al (1991), within the phenomenological paradigm there exists the approach of 'grounded theory'. This approach indicates that a "...key task of the researcher ...[is]...to develop theory through 'comparative method'." (Easterby-Smith et al, 1991; 35). The approach of grounded theory involving comparative method requires a research programme that is designed to ensure that the "...same event or process...[is investigated]...in different settings or situations." (Easterby-Smith et al, 1991; 35).

For example, a researcher could be interested in investigating a particular process or phenomenon. Using comparative method, a process or phenomenon would be subjected to investigation involving individual "...managers...departments...or organisations." (Easterby-Smith, 1991; 35).

As a result of such an investigation it may be found that there is a focus on retrospective review or control. Alternatively the investigation might reveal a future centred or goal oriented focus. Such a focus can be interpreted as either "...'judgmental' or 'developmental'...[approaches]...and the distinction would represent a *substantive theory* about ...[the phenomenon or process under investigation]..." (Easterby-Smith et al, 1999; 36) (Italics in the original).

Taking this argument further, Easterby-Smith et al (1991) go on to assert that such an investigation might also reveal that neither the retrospective nor future orientations have a significant effect on organisational performance or relationships. The conclusion drawn here is that both orientations are somewhat ritualistic and "...have the function of demonstrating and re-inforcing hierarchical power relations." (Easterby-Smith et al, 1999; 36). Such an approach would signal "...a more generalised *formal theory* about power and organisational rituals." (Easterby-Smith et al, 1991; 36) (Italics in the original).

Both 'substantive' and 'formal' theory types are of value in the investigation of organisational processes or phenomena. However, the theory should be sufficiently analytical "...to enable some generalisation to take place...[but it must also]...be possible for...[the researcher]...to relate the theory to their own experiences, thus *sensitising* their own perceptions." (Easterby-Smith et al, 1991; 36). (Italics in the original).

The positivistic, and contrasting, approach is that of establishing a hypothesis and then gathering data to either support or to refute the proposed theory. Clearly there are advantages to such an approach and the "...main practical advantage of the 'hypothesis testing' approach...is...[the]...initial clarity about what is to be investigated." (Easterby-Smith et al, 1991; 36).

Establishing a clear method can aid any attempt to replicate the investigation. Therefore "...any...[findings]...arising from the...[original]...research can be...[scrutinised]..." (Easterby-Smith et al, 1991; 36). However, whilst such replicative testing might confirm the original research results, inconclusive or negative results might not be satisfactorily explained. In such

cases the somewhat inflexible hypothesis testing approach gives "...little explanation on why this is so." (Easterby-Smith et al, 1991; 36).

2.3.2.4 Experimental Designs and Fieldwork

Experimental activity is a critical aspect of positivism and scientific method. According to Easterby-Smith (1991) experimental method involves:

- Random selection of subjects to either an experimental or control group;
- Manipulation, by the researcher, of the experimental group conditions;
- Maintenance of control group conditions;
- Assessment of effects on both groups.

Such controlled 'pure' experiments are very difficult "...to conduct within real organisations...where there is no captive population from which to draw volunteers." (Easterby-Smith et al, 1991; 37). This difficulty can only be partially overcome by the use of 'quasi-experimental' designs. This involves "...[the evaluation of]...a range of designs which make use of multiple measures over time in order to reduce the effects of control and experimental groups not being fully matched." (Easterby-Smith et al, 1991; 37).

A common quasi-experimental design is that of "...pre-test/post-test comparison..." (Easterby-Smith et al, 1991; 37) in which the effects of, for example, taking a course can be evaluated by comparing results between those who attend the course with those who do not. Difficulties associated with using such an approach include the assumption "...that 'nothing' happens to the control group during the period...[of the test]..." (Easterby-Smith et al, 1991; 37).

It can be argued that there is very little difference between 'pure' and 'quasi-experimental' design in that both forms suffer from similar weaknesses relative to real world research in organisations involving practising managers.

The phenomenological approach is often referred to as 'fieldwork' and this involves:

> "...the study of real organisations or social settings...[using]...*ethnography*...[in which the researcher becomes fully immersed]...in...[an organisational]...setting in order to understand the meanings and significance's...people put upon their own behaviour and that of others." (Easterby-Smith et al, 1991; 38). (Italics in the original).

As this research programme was directed towards the development of a systemic approach to managing organisational change, the experimental/quasi-experimental approach was rejected. The phenomenological basis utilising an ethnograhpic mode was considered to be the most suitable, given the fact that several organisations with no 'captive' population(s) were available.

2.3.2.5 Verification or Falsification

Bearing in mind the nature, objectives and research questions contained in this research programme, this issue was particularly problematic.

The question of verification versus falsification is predicated on the view that "...however much data one obtains in support of a...theory...it is not possible to reach a conclusive proof." (Easterby-Smith et al, 1991; 39). It has been argued that it is necessary to search for evidence to refute the hypothesis being tested. According to Popper (1959) "...only one instance of refutation is needed to falsify a theory, whereas however many confirmations of the theory there are it will still not be conclusively proven." (Easterby-Smith et al, 1991; 39).

Recognising that this view has powerful logical validity presented a dilemma for this research programme. A clearly stated hypothesis exists in this research project. From this hypothesis, research questions and objectives were formulated. If the research programme were to proceed along Popperian principles, would a single refutation render the entire programme and all of its outputs as invalid? However, it was recognised that the issue of "...verification and falsification fits within the positivist view because ideas of 'truth' and 'proof' are associated mainly with that paradigm." (Easterby-Smith et al, 1991; 39). This research programme is not searching for a universal truth. Rather it is attempting to demonstrate a level of truth that will support the view that a Systemic Theory of Organisational Change will assist in producing robust and sustainable change in contemporary organisations. Indeed, the very title of this thesis indicates that this is to be the case.

Within that context, the phenomenological approach provides the useful concept of "...'critical subjectivity', which involves recognising one's own views and experiences." (Easterby-Smith et al, 1991; 39). The concept of critical subjectivity has provided a robust framework which has permitted this research programme to search for "...evidence that might confirm or contradict what...[is believed by this researcher]...to be true." (Easterby-Smith et al, 1991; 39). It is argued that the phenomenologically based approach, involving critical subjectivity, supports the felt need "...to investigate and understand what is taking place...[in contemporary]...organisations." (Easterby-Smith et al, 1991; 40) in terms of developing a Systemic Theory of Organisational Change.

2.4 CHOICE OF METHODOLOGICAL APPROACH

2.4.1 Discussion

The preceding discussion indicates that the issues associated with choice in the design of research programmes cannot be postulated in terms of absolutes. Such a choice is subject to and influenced by the cognitive processes and value system(s) of the researcher. (Ellis and Hall, 1996). Inevitably therefore, the design of a research programme is subjective in terms of the nature and objectives of the project. Indeed, Checkland's (1981) conceptual model, as adapted in **Figure 2.1**, suggests that it is necessary to adopt "...a holistic approach - using

concepts rather than numbers - to understand the complexity of organisational problems." (Easterby-Smith et al, 1991; 42).

The design of this research programme is neither purely positivist nor phenomenological. However, the programme, as it was designed, has provided a focus and context. The hypothesis and the derived research questions exemplify the focus. The context is largely phenomenological - due to the complex nature of the area of investigation - but with the inclusion of positivist features, such as hypothesis testing and developing 'rational' criteria for use in critically subjective evaluation, where necessary.

According to Ackoff (1981), holism is a central and fundamental principle of planning. This principle can also be applied to the design of a research programme, as it must always be the intention of a researcher to create an 'idealised design'. Ackoff (1981) also argues that the creation of an idealised design must be based on a 'participative principle'. This particular research programme was built around the premise that the theory and methodology should be tested in several organisations, and that the 'test phases' should involve members of those organisations in a particular mode. Clearly, this research programme is one of 'action research' incorporating:

> "...a belief that the best way of learning about an organisation...is through attempting to change it...[and]...a belief that those people...likely to be affected by, or involved in implementing...changes should...[be]...involved in the research process..." (Easterby-Smith et al, 1991; 34).

The design of this research programme was, in itself, problematic. Careful consideration was given to the issues and concerns as the preceding discussion indicates. The culmination of this process of consideration was to opt for a research design that is outlined in the following schema.

2.4.2 Research Process

The design of the research programme resulted in the following process:

- An **Action Research** basis in which organisations and their members would participate;
- A **systemic** orientation;
- The **researcher being involved** rather than independent;
- The use of **small samples** in a **longitudinal** mode;
- The **grounded theory** approach to be dominant - for flexibility - but with the **use of hypothesis testing in a complementary manner**;
- Data, and the consequent analysis, would be predominantly **qualitative**;
- **Ethnographic fieldwork** would be the data gathering mode;
- The verification/falsification dilemma would be managed by using the principle of **critical subjectivity**.

This research design is best viewed as a process. Using and developing Checkland's (1981) conceptual model, the research methodology is conceptualised in **Figure 2.4.**

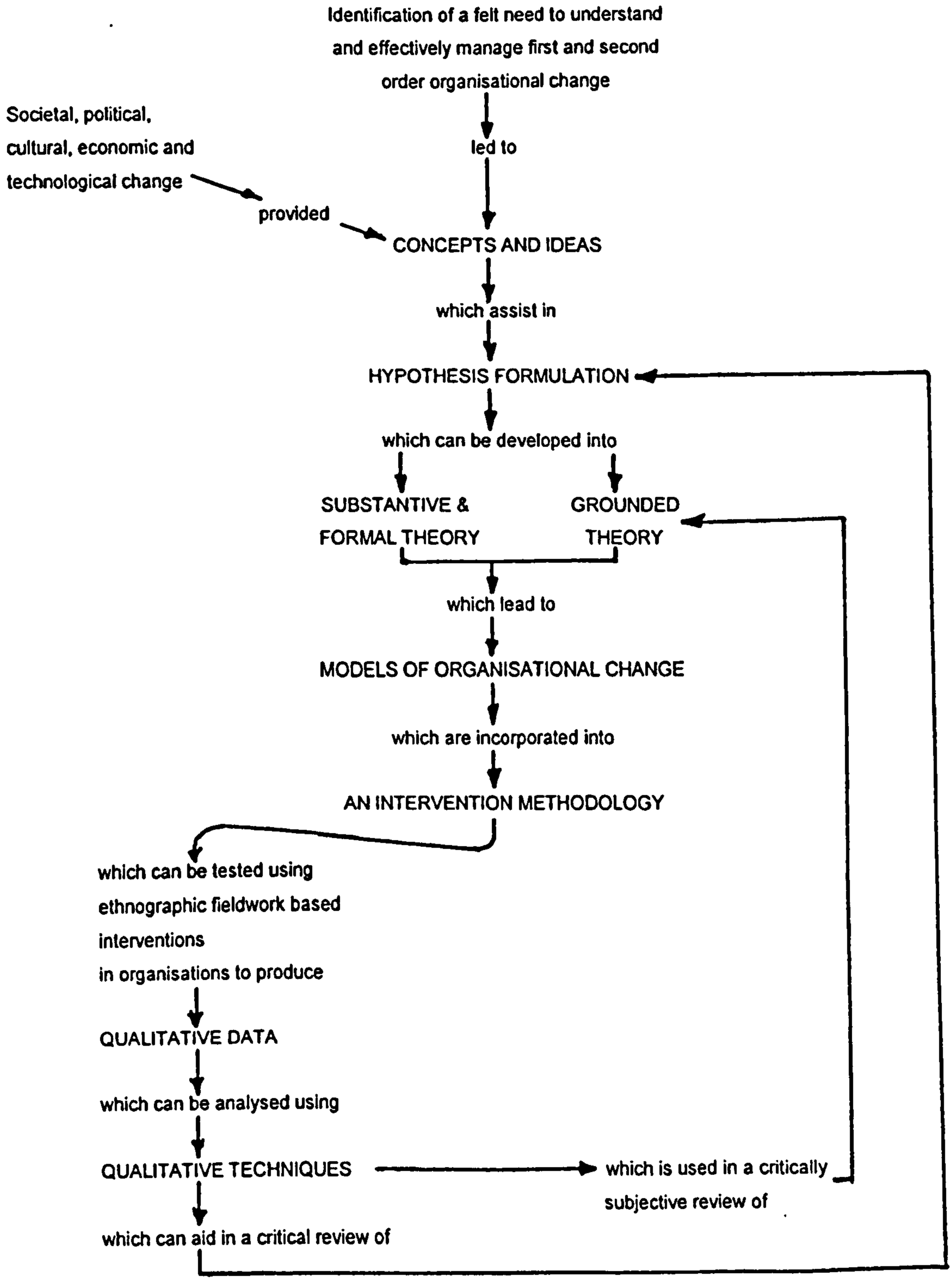


Figure 2.4: Research Methodology

(Adapted from Checkland, 1991; 8; Fig 1)

2.5 CONCLUDING SUMMARY

The diagram, shown in **Figure 2.4** above, provides an outline summary of the process of inquiry followed during the research programme. The author of this thesis identified the 'felt need' and is, therefore, the owner of this process of inquiry. The process diagram also summarises the discussion undertaken in this chapter.

The process of inquiry was developed to ensure that the research undertaken would be, as far as is possible, systemic. Indeed, it is concluded that the process is largely systemic for the following reasons:

- Action research encourages participation by organisational members;
- The researcher being involved ensures first hand knowledge of the outcomes of interventions undertaken during the research;
- Small, focused samples minimise the potential for strategic drift during an extended research programme;
- The complementarist approach associated with the use of grounded theory supported by hypothesis testing is very much in keeping with the principles of Critical Systems Thinking (CST) and encouraged systemic practice;
- Given the complexity of second order change situations, qualitative data analysis, related to ethnographic methods of data collection, is considered to be appropriate;
- The issue of verification versus falsification can best be resolved through the use of critical subjectivity which is entirely consistent with the needs of paradigm incommensurability and paradigm diversity.

Having established the methodological approach, and drawn conclusions associated with the reasoning for adopting this approach, it is now possible to establish a theoretical basis that will be used in later chapters, relative to the development of a Systemic Theory of Organisational Change. The first steps in this development will be taken in Chapter Three, where the issues associated with developing an understanding of organisational change will be considered.

CHAPTER THREE

THE NATURE, EPISTEMOLOGY AND ONTOLOGY OF ORGANISATIONAL CHANGE

3.1 INTRODUCTION

In Chapter Two, the methodological approach to be followed in terms of a systemic process of inquiry was discussed and outlined. This process was designed to take into account the hypothesis, research questions and objectives for the research programme that were outlined in Chapter One. Clearly, it is necessary, in any sound research programme, to develop an understanding of the theoretical and philosophical principles that underpin that programme. This is particularly important, as major objectives for this research programme are the development of a Systemic Theory of Organisational Change (STOC) and the associated Critical Pluralist Intervention Methodology (CPIM).

Therefore, prior to developing and then testing the STOC and the CPIM, it is necessary to establish an understanding of organisational change. This understanding, which will encompass the nature, structure, and processes of change, will be achieved by analytically reviewing the subject field of organisational change.

This analysis will assist in developing an epistemological and ontological underpinning for the Systemic Theory of Organisational Change (STOC).

This chapter will:

- Discuss the nature of change;
- Investigate and develop the issues associated with the dynamics of change;
- Create an understanding of first and second order change;
- Explore the structure and processes of change in systems terms;
- Review and critically analyse some established models of change;
- Use social theory as a basis for developing an epistemological and ontological framework of organisational change;
- Draw conclusions as a preparatory phase for a Systemic Theory of Organisational Change.

3.2 THE NATURE OF ORGANISATIONAL CHANGE

3.2.1 The 'Problem' of Change

"People...recognise that most changes...do not result from things "just happening" to them. Rather, they result from actions taken by purposeful, sentient human beings." (McWhinney, 1997; 17). Although purposeful (human centred) change may not always be as basic as McWhinney asserts, this statement is a useful starting point for the analysis of the field of organisational change.

Organisation Development (OD) scholars and practitioners (see for example French and Bell, 1978; Burke, 1987) would argue that all change, particularly in an organisational context, is carefully planned. This simplistic point of view is 'just plain wrong'! It is recognised and accepted that a considerable proportion of organisational change results from careful and detailed planning. For an organisation to develop and implement a long-term strategy, it must plan. Directed, proactive and conscious effort is a widely used mode of bringing about strategic, incremental and radical change in organisations. Nonetheless, a significant amount of organisational change is reactive in nature and occurs as a result of unforeseen shifts in circumstances and indeed, accidents or neglect by managers.

Taking this argument a stage further, it is asserted that:

> "It is becoming apparent that we create an arguably large part of our problems...[often]...in the very act of trying to resolve them. We create messes we are in, sometimes by blatantly destructive acts but often unwittingly in the course of dealing with other problems." (McWhinney, 1997; 18).

Clearly, organisational problems are often a by-product of purposeful human activity undertaken in pursuit of objectives. Problems can also be an unintended consequence which emerges from the resolution of a non-related problem situation. Therefore, it is inferred that intervention in one part of a system **ALWAYS** has the potential for detrimental consequences in other parts of or indeed, the total, system. Such consequences can, in extreme cases, be disastrous possibly leading to system destruction.

3.2.2 The Dynamics of Change

In much of the research into organisational change the emphasis is on the phenomena of change "...as the problem to be explained..." (Watzlawick et al, 1974; 2). However, the phenomena of persistence has been regarded as "...a "natural" or "spontaneous" state to be taken for granted and needing no explanation..." (Watzlawick et al, 1974; 2).

This presents an 'incomplete' picture of the nature of organisational change in terms of the dynamics of the change process. This incompleteness suggests to the author that:

Let A and B be members of the group of integers between 1 and 9. This can be logically specified as A*B>G if and only if A*B>(1;9). (Where > means 'belongs to'). If A*B > G and the operation * is regarded as (+), then A*B = (1;9).

For example, let * be the operation of addition (+); further, let A = 2 and B = 4. Therefore A+B = 6. Clearly this conforms to the requirement that the outcome of the combination of two of the members of the group is also a member of the group. However, if A = 4 and B = 7 then A+B = 11 then the outcome, in this case, is not a member of the group. The condition that the outcome of any combination of two or more members must also be a member of the group has been violated in this particular case.

The grouping of 'things' is a basic factor in our understanding of the world. The ordering of our world into intersecting and overlapping groups that share important elements assists us in our need to create structure and order. It is this ordering that helps to establish 'invariance' in that a combination of group members is another group member; a 'thing' that is inside the system and not outside it. This aspect of group theory is of major importance in boundary judgements for managers faced with multi-dimensional change situations.

This first group property of common characteristics allows for change within a group. However, this property also makes it impossible for any member, or combination of members, to place themselves outside the system.

A second important logical property is associated with the sequence of combination of group members. This property specifies that group members may be combined in a varying sequence but the outcome of the combination must remain the same.

Let A, B and C be members of a group and let * be a combinatorial rule that holds for that group. Then, (A*B)*C = A*(B*C) = (B*A)*C = C*(A*B) = (C*B)*A. Clearly this depends on the combinatorial rule and that * is invariant.

Thus, there is changeability within the process but invariance in the process itself. This is illustrated in **Figure 3.1** below by the process of making "...four moves of one unit (e.g., one yard, one mile) each in the direction of each of the four cardinal points. Regardless of the sequence (e.g., first north, then west, or whatever), under these conditions one is always back at the starting point at the completion of the fourth move." (Watzlawick et al, 1974; 4-5).

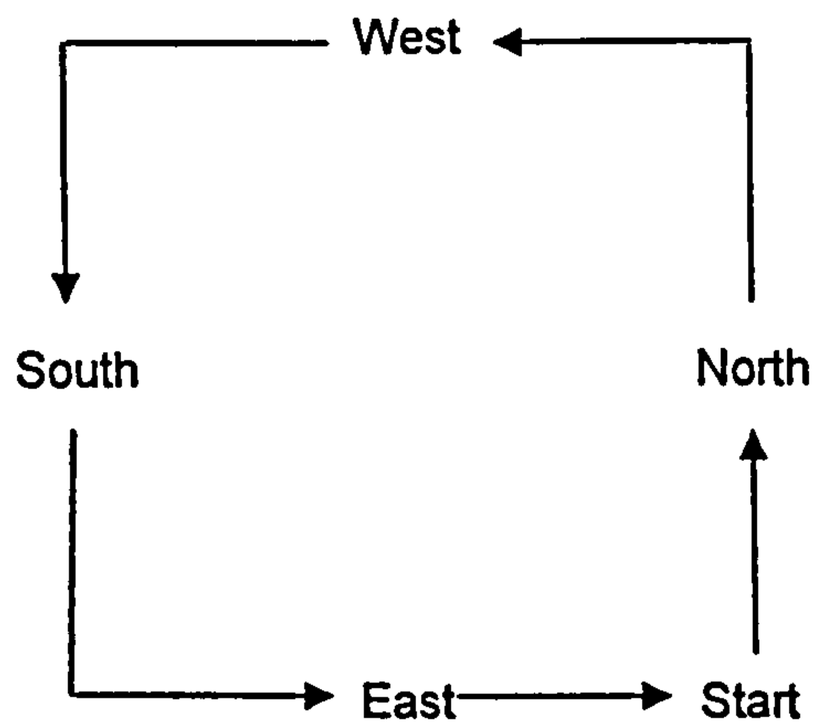


Figure 3.1: Process Changeability

The third group property is associated with the 'identity' member. A group contains an identity member "...such that its combination with any other member gives that other member, which means that it maintains that other member's identity." (Watzlawick et al, 1974; 5).

This means that an identity member always maintains the identity of other group members. Where the combination rule * is addition then the identity member is 0. However, when the combination rule * is multiplication then the identity member is 1.

This can be seen as a special case of invariance, playing a special role in system stability as illustrated by the major identity role of System Five in the Viable System Model (VSM), (Beer, 1981).

The fourth logical property to be considered is that of reciprocals in that "...in any system satisfying the group concept, we find that every member has its reciprocal or opposite, such that the combination of any member with its opposite gives the identity member." (Watzlawick et al, 1974; 5).

An example is that of 2 + (-2) = 0 under the combination rule of addition.

It can be seen that although this combination does produce a change, the result is the identity member of a group that contains the positive and negative integers including zero. On the one hand this combination produces a change but, on the other hand, the result is itself a member of the group and is, therefore contained within the group.

Therefore, it is argued that the theory of groups provides a theoretically sound framework for pursuing research into the inter-dependence between persistence and change within an organisational context.

What group theory cannot provide is a model for types of change that transcend a given system or frame of reference. For this it becomes necessary to consider the Theory of Logical Types.

3.2.2.2 Theory of Logical Types

The theory of logical types is associated with the concept of "...collections of "things" which are united by specific characteristics common to all of them." (Watzlawick et al, 1974; 6). This means that each member of the class possess specific characteristics that identify them as members of the totality.

Whitehead and Russell in *Principia Mathematica* (1910) argued, in axiomatic form, "...whatever involves *all* of a collection must not be one of the collection." (Watzlawick et al, 1974; 6) (Italics in the original). An example is that of 'mankind'. Mankind is the class of all individual human beings. It is obvious that mankind itself is not an individual. There is a clear "...distinction between member and class and the fact that a class cannot be a member of itself." (Watzlawick et al, 1974; 7).

An important, and often neglected, aspect of change is that of levels of change in terms of complexity. Human beings are faced with "...hierarchies of logical levels, so the dangers of level confusions and their puzzling consequences are ubiquitous." (Watzlawick et al, 1974; 7).

Different types and forms of change can be puzzling. Change phenomena in social settings are more difficult to comprehend than in the natural sciences where mathematical models can be used to great effect. For example, "...the simplest...form of change is motion, namely the change of position." (Watzlawick et al, 1974; 7). This can be mathematically modelled using first order differential equations of the form:

$$dP/dt = f(t)$$

However, "...motion itself can be subject to change, i.e., to acceleration or deceleration, and this is a change of change (or metachange) of position." (Watzlawick et al, 1974; 7). This phenomena can be mathematically modelled using second order differential equations of the form:

$$d^2P/dt^2 = f(t)$$

This analysis can be extended yet further as "...one level higher there is a change of acceleration (or deceleration) which amounts to a change of change of change (or metametachange) of position." (Watzlawick et al, 1974; 7). This phenomena can be mathematically modelled using third order differential equations of the form:

$$d^3P/dt^3 = f(t)$$

From the preceding analysis it can be recognised that:

> "...change always involves the next higher level; to proceed, for instance, from position to motion, a step *out of* the theoretical framework of position is necessary. *Within* that framework the concept motion cannot be generated, let alone dealt with, and any attempt at ignoring the basic axiom of the Theory of Logical Types can lead to...confusion." (Watzlawick et al, 1974; 7) (Italics in the original).

It is becoming clear that in order to deal constructively with change in a social system, a meta-level language is needed. It is this requirement that forms an important aspect of the driving imperative for the development of a STOC which will be addressed later in this thesis.

The need for meta-level language, as a means of facilitating constructive engagement with social change phenomena, is associated with meaning and learning. It is necessary to link this need to the issue of methodology, and its relationship with organisational learning, by creating meaning within complex multi-level change situations. This can be investigated by examining the two words 'method' and 'methodology' in that:

> "...the term *method* denotes a scientific procedure; it is the specification of the steps which must be taken in order to achieve a given end. *Methodology*, on the other hand, is a concept of the next higher logical type, it is the philosophical study of the plurality of methods which are applied in the various scientific disciplines. It always has to do with the activity of acquiring knowledge, not with a specific investigation in particular. It is, therefore, a metamethod and stands in the same logical relation to method as a class to one of its members." (Watzlawick et al, 1974; 8) (Italics in the original).

Clearly it is incorrect to confuse method with methodology. It is also incorrect to confuse persistence with change - although it can be argued that persistence is a special (null set) form of change. However, it is most important to recognise that relationships do exist between both method and methodology and, indeed, between persistence and change.

This analysis can be extended, in terms of group theory and the theory of logical types, to the relationship between method and methodology. A method is a member of the class of methods that form a methodology. A methodology is a member of the class of methodologies that are contained within a theoretical framework. For example, differential equations are a method of the class that form 'hard' systems methodologies; these 'hard' systems methodologies, in turn, belong to the class of methodologies that are contained within the functionalist or positivist theoretical paradigm.

Using group theory and theories of logical types in this form permits the establishment of a partial basis for the derivation of a STOC. This framework can help to create meaning with respect to multi-level change and the need to utilise methodology that is appropriate in terms of sustainable change in terms of Critical Pluralism. The drive will now be toward a Critical

Pluralistic approach that will contain a meta-language for both understanding and managing multi-level organisational change.

Having discussed the issue of change dynamics in terms of group theory and theories of logical types, attention is now turned to the order of change.

3.2.3 The Order of Change

It is important to recognise that, so far, the discussion has been considering types of change that occur within complex systems. "Group Theory gives us a framework for thinking about the kind of change that can occur *within a system that itself stays invariant*;" (Watzlawick et al, 1974; 10) (Italics added for emphasis).

However, "...the Theory of Logical Types...gives us a framework for considering the relationship between member and class...which is in the nature of shifts between one logical level to the next higher...[level]." (Watzlawick et al, 1974; 10).

The inference is that there is a distinction between the two theories in terms of revealing that "...there are two different types of change: one that occurs within a given system which itself remains unchanged, and one whose occurrence changes the system itself." (Watzlawick et al, 1974; 10).

The first type of change occurs within the system and leaves the system itself unchanged. This type of change can be thought of as 'first order change'. The second type of change changes the system itself to another state and can be thought of as 'second order change'. Second order change is therefore the "...*change of change*..." (Watzlawick et al, 1974; 11) (Italics in the original).

It is possible to recognise that "...groups are invariant only on the first order change level...on the level of change from one member to another...but are open to change on the second order level...[in terms of]...changes to the body of rules governing their structure or internal order..." (Watzlawick et al, 1974; 11).

First order change is associated with internal system change where the system itself remains, to an external observer, unchanged. Second order change is manifest when the system itself is observed to change. Therefore, "...when we talk about change in connection with problem formulation and problem resolution *we always mean second order change*..." (Watzlawick et al, 1974; 11) (Italics added for emphasis).

The distinction between first and second order change, in theoretical terms, is relatively simple to define. However, in the world of organisational reality, this distinction becomes more difficult to establish. Therefore, "...inattention to this difference...between the two levels of change can occur very easily, and actions may be taken in difficult situations which not only do

not produce the desired change, but compound the problem to which the "solution" is applied." (Watzlawick et al, 1974; 13).

This issue is a central concern with respect to the development of the STOC, and this will be addressed in more specific terms later in the thesis. However, as a precursor to the more detailed treatment of this issue an outline of some initial thoughts, that will take into account the need to clarify first and second order change in conceptual terms, are offered.

3.2.3.1 First Order Change

Consider a system 'S' in some initial state 'S_i'. Let this system be made up of elements S_1.....S_n. This system can be modelled as a vector shown below.

$$S_i$$

$$\begin{bmatrix} S_{1i} \\ S_{2i} \\ S_{3i} \\ \cdot \\ \cdot \\ S_{ni} \end{bmatrix}$$

Here, there is a system (group) made up of elements (things) that, in the context of first order change, must conform to group properties set out in the theory of groups. This means that any combination, transformation, or sequence of operations on the group members must maintain group structure if the group or system is to undergo first order change only. The concept of mutual deterrence provides a practical example of such a system change in that, if two military power blocs adopt a hostile posture towards each other, and the relationship is that of an arms race, then the system state must remain invariant no matter what the two blocs do. Indeed, the:

> "*...policy of mutual deterrence includes no provision for its own resolution*...[and under such conditions]...the invariance factor...prevents a system...from generating within itself the conditions for second order change. It can run...through...[multiple sets of]...first order change phenomena, but as its...[internal]...structure remains invariant, there is no second order change." (Watzlawick et al, 1974; 15) (Italics in the original).

For a system to remain internally invariant, that is undergo first order change only, it must also conform to the group property of remaining unchanged under varying sequences of operations on its elements. Examples of this can be found in homeostatic systems and the human body is an appropriate model of such a system. A human being that is subject to, for example, sudden and repeated variations in ambient temperature, remains internally invariant and does not exhibit second order change. Organisations responding to external changes in

market conditions can also display similar behaviour. Under such conditions of first order change organisations attempt to achieve homeostasis with their external environment.

Such system behaviour can be seen as "...true first-order change phenomena, whereby different behaviors out of a finite repertory of possible behaviors are combined into different sequences, but leading to identical outcomes." (Watzlawick et al, 1974; 17). In general terms "...the persistence phenomena...can be observed...whenever the causality of a sequence is circular rather than linear..." (Watzlawick et al, 1974; 17). Under such circular causality conditions feedback becomes the important factor. Indeed, it is argued that when system elements (things) are governed by circular feedback, then environmental inputs to the system are reduced in importance. Therefore, it can be inferred that the total system structure remains invariant and first order change only occurs. This can be recognised in the following representation.



Within such a representation, "...behavior...[B]...applied to behavior...[A]...is practically equivalent to the application of...[A to B]...which satisfies the group property...[A*B = B*A]." (Watzlawick et al, 1974; 17).

In terms of first order change it is also necessary to consider the issue of the identity function "...which means...*zero first-order change* when...[group members are]...combined with any other member...[indeed, it is not]...trivial to emphasize that anything that does not produce change leaves things as they are." (Watzlawick et al, 1974; 17) (Italics in the original). Indeed Ackoff (1981) argues that, in developing a reference scenario for an organisational system, consideration is being given to a future that will be if nothing is done. The identity function "...refers to the fact that the combination of any group member with its reciprocal or opposite gives the identity member." (Watzlawick et al, 1974; 18).

The issue of triviality is important and can be better understood when it is recognised that:

> "...the identity member...when combined with...[another]...group member...preserves the identity of *that member* (i.e., produces zero first-order change), while the combination of that group member with its opposite preserves the identity of the *group* (i.e., produces the identity member and therefore zero second-order change)....It is in the nature of tradition to ensure persistence, if necessary through corrective action." (Watzlawick et al, 1974; 21) (Italics in the original).

Clearly then, in terms of the four group properties contained within group theory, it is obvious:

> "...that any one, or any combination, of these properties cannot produce second order change. A system which may run through all its possible internal changes (no matter how many there are) without effecting a systemic change, i.e. second-order change, is said to be caught in a *Game Without End* (1). It cannot generate from within itself the conditions for its own change; it cannot produce the rules for the change of its own rules." (Watzlawick et al, 1974; 22) (Italics in the original).

However, second order change can and does occur. "There is the undeniable fact that far from being impossible, second order change is an everyday phenomenon..." (Watzlawick et al, 1974; 22). It is to this aspect of change that we now turn using the theory of logical types.

3.2.3.2 Second Order Change

Second order change is associated with problem formulation and solution, and also with the issue of the change of change. Nonetheless "...people *do* find new solutions, social organisms *are* capable of self-correction, nature finds ever-new adaptations, and the whole process of scientific discovery...is based precisely on the stepping out of an old into a new framework..." (Watzlawick et al, 1974; 23) (Italics in the original).

Because second order change involves changing the system itself, it can appear threatening to those inside the system. Indeed, it is often the case that "...second order change appears unpredictable, abrupt, illogical etc....[but]...only in terms of first order change, that is, from within the system." (Watzlawick et al, 1974; 24). This apparently irrational reaction to change, when it occurs within organisational or social systems, is understandable "...because...second-order change is introduced into the system from the outside and therefore is not something familiar or...understandable in terms of...first order change." (Watzlawick et al, 1974; 24).

It is necessary to transfer the thought processes associated with understanding change from inside to outside the system if we are to understand second order change. Watzlawick et al (1974) cite the 'nine dot' problem as a means of developing this understanding. The nine dots shown in **Figure 3.2** below are to be joined by four straight lines without lifting the pencil from the sheet of paper.

(1) See: Watzlawick, Paul; Beavin, Janet H.; and Jackson, Don D. Pragmatics of Human Communication: A Study of Interactional Patterns, Pathologies and Paradoxes. New York: W.W.Norton, 1967, pp 232-36.

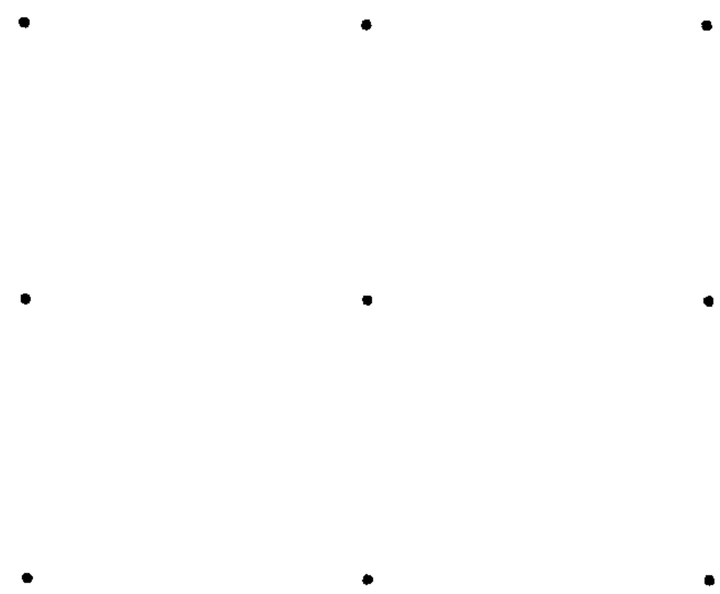


Figure 3.2 The Nine-Dot Problem

People trying to solve this problem often make an assumption that makes a solution virtually impossible. The usual assumption is that as the dots form a square then the solution must be found within the square. The subsequent failure to solve the problem within this mode of thinking lies in the attempted process adopted for arriving at a solution. No matter what combinations of four lines are used from within the square at least one dot will remain unconnected. In this mode of thinking the totality of first order possibilities that exist within the square will never provide a solution.

The problem needs second order thinking as "The solution is a second-order change which consists in leaving the field and which cannot be contained within itself because...it involves all of a collection and cannot, therefore, be part of it." (Watzlawick et al, 1974; 25).

Remaining inside the square is to take a first order perspective on the problem situation in that "...from inside the...[square]...that the solution appears...[to be]...beyond our control. In the second-order change perspective it is a simple change from one set of premises to another of the same logical type." (Watzlawick et al, 1974; 26). This means that to solve the problem it becomes necessary to step outside the square and examine the assumptions made about the dots and not the dots themselves. The solution to the nine dot problem is revealed in **Figure 3.3** below.

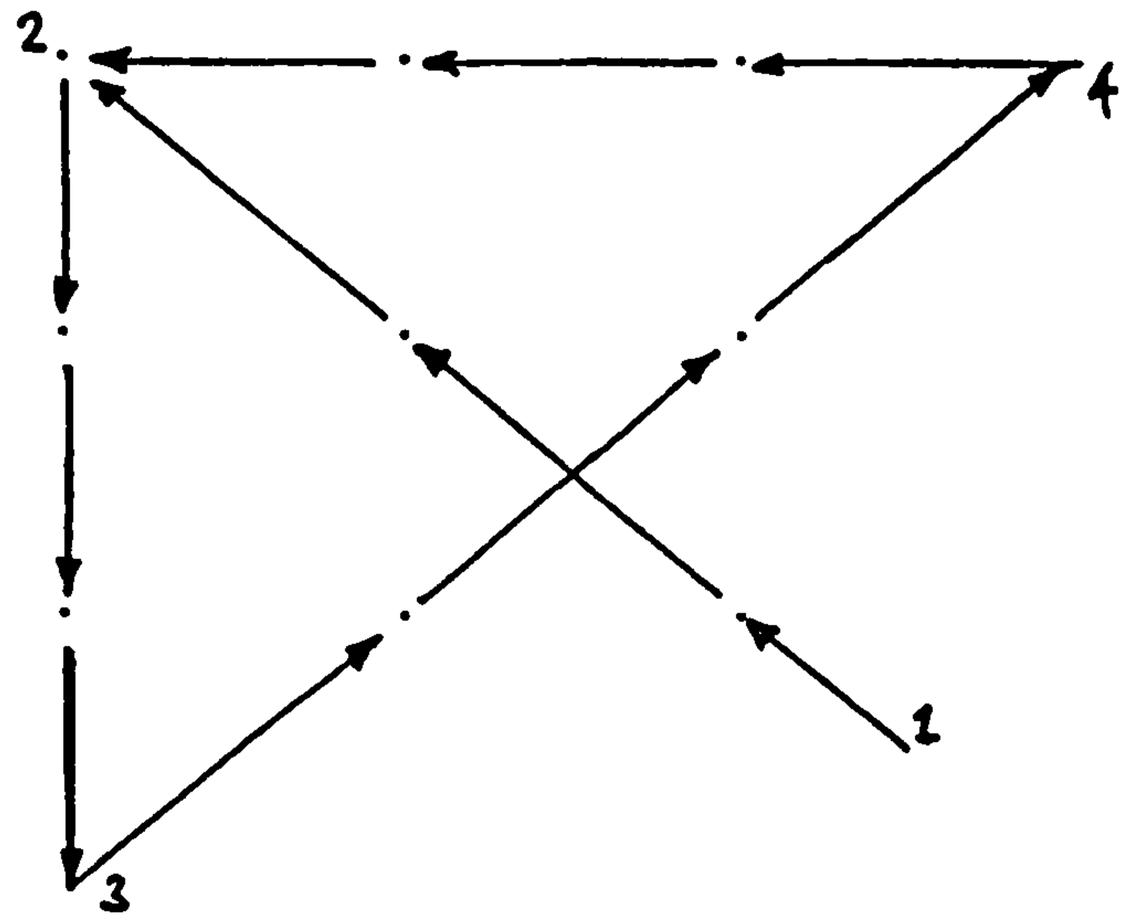


Figure 3.3 Solution of the Nine-Dot Problem

This is second order change which must be associated with solving the problem in the here and now. In other words it is necessary to understand the rules of the game before an interventionist is able to change them. It is often the case that "...conceptual frameworks are important not only for further insights into neglected dimensions of the underlying phenomenon. They are essential as a reminder of the distortions and limitations of whatever conceptual framework one employs." (Allison et al, 1999; 8).

In organisational change situations the organisational problem is perceived by the problem owners to be inside the box. The problem owners are also themselves inside the box and adopt a first order change perspective. The problem owners fail to see the whole system and operate within first order limitations and this results in non-systemic change. Ackoff (1995) has eloquently argued that Total Quality Management (TQM) and Business Process Re-Engineering (BPR) initiatives fail because they are not systemic. What Ackoff did not bring out, or address in his speech, was that these initiatives fail because both TQM and BPR are invariably undertaken within the organisational box from a first order change perspective.

A central argument of this thesis, supported by the research that formed a basis for the programme, is that many, if not all, 'traditional' organisational change programmes fail because the problem situation is dealt with using first order thinking only. Many organisational change situations are so intractable that first order thinking is entirely inappropriate. Second order thinking, which should be the preferred mode, is not used. This thesis also argues that many of the well known 'hard' systems based intervention methodologies, which are inherently prescriptive, are also first order in nature. Organisational Development (OD), Strategic Planning and many other well known organisational change techniques also suffer from similar shortcomings and will not, in the current first order manner of application, ever bring about sustainable systemic change which involves second order thinking.

Before dealing with some of the well-known approaches to organisational change, the structure and process of organisational change will be considered by using a systems thinking perspective.

3.3 STRUCTURE AND PROCESS OF CHANGE IN SYSTEMS TERMS

Given the almost obsessive interest in organisational change it is, at the very least, surprising "...that we have *not created* a science of change." (McWhinney, 1997; 18) (Italics added for emphasis). Ackoff, (1981, 1999) has provided an important clue for this failure of the management and systems sciences and this clue is contained in his concept of the 'machine age' of organisational analysis.

Organisations conforming to the 'machine age' model possess relatively low numbers of contained system elements with correspondingly low levels of inter-relationships and interactions between these elements. Such organisations respond only very slowly to change and it follows that "...the approaches to change in...[such organisations]...served...adequately for the level of inter-dependence...['machine age']...change theorists and practitioners recognised." (McWhinney, 1997; 18). The nature, structure and process of change associated with organisations of the 'machine age' is characterised by:

- An organisational environment that is stable and predictable;
- Organisations, as systems, are relatively closed to their environment;
- The rate of change is relatively slow;
- Change is confined to incremental adjustments in process technology and under internal managerial control;
- Working practices are static and changed little;
- Job design was 'scientific' and based on 'economic rationality';
- Organisational structures are hierarchical;
- Managerial and leadership styles are 'Theory X' in nature;
- Managerial control is exercised through overt systems of bureaucratic rules and regulations;
- Innovation is not considered to be important;
- Power is concentrated at the top of organisations;
- Failure results in blame and punishment;
- Change is considered to be simple, linear, first order in nature, and managed accordingly.

Given such characteristics, the development of a theory of change was not considered to be necessary. The 'machine age' model is associated with traditional 'Fordist' approaches to organisational management predicated on Tayloristic principles of 'scientific management'.

However, contemporary organisations can no longer be analysed and understood within the simplistic framework of the 'machine age'. The nature, structure and process of organisational change have, in themselves, changed. Ackoff (1981, 1999) has argued that 'we'

> "In practice, the criteria for...[problem]...resolution differ in accordance with the worldviews of those involved. The differences...arise from diverse concepts of cause, meaning and satisfaction that lie beneath the way that those who hold those views define the problem. Issues...do not have...unambiguous structures. They are laden with a complex of beliefs, values and emotions."
> (McWhinney, 1997; 19).

There is a danger in using the words 'problem' and 'issue' synonymously. They are different, and this suggests that the use of the words in the context of managing organisational change should also be differentiated.

"The origins of the two words *problem* and *issue* indicate the differences between them. *Problem* is derived from the Latin to "throw something at." *Issue* is a word for "outflow."." (McWhinney, 1997; 20) (Italics in the original).

McWhinney (1997) goes on to suggest that throwing resources at them can solve problems. Whereas issues are flows that need to be managed. This concept is useful as it provides an indicator that the development of a Systemic Theory of Organisational Change is not simply possible, it is vitally necessary.

However, the concept is not without its weaknesses. Both Checkland (1981, 1991, 1999) and Ackoff (1981, 1999) argue that it is necessary to stop thinking about 'problems' and turn our attention to 'problem situations' or 'messes'. Both of these scholars go on to suggest that 'problem situations', or 'messes', contain sets of inter-connected problems. Checkland (1981, 1991, 1999) suggests that 'problem situations' contain problems, concerns, worries, questions, issues, etc. Checkland (1981, 1991, 1999) also proposes that the learning process of inquiry known as Soft Systems Methodology (SSM) can produce both task and issue based activities designed to bring about improvement in a 'problem situation'.

Organisational change can be conceptualised as a network of inter-connected problems - containing issues - that produce flows whenever an intervention occurs designed to create a change in the system that contains the problem situation. It is these flows that must be managed, and to do that effectively it is necessary that a sound theoretical underpinning is used.

This research programme has been driven by the imperative and recognition that:

> "We need to have an overall...[systemic]...theory of how to deal with critical ...[organisational change]...issues - if for no other reason than to have a place to map our failures and move beyond them...[in terms of organisational learning and effectiveness through critical systems thinking]...." (McWhinney, 1997; 18).

It is for this reason that understanding the nature, structure and process, along with the development of an epistemological and ontological framework for organisational change are essential precursors to the derivation of a Systemic Theory of Organisational Change.

3.4 THE ESTABLISHED MODELS OF ORGANISATIONAL CHANGE

3.4.1 Persistence and Change

Development of organisational change models has exercised the minds of scholars for many a long year! Since the late 1950's the literature associated with the study of organisational change has burgeoned. Examples of such work are the publications of scholars including Ackoff (1981, 1999); Argyris (1992); Argyris and Schon (1978); Beer (1980); Bennis (1969); Blake and Mouton (1964); Burns and Stalker (1994); Emery and Trist (1960); French and Bell (1978); Hofstede (1980); Kanter (1983, 1989); Lewin (1951); Likert (1961, 1967); Mintzberg (1973); Morgan (1986, 1997); Nadler (1977); Peters and Waterman (1982); Pettigrew (1985,); Pettigrew and Whipp (1991); Quinn (1980); Rice (1958); Schein (1980, 1985, 1987); Trist (1951). This list is far from a complete exposition of the available literature. As it is beyond the scope of this thesis to review and comment on all of this work, the review and comment will be restricted.

The dominant characteristic of much of the work of the scholars referred to above has been the obsessive concentration on the 'management of change'. This characteristic appears to have developed from an assumption that intervention in organisational problem situations had to concentrate on finding explanations for 'change' per se. In other words the phenomenon of change dominated at the expense of the equally important, but mostly neglected, phenomena of persistence and stability.

Change is a pervasive, immediate, and recognisable concept in human experience. However, it is also important to conceptualise the dichotomy of persistence or stability. This is so because to fully understand the concept of change it is necessary understand the opposite condition of stability or persistence. Stability and change are recursively related and, in fact, form a duality. This aspect is also associated with first and second order change.

3.4.2 Dichotomy in Organisational Change

There is an apparent consistency in the vocabulary being used in the change management literature. Comfort can be drawn from the apparent 'agreement' between academics and practitioners and it is indicated that "...words and terminology appear to have the same meaning to all who deal with them." (Wilson, 1992; 3).

However, Wilson goes on to warn that there is conflict in terms of both "...theoretical vocabulary and applied approaches...[and that]...there are intense debates between virtually all who lay claim to being analysts of change, to the extent that many theories and much empirical evidence appear mutually exclusive." (Wilson, 1992; 4).

This enigmatic dichotomy reveals a need for this thesis. There is, on the one hand, apparent agreement with respect to the lexicon of organisational change whilst, on the other hand, there is conflicting debate and mutually exclusive theories. This lends support to the hypothesis outlined at the outset of this dissertation.

Such differences regarding the 'language' of organisational change provides a basis for investigating and then dealing with such polarised positions. In a remarkably similar fashion to the intense 'hard' versus 'soft' debates that permeated the systems movement during the 1980's, there appear to be extreme perspectives in the organisational change movement in that:

> "On the one hand are management 'recipes' which provide outright normative maxims for managing change in complex organisations. On the other, there are the more analytical and theoretical approaches aimed at understanding the complex processes of change as an end in itself." (Wilson, 1992; 5).

A similar polarisation existed within the systems movement prior to the work of Jackson (1991); Jackson and Keys (1984); Flood and Jackson (1991(a), 1991(b)) in developing the principles and theoretical framework of Critical Systems Thinking (CST). This thesis has, as one of its fundamental objectives, the intention of utilising CST as a rigorous but harmonising framework to remove such dichotomous polarisation within the field of organisational change. This will be achieved by using CST as the theoretical underpinning for the development of the STOC, involving a critical pluralist approach which will incorporate paradigm diversity.

3.4.3 Approaches and Concepts

There are many perspectives, approaches and concepts in the field of study known as 'organisational change'. The field of organisational change is difficult as an area of study largely due to the fact "...that its very nature is often transient, intangible and, above all, appears to be processual. Change occurs over time. It cannot occur independently of any form of temporal measurement." (Wilson, 1992; 6). Many of the available treatments of organisational change recognise the temporal aspect, but fail to include it effectively in the treatment. This is a major omission as time simply must be included in any systemic treatment and analysis of organisational change.

The fact that there are multiple competing approaches to concepts and treatments of organisational change tells us that there is disagreement amongst practitioners and theoreticians alike. However, it is necessary to know what these approaches and concepts are before going on to develop a credible systems based alternative.

Wilson (1992) argues that the range of approaches for understanding and explaining organisational change include:

- Behavioural approaches that have emerged from social psychology and are concerned with interpersonal aspects;

- Structural approaches associated with issues of organisational design and environmental aspects;
- Cultural approaches that have been developed to investigate values, beliefs, and ideological aspects.

From Wilson's (1992) set of approaches it can be argued that organisational change can be analysed from any one or indeed all of them. This simply compounds the problem facing managers and academics alike as the choice becomes bewildering.

Wilson 'muddies up the waters' even more as he goes on to show that "Concepts of and approaches to change permeate virtually every aspect of organizational behaviour and...analysis." (Wilson, 1992; 7). In that context Wilson (1992) argues that the subject fields of organisational behaviour, organisational analysis and organisational theory all treat organisational change using widely differing assumptions. In that context:

> "Organizational behaviour has emphasized the roles of training, interpersonal skills, organizational development, communication and effective groups...in achieving and sustaining organizational change. Organizational analysis has...[emphasised]...the key role of processes such as strategic decision-making, the exercise of power and the importance of organizational structures in preventing or achieving change. Organization theory has warned against approaching the question of change as if it were an objective 'fact' of organizational life and has proposed that...change is predominantly a perceptual phenomenon, understandable only in terms of individual's accounts...of the situation." (Wilson, 1992; 7).

Given such differing sets of lenses it should be of little surprise that the subject field of organisational change is a veritable minefield. Within such a contextual framework it is readily apparent that, in managerial terms at least, "...the managerial task...becomes one of establishing some rationality, or some predictability, out of the seeming chaos that characterizes change processes." (Wilson, 1992; 7). The issue of 'chaos' will be re-visited later in the development of the STOC. However, given the differences that exist it is useful to recognise that "...change is a relative concept...[in that]...we really mean the degree of change taking place rather than assuming that change is the anti-thesis of some assumed stability." (Wilson, 1992; 8). This viewpoint is at one with the concepts of first and second order change discussed earlier in this chapter.

Recognising the differing lenses as a 'fact of life' it is helpful to create a framework that "...allows comparative analysis. Of course, frameworks themselves are not constant. At best they are guides (rather than axiomatic) and, no doubt, any number of frameworks can substitute...[for each other]..." (Wilson, 1992; 9).

Wilson (1992) provides a four-cell framework that can provide a basis for analysis shown below as **Figure 3.4.**

	The Process Of Change	The Implementation Of Change
Planned Change	Cell 1 Logical incrementalism and various needs, Commitments and shared Vision models	Cell 2 Reducing resistance to change (e.g. force field analysis)
Emergent Change	Cell 3 Characteristics of strategic decisions: Political process models	Cell 4 Contextualism: implementation is a function of antecedent Factors and processes

Figure 3.4 A Characterisation of Approaches to Organisational Change
(Source: Wilson, 1992; 10; Fig 1.1)

Wilson (1992) argues that the four cells shown in Figure 3.4 reveal differences in ontological and epistemological perspectives. Although this is important it is sufficient for present purposes to note that such differences must be understood in terms of the development of the STOC.

Although Wilson does not delve into the theoretical issues associated with these dimensions, the framework does reveal that "...the vertical dimension...[shows that]...change can either be *planned* or can *emerge* in organizations." (Wilson, 1992; 9) (Italics in the original). Furthermore, Wilson assumes that "...change...[that]...can be planned in advance will differ radically from...[change]...which...emerges as a result of the interplay of multiple variables." (Wilson, 1992; 9). The framework shown in Figure 3.4 also reveals that through "...the horizontal dimension, change can also be described primarily as a *process* or primarily as a strategy of *implementation*." (Wilson, 1992; 9) (Italics in the original).

Summarising from Wilson (1992; 10-11) the interpretation of the four cells of Figure 3.4 is as follows:

- Cell 1 - Change is planned by managers but needs process analysis over a period of time;
- Cell 2 - Change is articulated in advance with an emphasis on the primary task of implementation;
- Cell 3 - Change is seen as an emergent phenomenon resulting from an interplay between organisational history, economics, politics and business sector characteristics;
- Cell 4 - Change is contextualised in terms of the build up and operationalisation of power interests.

Clearly, the four cells of **Figure 3.4** suggest that:

"Depending upon which perspective(s) are taken, different issues will surface as important to the understanding and management of strategic change. Each perspective varies not only along the dimensions shown in...[**Figure 3.4**]...but also as to which levels of analysis are adopted." (Wilson, 1992; 11).

The levels of analysis can be recognised, in systems terms, as being those of:

- The individual;
- The group;
- The organisation;
- The organisational environment.

However, organisational change can also be investigated at the Operational and/or the Strategic levels of analysis. Wilson (1992) also goes on to argue that change can be analysed in terms of the degree of change and that this involves four levels of analysis as shown in **Figure 3.5** below.

3.4.4 Analytical Frameworks and Models of Change

Organisational managers often talk about 'planning and managing change', and indeed, argue that this is what they are paid to do. Much of an operational managers' time is taken up by involvement in change programmes such as Total Quality Management (TQM) Initiatives, Just In Time (JIT), the restructuring of operational processes through Business Process Re-engineering (BPR) programmes, or by changing organisational structures using Organisational Development (OD) interventions. All of these change models suggest that planned change programmes are relatively simple to implement by following the procedures suggested in some textbook or consultants manual. There is the other side of this coin that must be considered in that "The notion of planned change, on the surface a seemingly rational and eminently appropriate task for managers, is not so unproblematic as it may seem." (Wilson, 1992; 14).

Wilson goes on to argue that "Care has to be taken to recognise the sociological and psychological assumptions that inform what is planned, by whom and in which ways it is implemented." (Wilson, 1992; 14). Despite these appropriate words of caution "...the notion of planned change should not simply be dismissed...[as there is]...immense potency drawn from practice." (Wilson, 1992; 15). However, the complementarist principle of CST (Flood and Jackson, 1991(a); Jackson, 1991), suggests that to depend upon practice alone inhibits the organisational learning that can result from the use of appropriate theory through which managerial practice is properly informed.

However:

> "The dominant theory-in-use in British and American organizations is the achievement of planned change through managers trained in specific techniques who can develop special skills to see the change through. This is despite a growing weight of empirical evidence which indicates that the analysis of change is best understood in terms of its context and of political processes in organizations." (Wilson, 1992; 15).

It is obvious, from Wilson's (1992) view, that although the concept of planned change is dominant in managerial practice, this model is dangerously weak in terms of the lack of inclusion of the 'softer' aspects that should be associated with systemic organisational change programmes. This missing factor will be included in the STOC.

This raises an important epistemological question "...how do we know what we know about change processes?" (Wilson, 1992; 19). This is most important within the context of developing the STOC and begs the question 'what epistemological and ontological framework is necessary before we can develop the systemic theory?' This issue will be discussed in the final section of this chapter as it is a fundamental and necessary step in the development of the STOC.

In terms of the established models of organisational change the epistemological issue "...[depends]...upon the method(s) chosen by the researchers...[and]...the choice of factors deemed to be important in characterizing the change process differs markedly." (Wilson, 1992; 19-20). As a fundamental first step "...it is necessary to define the level of change in question...[and these]...levels are depicted in...[**Figure 3.5** below]...that identifies the degree of change experienced and separates the degrees into four levels." (Wilson, 1992; 20).

Degree of change	Operational/ Strategic level	Characteristics
Status quo	1 Can be both operational And strategic	No change in current practice
Expanded reproduction	2 Mainly operational	Change involves producing more of the same goods or services
Evolutionary transition	3 Mainly strategic	Change occurs within existing parameters of the organisation e.g. change, but retain the existing structure and technology, etc.
Revolutionary transformation	4 Predominantly strategic	Change involves shifting or or re-defining existing parameters. Structure and technology likely to change.

Figure 3.5 Levels and Degrees of Organisational Change
(Adapted from Wilson, 1992; 20; Table 2.1)

Figure 3.5 provides a 'map' which clarifies some of the processes of change that are available. Although characteristics of first and second order change can be recognised in this map, Wilson (1992) fails to explicitly include these in his model. This is further example of the lack of systemicity in the established models of organisational change.

In spite of the explicit exclusion of the systemic nature of organisational change, in terms of first and second order change, the issue of systemicity is implicitly addressed by Wilson (1992) through a discussion of strategic change in organisations. Two broad theoretical models are offered as a means through which the epistemological question can be addressed. These two approaches are characterised as:

> "1 *The systemic conflict framework.* The organization is viewed as a social system. Because of this, it will be characterized by conflict, politicking and inherent tensions. The tensions can arise between individuals, departments in a single organization or between organizations in larger networks. It is these tensions and contradictions which provide the impetus for change. Energy to support the change process comes from unresolved tensions within the single organizational unit, the ultimate goal being to achieve a new balance between the current set of conflicts.
> 2 *The strategic choice/entrepreneurial framework.* The organization is still viewed as a social system, but the focus of analysis shifts towards one which embraces the notion of 'strategic choice'....Solutions to perceived problems are assumed to be found outside the organization. The manager's task is to scan the environment for the most relevant solution. This perspective also views the managerial task as essentially entrepreneurial - the manager as the doer..." (Wilson, 1992; 21) (Italics in the original).

On the basis of these two approaches - as a framework for understanding the established models of organisational change - it is postulated that "...much of the emphasis...in management training falls under the rubric of the strategic choice/entrepreneurial framework..." (Wilson, 1992; 21). It is also argued that "..there appears to have been a...neglect of the systemic conflict framework in which the context, history and antecedents of change are fundamental pieces of the jigsaw of evidence and understanding." (Wilson, 1992; 22).

Wilson (1992) goes on to provide a useful summary of the major established models and theories of organisational change and this is reproduced below.

The systemic conflict framework includes:

- Contextualism;
- Population ecology models;
- Organisational life cycles;
- Market and business sector approaches;
- Power and political models of change;

The strategic choice framework includes:

- Organisational development (OD);
- Planned incrementalism;
- The enterprise culture as normative practice;
- Learning from 'best practice' or 'benchmarking';
- Using external consultants or change agents.

(Adapted from Wilson, 1992; 22).

It is on the basis of the preceding discussion that the epistemology and ontology for organisational change will be investigated. This will be a fundamental precursor to the development of the STOC.

The starting point for the investigation of the epistemology and ontology for organisational change will be the work of Burrell and Morgan (1979). This groundbreaking work established a framework for the analysis of social phenomena and is useful as a basis for the purposes of this analysis.

3.5 AN EPISTEMOLOGY AND ONTOLOGY OF ORGANISATIONAL CHANGE

3.5.1 A Framework for Social and Organisational Analysis the Subjective - Objective Dimension

Organisations can be studied and analysed as social entities that change over time. This suggests that a framework for such study and analysis is required. The very suggestion that a framework for analysis is needed indicates that it is necessary to "...approach...[the]...subject via explicit or implicit assumptions about the nature of the social...[and organisational]...world and the way in which it may be investigated." (Burrell & Morgan, 1979; 1). These assumptions will have a significant bearing on the manner in which organisational interventions in the context of change are undertaken. Firstly "...there are assumptions of an *ontological* nature...which concern the very essence of the phenomena under investigation...[and secondly there are]...assumptions of an *epistemological* nature...about the grounds of knowledge." (Burrell & Morgan, 1979; 1) (Italics in the original).

3.5.1.1 Ontological Assumptions

Ontological assumptions are associated with the nature of 'reality'. It is pertinent to ask is the 'reality' under investigation:

> "...external to the individual - imposing itself on individual consciousness from without - or the product of individual consciousness; whether 'reality' is of an 'objective' nature, or the product of individual cognition; whether 'reality' is a given 'out there' in the world, or the product of one's mind." (Burrell & Morgan, 1979; 1).

3.5.1.2 Epistemological Assumptions

Epistemological assumptions are concerned with the nature and grounds of knowledge. Any analysis of organisational problem situations suggests that there is a need to assess "...how one might begin to understand the...[organisation]...and communicate this as knowledge to fellow human beings." (Burrell & Morgan, 1979; 1). Such assumptions involve questions such as "...what forms of knowledge can be obtained, and how can one sort out what is to be regarded as 'true' from what is to be regarded as 'false'." (Burrell & Morgan, 1979; 1). Such a dichotomy is associated with an epistemological stance in terms of:

> "...a view of the nature of knowledge itself: whether, for example, it is possible to identify and communicate the nature of knowledge as being hard, real and capable of being transmitted in tangible form, or whether 'knowledge' is of a softer, more subjective...kind based on experience and insight..." (Burrell & Morgan, 1979; 1)

3.5.1.3 Human Assumptions

Any organisational change situation involves human beings. Clearly then, it is also necessary that assumptions concerning "...the relationship between human beings and their environment..." (Burrell & Morgan, 1979; 2) are taken into consideration.

The development of an understanding of human nature is essential to identify:

> "...perspectives in social science which entail a view of human beings responding in a mechanistic or deterministic fashion to the situations encountered in their external world. This view...[is]...one in which human beings and their experiences are regarded as products of the environment; one in which humans are conditioned by their external circumstances." (Burrell & Morgan, 1979; 2).

Such a deterministic perspective "...can be contrasted with one which attributes...a more creative role...where 'free will' occupies...centre stage; where man is regarded as the creator of his environment..." (Burrell & Morgan, 1979; 2).

3.5.1.4 Methodological Assumptions

Intervention in an organisation within a change context involves the utilisation of an appropriate methodology or a process of inquiry. The assumptions concerning ontology, epistemology and human nature "...have direct implications of a *methodological nature*. Each...[set of assumptions]...has important consequences for the way in which one attempts to investigate and obtain knowledge about the...[organisational]...world. (Burrell & Morgan, 1979; 2) (Italics in the original).

The prevalent assumptions concerning ontology, epistemology and human nature "...are likely to incline...[interventionists]...towards different methodologies...[with a]...range of choice...so large that what is regarded as science by the traditional 'natural scientist' covers but a small range of options." (Burrell & Morgan, 1979; 2).

It is, therefore, inferred that a wide range of methodologies would be necessary to effectively address all levels and degrees of change that are outlined in **Figure 3.5**. It is also the case that different methodological approaches are necessary in order to cope with first and second order change.

Therefore, it should be no surprise to learn that it is:

> "...possible to identify methodologies employed in...[organisational change]...research which treat the...[organisational]...world like the natural world, as being hard, real and external to the individual, and others which view it as being of a much softer, personal and more subjective quality. (Burrell & Morgan, 1979; 2).

3.5.1.5 Commentary

An interventionist who treats the organisational:

"...world as if it were a hard...objective reality...is likely to focus upon an analysis of the relationships and regularities between the...elements...[of the organisational system with the main]...concern...[being]...the identification and definition of these elements and...[the]...ways in which these relationships can be expressed." (Burrell and Morgan, 1979; 3).

As the perspective of 'objective reality' involves a systematic search for regularity and is concerned with internal organisational change then it is concerned with 'first order' change in organisational terms.

If however, an interventionist takes an approach which views organisational reality through a 'lens' that "...stresses the importance of the subjective experience of individuals...then the search for understanding focuses upon...the way in which the individual creates, modifies and interprets...[his organisational]...world." (Burrell and Morgan, 1979, 3).

The perspective of 'subjective reality' that "...emphasises the relativistic nature of the...[organisational]...world..." (Burrell and Morgan, 1979; 3) is related to second order change. This is argued to be the case as the approach is concerned with the search for understanding why the system itself is changing. Clearly this is systemic and is therefore second order change.

The perspective that treats the organisational world in terms of objective reality is likely to guide an interventionist towards a methodology that is rooted in the principles of the natural sciences and is often referred to as 'logical positivism'. However, the perspective that views the organisational world through subjective lenses is much more likely to steer an interventionist towards using an 'anti-positivist' or 'interpretivist' methodology.

The way(s) in which individual interventionists interpret, and understand, the organisational world can have significant consequences for involvement in any organisational change situation. Indeed many of the failures in organisational change situations can be attributed to a partial, or total, lack of understanding of ontological and epistemological issues. In developing an ontology and epistemology of organisational change it is important to create some of the base conditions that are required for the development of the STOC. Firstly it is necessary to explore epistemological, ontological, methodological and human issues in more detail.

3.5.1.6 The Ontological Debate

Here the 'nominalist' and 'realist' perspectives that are recognised as extreme positions will be explored. The ontological debate is associated with the ways in which the social and

organisational world is interpreted and the "...nominalist...[perspective is associated with]...the assumption that the social...[and organisational]...world external to individual cognition is made up of nothing more than names...used to structure reality." (Burrell and Morgan, 1979; 4). This perspective presents a viewpoint that simply "...does not admit to there being any 'real' structure to the world...[insisting that the names utilised are convenient for individuals]...as tools for...making sense of and negotiating the...[social and organisational]...world." (Burrell and Morgan, 1979; 4).

The 'realist' perspective, on the other hand, presents an argument that "...postulates that the social...[and organisational]...world...is a real world made up of hard...immutable structures...[that]...exist as empirical entities." (Burrell and Morgan, 1979; 4). Within this ontological perspective it is argued that:

> "...the social...[and organisational]...world exists independently of an...individual...who is seen as being born into and living within a social...[and organisational]...world which has a reality of its own. It is not something that the individual creates - it exists 'out there'; ontologically it is prior to the existence and consciousness of any single human being." (Burrell and Morgan, 1979; 4).

3.5.1.7 The Epistemological Debate

Here then, the concern is the issue of positivism versus anti-positivism in terms of achieving a means of characterising methodological approaches to organisational interventions within a change situation. A 'positivist':

> "...epistemology...[seeks]...to explain and predict what happens in the social...[and organisational]...world by searching for regularities and causal relationships between its constituent elements...[and]...is in essence based upon...traditional approaches which dominate the natural sciences." (Burrell and Morgan, 1979; 5).

The methodological approach of the natural sciences differs in terms of the search utilised for regularities. There are those who would argue that "...hypothesised regularities can be verified by an adequate research programme...[whilst]...others would maintain that hypotheses can only be falsified and never demonstrated to be 'true'." (Burrell and Morgan, 1979; 5).

Whether a verificationist or falsificationist approach is taken it is argued that "...both...would accept that the growth of knowledge is a...cumulative process in which new insights are added...and false hypotheses eliminated." (Burrell and Morgan, 1979; 5). Whether the approach is of a verificationist or a falsificationist nature, the search for regularities in explaining human behaviour is one of a first order nature. There is an almost obsessive concern for the development of systematic processes that will 'guarantee' repeatability and this is obviously associated with first order internal system change.

The polarised position taken up by the anti-positivists:

"...is firmly set against the utility of a search for laws or underlying regularities in the world of social...[and organisational]...affairs...[that is]...essentially relativistic and can only be understood from the point of view of the individuals who are directly involved in the activities which are to be studied." (Burrell and Morgan, 1979; 5).

In rejecting the:

"...standpoint of the 'observer'...as a valid vantage point for understanding human activities...[anti-positivists argue]...that one can only 'understand' by occupying the frame of reference of the participant...[engaged in a change situation]...from the inside..." (Burrell and Morgan, 1979; 5).

Clearly, the anti-positivist perspective is "...subjective rather than objective...[and there is a rejection of]...the notion that science can generate objective knowledge of any kind." (Burrell and Morgan, 1979; 5).

Exploring the anti-positivist perspective within a first/second order context is of importance in developing a STOC. On the face of it, using the participant frame of reference would appear to be associated with a first order notion of organisational change. However, there is an inherent search for understanding of the dynamic of change, from a standpoint of system wide change, using the full range and scope of a change situation. As this is systemic, and therefore second order in nature, it is argued that anti-positivism, and those who adopt such a perspective, is concerned with second order change.

3.5.1.8 The Human Nature Debate

Attempts to understand human behaviour within an organisational context, particularly when change is involved, has been the subject of intense interest and research over many decades. This interest commenced in a recognisable way with the work of Taylor, Fayol and Weber in what has become known as the 'classical' or 'traditional' theories of organisational behaviour. It is beyond the scope of this thesis to explore this aspect of organisational behaviour in any depth. However, it is worth pointing out that this area of research continues to occupy leading scholars as the nature and rate of organisational change continues to change. The reason for mentioning this area of scholarly activity is that it is inexorably linked to this research programme in terms of developing a human component of the STOC.

Much of the scholarly activity associated with understanding human behaviour in organisational change situations has been the research into 'models of man'. The human nature debate here "...revolves around the issue of what model of man is reflected in any...social-scientific theory." (Burrell and Morgan, 1979; 6). Again, it can be seen that there are polarised extremes to contend with.

At one pole is "...a determinist view which regards man and his activities as being...determined by the situation or 'environment' in which he is located." (Burrell and Morgan, 1979; 6). This perspective, or model of man, is closely linked to a realist ontology and a positivist epistemology. For example, 'scientific management' principles postulated that man, as an economic factor of production, could be moulded by his working environment to higher levels of productivity in return for appropriate economic rewards.

The polar opposite of this determinist view is the "...voluntarist view that man is...autonomous and free-willed." (Burrell and Morgan, 1979; 6). Under this regime of thinking man has choice in the way he relates to and interacts with his social and organisational world. This model of man relates to a nominalist ontology and an anti-positivist epistemology. The 'human relations' and 'systems' schools of management thought are identified with man as the principal level of analysis, and the power of the group in establishing the culture and norms of human behaviour when confronted with organisational change situations.

In trying to understand human activity in organisations it is normal to "...incline to one or other of these points of view, or adopt an intermediate standpoint which allows for the influence of both situational and voluntary factors in accounting for the behaviour of human beings." (Burrell and Morgan, 1979; 6). This creates a paradox for scholars and interventionists alike in trying to understand and respond to the vagaries of human behaviour in an organisational change situation. The ontological and epistemological debate recognises clearly identified perspectives that can be de-lineated where organisational change is concerned. The human nature debate however is much more difficult to 'boundarise' in the context of first/second order change. The argument that it is possible to adopt an intermediate or 'fence sitting' position in this debate permits a mixed or contingency approach to be followed when analysing human behaviour in an organisational change situation. This is in keeping with the contingency or 'no best way' model of organisational behaviour that emerged from the systems based models of the 1960's. Such an approach has found considerable favour amongst scholars and interventionists in that situational variables can be incorporated into any analysis being undertaken in response to a change situation. Therefore, it is argued that the boundary for a particular organisational change programme should be established having due regard for the situational variables encountered. In this manner it is entirely feasible to recognise and deal with both first and second order change where human nature is concerned.

3.5.1.9 The Methodological Debate

The view that "...one can only understand the social...[and organisational]...world by obtaining first-hand knowledge of the subject under investigation...places considerable stress upon getting close to one's subject..." (Burrell and Morgan, 1979; 6). This 'ideographic' methodological "...approach emphasises the analysis of the subjective accounts...one generates by 'getting inside' situations...[and the]...method stresses the importance of letting one's subject unfold its nature...during the process of investigation." (Burrell and Morgan, 1979; 6). The ideographic methodological approach to organisational intervention is closely linked to the nominalist ontology and the anti-positivist epistemology and is also associated with a

voluntarist view of human nature. Using the arguments rehearsed above, it is clear that an ideographic methodological approach is conducive to addressing second order change situations.

It is also necessary to consider the polarised 'nomothetic' methodological approach that "...lays emphasis on the importance of basing research upon systematic protocol and technique." (Burrell and Morgan, 1979; 6). The nomothetic approach emphasises the: "...methods employed in the natural sciences, which focus upon the process of testing hypotheses in accordance with the canons of scientific rigour. It is preoccupied with...scientific tests and the use of quantitative techniques for the analysis of data." (Burrell and Morgan, 1979; 6-7). The nomothetic methodological approach is related to a realist ontology and a positivist epistemology. As there is also an association with a determinist view of human nature, then it is clear that the nomothetic methodological approach is only capable of managing first order organisational change situations.

3.5.1.10 Assumption Analysis

The debates concerning the ontological, epistemological, human nature and methodological strands can help to "...provide an extremely powerful tool for the analysis of social...[and organisational change]...theory." (Burrell and Morgan, 1979; 7).

Whilst it is recognised that there is likely to be a "...relationship between the positions adopted...[and discussed above]...on each of the four strands, assumptions about each can vary...considerably." (Burrell and Morgan, 1979; 7). Each of these assumptions will be reviewed as a precursor to considering the issues of control and radical change in an organisational context.

The assumptions regarding the strands of ontology, epistemology, human nature and methodology will be examined from the standpoints of the "...extreme positions on each of the four strands...[that]...are reflected in...two major intellectual traditions..." (Burrell and Morgan, 1979; 7).

The first of the two intellectual traditions "...which have dominated social science over the last two hundred years is...described as 'sociological positivism'...and reflects the attempt to apply models and techniques derived from the natural sciences to the study of human affairs." (Burrell and Morgan, 1979; 7).

Sociological positivism:

- Is ontologically 'realist' and views the social world in terms similar to the natural world;
- Is epistemologically 'positivist' and utilises natural science processes of inquiry;
- Takes a 'deterministic' view of human nature by using an economic model of man;
- Advocates 'nomothetic' methodological approaches to intervention in human affairs.

(Adapted from Burrell and Morgan, 1979; 7).

The second of the two intellectual traditions is:

"...that of 'German idealism'...[that]...stands in complete opposition to...[sociological positivism in that]...it is based upon the premise that the...reality of the universe lies in 'spirit' or 'idea' rather than in the data of sense perception...[and]...in contrast to the natural sciences, it stresses the...subjective nature of human affairs, denying the utility and relevance of the models and methods of natural science..." (Burrell and Morgan, 1979; 7).

German idealism:

- Is ontologically nominalist and views the social world as being made up of labels used to describe reality;
- Is epistemologically anti-positivist and rejects the notion of scientific modelling of human affairs;
- Takes a 'voluntarist' view of human nature by emphasising the free will of human behaviour;
- Advocates an 'ideographic' methodological processes of inquiry.

(Adapted from Burrell and Morgan, 1979; 7).

The extremes of the assumption analysis will be used as a basis for the first of the two dimensions of the framework for social and organisational analysis. This first of the two dimensions is known as the 'subjective - objective' dimension and is shown in Figure 3.6 below.

Subjectivist Approach to Social Science	Objectivist Approach to Social Science	Strand
Nominalist	Realist	Ontology
Anti-positivist	Positivist	Epistemology
Voluntarist	Determinist	Human Nature
Ideographic	Nomothetic	Methodology

Figure 3.6 The Subjective - Objective Dimension of a Framework for Social and Organisational Analysis
(Adapted from Burrell and Morgan, 1979; 3; Figure 1.1)

3.5.2 A Framework for Social and Organisational Analysis - The Regulation and Radical Change Dimension

Social and organisational analysis has many facets and concerns. The issues of ontology, epistemology, human nature and methodology have been addressed and a

dimension along a Subjective - Objective continuum, as a first stage in the development of a framework of analysis, has also been established.

It is now necessary to incorporate the Regulation - Radical change dimension to complete the analytical framework. This will be achieved by considering the issues of order and conflict in society and organisations.

3.5.2.1 The Order - Conflict Debate

As a starting point for the consideration of the problems of order and conflict in society and organisations, the already discussed concepts of persistence and change will be used. It has already been argued that persistence and change are inter-related aspects of organisational 'life'. The notions of conflict and order are also fundamental issues, and indeed change situations, in organisational behaviour.

Conflict is an endemic feature of all organisations; it is always present either in covert or overt forms. Dysfunctional conflict can destroy a social organisation, whereas conflict that is well managed can be creatively used in a manner beneficial to organisational effectiveness.

A well ordered organisation is a state that many managers aspire to. Indeed, the achievement of control is a fundamental function of management. An organisation is structured in a manner likely to assist managers to control the function for which they are held responsible. The Viable System Model (VSM) (Beer, 1981) incorporates, as a fundamental principle, the notion of control and is predicated on the cybernetic principle of 'the science of control in man and machine'. Clearly, control is an important aspect of organisational analysis.

Control is associated with stability, or persistence in organisations. Conflict, on the other hand is related to change. Under stable organisational conditions it is likely that control is relatively easy to achieve. However, under conditions of uncertainty or change conflict is highly likely to exist. These conditions can be thought of as the emergent properties of an organisational system operating under quite different conditions. From this it can be inferred that the system properties of stability and change are correlated to order and conflict. All of this is rather pragmatic and it is necessary that we put the theoretical side into place.

The sociological debate has been conducted by theorists who have "...concentrated upon explaining the nature of social order and equilibrium on the one hand, and those which were more concerned with problems of change, conflict and coercion in social structures on the other." (Burrell and Morgan, 1979; 10).

This debate led to two societal models that "...are characterised in terms of competing sets of assumptions..." (Burrell and Morgan, 1979; 11). These two sets of assumptions and the associated characteristics are summarised below.

The order model characteristics are:

- Commitment;
- Cohesion;
- Solidarity;
- Consensus;
- Reciprocity;
- Co-operation;
- Integration;
- Stability;
- Persistence.

The conflict model characteristics are:

- Coercion;
- Division;
- Hostility;
- Dissensus;
- Conflict;
- Malintegration;
- Change.

(Adapted from Burrell and Morgan, 1979; 11)

In a manner similar to that rehearsed for stability and change, it can be argued that it "...is a...[mistake to treat]...the order and conflict models as being entirely separate...and that it is possible for theories to involve elements of both models...[in other words]...they are not mutually exclusive..." (Burrell and Morgan, 1979; 11).

It is entirely reasonable to suggest that, as the order - conflict models form a continuum, then this can form a basis for the second dimension of the analytical framework. However, it has also been suggested, "...this conceptualisation is...an oversimplification, and whilst providing a very useful tool...it is open to...misinterpretation." (Burrell and Morgan, 1979; 13). It is, therefore, important that we search for and develop an alternative to the model as "...the order - conflict distinction is...problematic...[and]...it should be replaced as a central theme by the notions of 'regulation' and 'radical change'." (Burrell and Morgan, 1979; 13).

3.5.2.2 The Regulation - Radical Change Dimension

The concept of 'regulation' in societal and organisational systems helps to "...provide explanations...in terms which emphasise...underlying unity and cohesiveness...[and]...is essentially concerned with the need for regulation in human affairs." (Burrell and Morgan, 1979; 17).

The notion of regulation is closely associated with control and is, therefore, linked to stability and persistence in organisational management. The issues that are considered to be of paramount importance in this extreme of the dimension include:

- The need to understand why social and organisational systems are maintained as recognisable entities;
- Finding an explanation for societal and organisational integration;
- Understanding the social and organisational forces that prevent inter-factional 'war'.

(Adapted from Burrell and Morgan, 1979; 17).

Radical change, on the other hand, is related to the management of change in an organisational setting. It is not possible at this stage of the thinking to state, with any degree of certainty, whether it is first or second order change that is at issue. However, the issues that are seen to be important include:

- Finding explanations for structural conflict, modes of domination and contradiction that exist in organisations;
- A concern with the need for 'man's' emancipation from constricting societal and organisational structures;
- Establishing what might be possible rather than 'what is' in terms of societal and organisational potential;
- Developing alternatives rather than a passive acceptance of the status quo.

(Adapted from Burrell and Morgan, 1979; 17).

These issues and concerns that characterise the extremes of the regulation - radical change dimension are summarised below in **Figure 3.7.**

Regulation is concerned with:	Radical Change is concerned with:
The Status Quo	Radical Change
Social Order	Structural Conflict
Consensus	Modes of Domination
Social Integration and Cohesion	Contradiction
Solidarity	Emancipation
Need Satisfaction	Deprivation
Actuality	Potentiality

Figure 3.7 The Regulation - Radical Change Dimension of a Framework for Social and Organisational Analysis
(Adapted from Burrell and Morgan, 1979, 18; Table 2.2)

Using the two dimensions it becomes possible to formulate the framework for social and organisational analysis. This framework will then be used to develop the ontological and epistemological framework for organisational change.

3.5.3 A Framework for Social and Organisational Analysis - Two Dimensions and Four Paradigms

Burrell and Morgan (1979) utilised the two dimensions to create a two by two matrix as a basis for the four-paradigm framework for social and organisational analysis. Combining the "...objective-subjective and regulation-radical change dimensions, we can produce a matrix defining the four key sociological paradigms...which are labelled *functionalist*, *interpretive*, *radical structuralist*, and *radical humanist*..." (Jackson, 1991; 19) (Italics in the original). This "...four-paradigm framework is represented by...[**Figure 3.8** in which each of]...the paradigms is a self contained theoretical statement..." (Ellis, 1995(a); 202).

Each of the four paradigms "...are founded upon mutually exclusive views of the social world...stands in its own right and generates its own distinctive analyses of social life." (Jackson, 1991; 19). This "...should put us in a position to ask whether we agree with the assumptions...[that underpin each of the paradigms]..." (Jackson, 1991; 19). This is particularly relevant when considering the issues associated with organisational change in the context of the intervention methodologies being used in particular change situation. As 'Critical Reflection' is a fundamental principle of CST it is right and proper that such questions are included in the STOC.

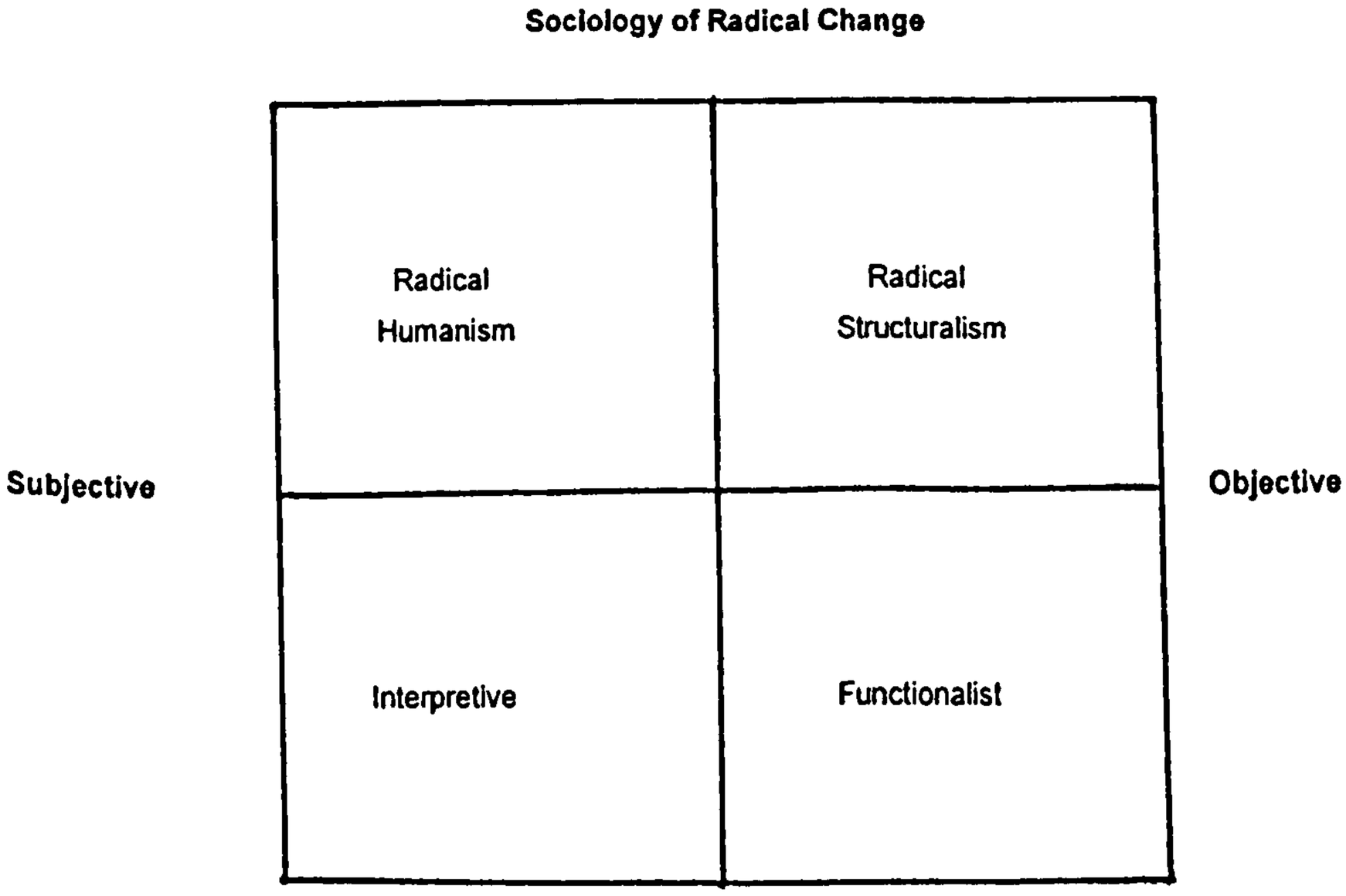


Figure 3.8 The Four Paradigm Framework for Social and Organisational Analysis
(Source: Burrell and Morgan, 1979; 22; Figure 3.1)

The main characteristics of the four paradigms can be drawn together by referring to the previous discussion of the two dimensions. The characteristics are summarised below. This summary uses as its sources Burrell and Morgan (1979), Jackson (1991) and Ellis (1995(a)).

The Functionalist Paradigm:

- Is based on objectivism and regulation;
- Searches for regularity in relationships between elements and sub-systems within systems;
- Views, or 'sees' systems as having a 'hard' existence independent of observers;
- Recognises human factors as being no more problematic than any other system elements;
- Places emphasis on the power and value of mathematics as the preferred means of developing models of social systems;
- Studies and analyses organisational and social systems in order that their behaviour may be predicted and controlled.

The Interpretivist Paradigm:

- Is based on subjectivism and regulation;
- Recognises that understanding of social and organisational systems is only made possible through gaining subjective knowledge of the human beings who construct the systems;
- Sees systems as being difficult to identify and define in that they are viewed as 'soft' and exist only as a creative human construction;
- Suggests that it is not possible to develop mathematical models of social systems and asserts that knowledge of system activities is gained by 'getting inside the system to conceptualise the modus operandi';
- Suggests that social and organisational systems are studied to predict and control their behaviour.

The Radical Structuralist Paradigm:

- Is based on objectivism and radical change;
- Also sees systems as having a 'hard' existence independent of observers;
- Seeks to establish and understand regularity in relationships between system elements and sub-systems;
- Does not pay much attention to the intentions of human beings in social systems;
- Emphasises quantification in system models but with the intention of studying the mechanics of radical change;
- Seeks explanation for and understanding of system contradictions and structural conflict in the system;
- Advocates human emancipation from the structural constraints imposed by the system.

The Radical Humanist Paradigm:

- Is based on subjectivism and radical change;
- Sees systems as being the creative constructs of human beings;
- Understands social and organisational systems through understanding the intention of their human creators;
- Suggests that understanding system behaviour is only achievable by observer involvement in system activities;
- Gaining understanding of the social arrangements that constrain human development is seen as fundamental if human emancipation is to be achieved;
- Rejects the notion that mathematical models can assist in understanding system behaviour.

A framework for social and organisational analysis is established in terms of:

- The ontological assumptions;
- The epistemological assumptions;
- The assumptions concerning human nature and activity;
- The methodological assumptions within the context of processes of inquiry;
- The subjective-objective issues relative to social organisations;
- The issues of radical change versus regulation in social organisations;
- The development of four paradigms.

This chapter will be completed by using the Burrell and Morgan (1979) schema as a basis for setting out an ontological and epistemological framework of organisational change.

3.5.4 An Epistemological and Ontological Framework for Organisational Change

The preceding discussion of the Framework for Social and Organisational Analysis provides an ontological and epistemological framework that will help to underpin the Systemic Theory of Organisational Change.

This will be approached through the following schema:

- Setting out an environmental dimension that ranges from stable to unstable;
- Developing an organisational response dimension that ranges from active to passive;
- Creating four characteristic models to form an ontological and epistemological framework that will help to develop and underpin the Systemic Theory of Organisational Change.

3.5.4.1 The Environmental Dimension

All business organisations operate in a containing environment. This environment, in systems terms, is that aspect of organisational management that is largely outside the direct control of the managers of the organisation. Systems and factors that are in the environment of an organisation are external to the operational boundary of the organisation.

It can be argued that the environment of an organisation is made up of two distinct areas:

- The general environment containing systems that affect all organisations;
- A task environment which contains systems that are specific to particular organisations.

The general organisational environment can contain systems such as:

- The prevailing political regime;
- Economic;
- Demographic;
- Financial;
- Social.

A task environment can contain systems such as:

- Suppliers;
- Technological;
- Customers.

The systems contained in a task environment are likely to be more conducive to managerial control than those in the general environment.

Rates of change in an organisational environment vary across a continuum ranging from rapid to slow. The nature of the environment can vary from stable, certain and predictable on the one hand to unstable, uncertain and unpredictable on the other hand. These variations in environmental conditions are likely to be of significant interest to organisational managers and must be included in any theory of organisational change. Yet, many organisations appear either to be unaware of the operational environment, or if there is awareness, little real attempt is made to use the knowledge in a manner beneficial to the organisation. It is for reasons such as these that a deeper understanding of the ontological and epistemological bases of change will provide benefit in terms of more effective change management programmes.

The prevailing rate of change in the task environment may not be the same as that in the general environment. Indeed the levels of interdependency and interconnectedness between the task and general environments are likely to be positively correlated to each other. Therefore, for purposes of this thesis, it will be assumed that the rates of change in both task and general environments are the same. Having accepted that both the task and general environments can be considered as homogenous then the 'environment' can be understood in terms of a continuum. This is shown in **Figure 3.9** below.

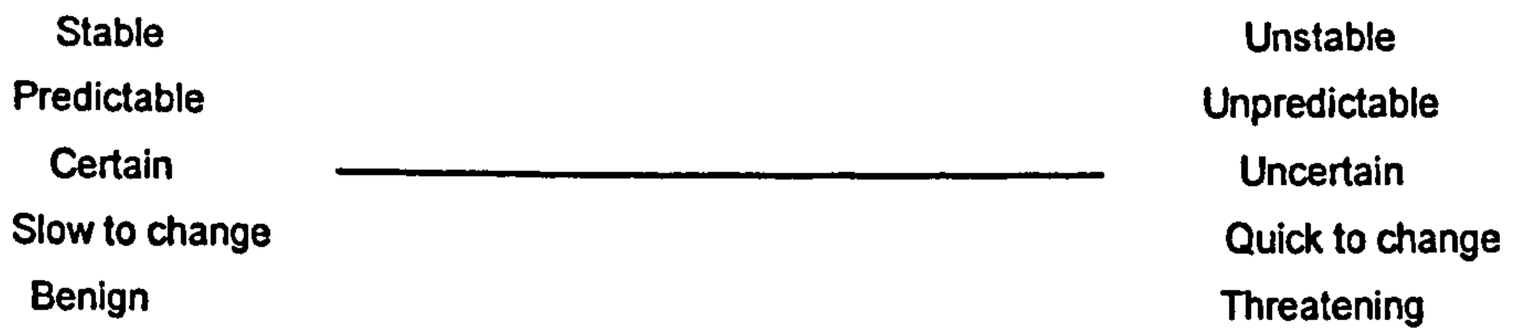


Figure 3.9 Variability in an Organisational Environment

3.5.4.2 The Organisational Response Dimension

This is an interesting dimension and has needed thought prior to arriving at a 'conceptualisation' as a basis for analysis. The 'organisation' itself does not respond to change; it is the managers that respond to the demands of change situations within the context of the need for organisational effectiveness. Therefore, it can be argued that this dimension can be considered in terms of:

- Organisational adaptability;
- Managerial posture(s);
- Decision capability....

However, in the interest of simplicity, it is reasonable to use the concept of 'response' and to locate this within the context of the level of managerial activity generated by a 'felt need' for change. This felt need could emerge as a result of internally generated (push) or externally (pull) imposed change situations. This is not to say that the nature or level of activity generated by push or pull changes may not differ in intensity or levels of commitment. Indeed, this little understood aspect of organisational change could well benefit from further research, but that is beyond the scope of this thesis.

An organisation, in terms of its management, can respond to change demands in 'passive' or 'active' forms. Whether the change is of a pull or a push nature, managers can adopt a passive or an active posture in response to the demand. This posture will, of course, have consequences for the organisation as a system and will also have a bearing on the ability to gain or maintain strategic competitive positioning in the operational environment.

This can be conceptualised as shown in **Figure 3.10** below.

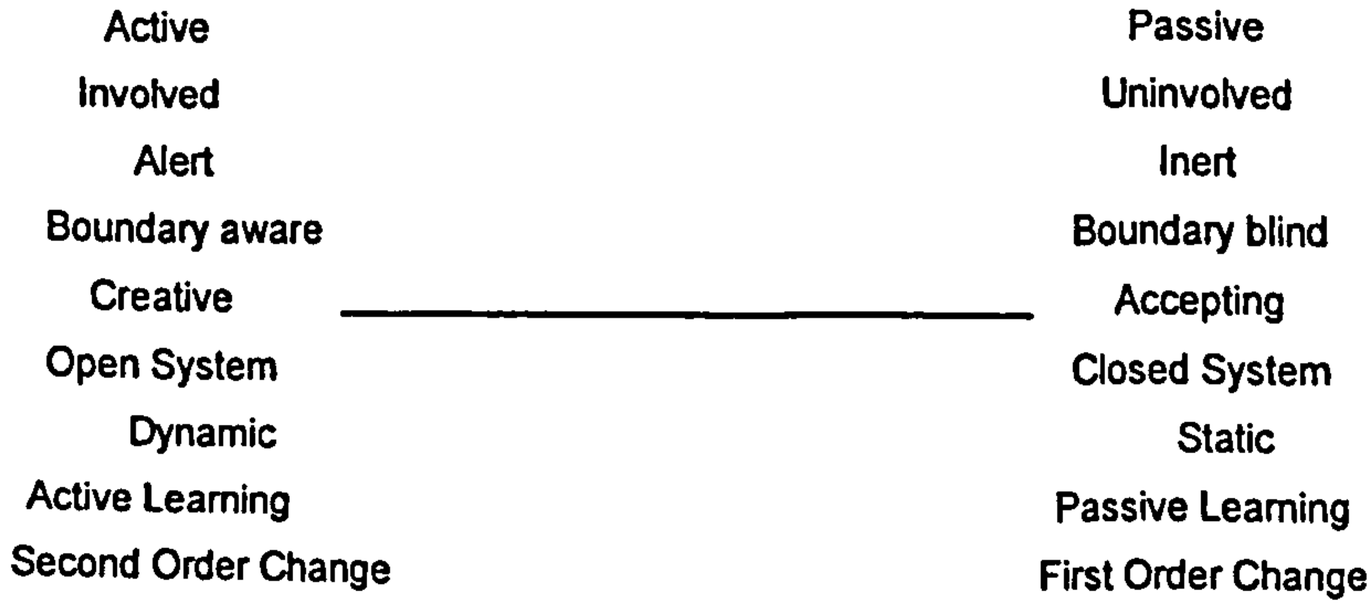


Figure 3.10 Organisational Response to Change

3.5.4.3 Commentary

The assumptions, characteristics, and theoretical underpinning of the Framework for Social and Organisational Analysis (Burrell and Morgan, 1979) were rehearsed in paragraphs 3.5.1, 3.5.2 and 3.5.3.

This framework helps to articulate four characteristic models of organisational change that will be discussed below. These four models are also related, in terms of their characteristics, to the environmental and organisational change dimensions shown in **Figures 3.9 and 3.10** above.

The four models, which are suggested as an ontological and epistemological framework for organisational change, are articulated by using sets of characteristics. These four models will be of ontological and epistemological value in the development of the Systemic Theory of Organisational Change (STOC). The four models will also form a basis for developing the characteristics of the human and system complexity dimensions of the Contextual Relationship Model in Chapter Seven. Therefore, this model is an important component of the Critical Pluralist Intervention Methodology (CPIM).

3.5.4.4 The Inactive Characteristic Model

The characteristics of the inactive model of organisational change include:

- Passive in terms of the organisational response dimension;
- Stable in terms of the environmental variability dimension;
- Organisational structures are likely to be bureaucratic with routine behaviour based on well-established formal rules;
- A reliance upon scientific method as a basis for investigative processes of inquiry;
- A realist ontology;
- An emphasis upon pragmatism with little critical reflection on which to base learning;
- Boundary blind, inert and inactive;
- Organisational behaviour will be relatively closed as a system;
- Organisational structures are likely to concentrate power at the top with an assumption that knowledge is restricted to those who hold power;
- Tolerance of ambiguity and failure is likely to be low with subsequently low levels of innovation and creativity as a result;
- Organisational cultures are likely to inhibit individualism and utilise a rational economic model of man;
- Managerial behaviour is likely to be based on autocratic styles of management;
- Change is likely to be resisted and limited to first order only;
- A machine metaphor is appropriate.

3.5.4.5 The Adaptive Characteristic Model

The characteristics of the adaptive model of organisational change include:

- Active in terms of the organisational response dimension;
- Stable in terms of the environmental variability dimension that it shares with the inactive model;
- Organisational structures are likely to be quasi-bureaucratic with an ability to adapt structure dependent upon the prevailing environmental conditions;
- A reliance upon ideographic methods of inquiry but with a marked preference for one particular approach;
- A nominalist ontology;
- An emphasis upon adaptive learning through consensus seeking approaches;
- Boundary aware, alert and adaptive;
- Organisational behaviour will be relatively open as a system;
- Organisational structures are likely to recognise that power is an issue and that it will be normally found at the top of an organisation with a recognition that knowledge will also be restricted to those who hold power;
- Tolerance of ambiguity and failure will be higher than that of the inactive model but will not be permitted 'free rein';
- Creativity and innovation levels are likely to be restricted to group rather than individual activity;
- Organisational cultures are also likely to inhibit individualism and utilise social animal models of man;
- Managerial behaviour is likely to be based on paternal autocratic styles of management;
- Change is likely to be accepted but limited to first order only;
- Because of adaptive behaviour, an organic metaphor is appropriate.

3.5.4.6 The Proactive Characteristic Model

The characteristics of the proactive model of organisational change include:

- Active in terms of the organisational response dimension;
- Unstable in terms of the environmental variability dimension. This characteristic is shared with the adaptive model;
- Organisational structures are most likely to be of a network form with a high degree of adaptability to changing environmental conditions;
- A complementarist approach to methods utilised during processes of inquiry in critical mode;
- A nominalist ontology;
- An emphasis upon proactive learning that is actively sought;
- Boundary alert, dynamic and change seeking;
- Organisational behaviour will be totally open as a system;

- Organisational structures are such that power is seen as a process of influence and not related to rational legal authority or position;
- Knowledge is seen as an organisational resource emanating from all organisational levels and to be beneficially used for the total organisation;
- Tolerance of ambiguity and failure will be a norm provided that learning occurs;
- Creativity and innovation will be a system wide expectation and encouraged at both group and individual levels;
- Organisational culture will encourage trust and open behaviour with individualistic creativity commensurate with entrepreneurial modes of management;
- Managerial behaviour is likely to be open and democratic;
- Change is encouraged with 'out of the box' thinking promoting second order change;
- Chaos is accepted and managed;
- Because learning is active a neuro-cybernetic metaphor is appropriate.

3.5.4.7 The Reactive Characteristic Model

The characteristics of the reactive model of organisational change include:

- Passive in terms of the organisational response dimension;
- Unstable in terms of the environmental variability dimension. This characteristic is shared with the inactive model;
- Organisational structures are likely to be of a matrix or pseudo-matrix variety with a reasonable capability to manage environmental changes;
- A preference for scientific methods as processes of inquiry, but with an ability to adopt a multiple approach when absolutely necessary;
- A realist ontology;
- A reactive approach to learning, an after the event outlook;
- Boundary inert, tendency to concentrate on internal changes and to ignore the events occurring in the outside world;
- Organisational behaviour is relatively closed as a system;
- Organisational structures are associated with power being dissipated between project and formal authorities with knowledge being closely guarded at the level of generation;
- Ambiguity and failure is tolerated at senior levels often as an 'excusable condition' of progress;
- Creativity and innovation are expected at project levels;
- Organisational culture can create conflict between project and formal authority. Group norms dominate individual enterprise;
- Managerial behaviour is likely to be consultative democratic but the tendency to regress to autocratic style can be high;
- Change is recognised as a fact of life but implemented as a reaction. A follower rather than a leader in strategic competitive positioning;
- First order change is normative, with second order change a rarity;
- Chaos is to be avoided;
- A culture metaphor is appropriate.

3.6 CONCLUDING SUMMARY

Whilst **Figures 3.9 and 3.10** above reveal the ontological and epistemological characteristics that can improve the understanding of organisational change, it is also helpful to briefly review the preceding discussion. This will provide a basis in Chapter Six from which to develop the STOC.

This Chapter Three has considered and discussed:

- The nature of organisational change in terms of the problem, dynamics, and first and second orders;
- The structure and process of change in systems terms;
- The established models of organisational change;
- An epistemological and ontological framework for organisational change utilising the sociological paradigmatic approach of Burrell and Morgan (1979) as a developmental basis.

In terms of the dynamics of change it was established that both group theory and the theory of logical types are helpful where multi-level change is concerned. Group theory and the theory of logical types show that persistency and change are linked, as indeed are method and methodology. It is theoretical aspects such as these that lead to the conclusion that a partial basis for deriving a Systemic Theory of Organisational Change has been established.

First order change is seen as internal to any system where the system itself remains, to an observer, unchanged; whereas second order change is a phenomenon in which the system itself changes. From this rather simplistic summary it is concluded that second order change is associated with problem formulation and resolution, and is strategic in nature. It is most likely to be encountered in organisations undergoing total system change that is either imposed from the environment or generated from within the organisation itself.

Traditional organisational change programmes are often seen as 'events' and treated as first order. In reality, organisational change programmes are frequently nothing of the sort; rather they are a complex mixture of first and second order changes and are a 'process'. Herein lay the seeds of failure for many such change programmes in that the change is neither effective nor sustainable simply because the phenomenon is not recognised or understood. In systems terms the change programme design is not systemic. This view is supported by considering organisational change in systems terms and this can be summarised by recognising that problems and issues are not synonymous. Frequently 'problem' and 'issue' are seen as one and the same; they are not, and it is erroneous to think that problems can be solved simply by throwing in undirected resources using first order thinking. A more effective, second order approach is to recognise that problems are situations made up from networks, or a 'mess', of problems. Such a mess, or problem situation, contains many issues that need to be managed as flows or processes, leading to the conclusion that second order thinking is systemic, whereas first order thinking is simply systematic.

Established models of organisational change are largely non-systemic and, therefore, the conclusion must be that such models concentrate on first order change at the expense of second order change. From this conclusion, and given that most organisational change programmes utilise the established models, it is little wonder that the failure rate is high.

The Burrell and Morgan (1979) sociological analysis framework provided the basis for a theoretical development of an epistemology and ontology of organisational change in terms of characteristic models. Such a framework is considered valid given that organisations can be viewed as social systems and entities.

CHAPTER FOUR

SYSTEMS THINKING - A PERSPECTIVE

4.1 INTRODUCTION

This is the first of two chapters that will deal with important and fundamental theoretical aspects of systems thinking including:

- The underpinning philosophical components of systems thinking;
- The relationships between social theory and systems thinking;
- The development of the 'traditional' forms of systems thinking;
- The emergence and development of 'pluralistic' forms of systems thinking;
- The reasoning behind and underpinning of 'critical' systems thinking.

This chapter will draw upon the work already undertaken in Chapter Three by utilising the sociological paradigms of Burrell and Morgan (1979) as a theoretical underpinning for systems thinking. Also included in Chapters Four and Five will be the work of scholars such as:

- Russell Ackoff;
- Gibson Burrell;
- Stafford Beer;
- Peter Checkland;
- C West Churchman;
- Colin Eden;
- Robert Flood;
- Michael Jackson;
- Gareth Morgan;
- John Warfield;
- Werner Ulrich.

This Chapter Four, in combination with Chapters Three and Five, will help to provide a theoretical basis for the Systemic Theory of Organisational Change (STOC). The structure of this chapter will be:

- A discussion of the development of 'traditional' or 'hard' forms of systems thinking;
- Consideration of the emergence of 'pluralistic' or 'soft' forms of systems thinking;
- An exposition of the bases of 'critical' and 'emancipatory' forms of systems thinking;
- Discussion of a theoretical underpinning for systems thinking.

4.2 TRADITIONAL SYSTEMS THINKING

Systems thinking emerged from the assumption "...that systems of all types could be identified by empirical observation of reality and could be analyzed by essentially the same methods that had brought success in the natural sciences." (Jackson, 1991; 5).

Systems thinking, as an abstract notion, is rooted in the positivist paradigm of the natural sciences. Burrell and Morgan (1979) refer to this, in the terminology of the social sciences, as the 'Functionalist Paradigm'. This conceptually underpins the notion of a system in abstract terms. However, according to Ellis (1995(a)), it was not until the 1940's that systems thinking emerged as a discipline. Indeed, "...until the mid 1970's there was general agreement concerning the notion of 'system' and with respect to...concepts such as 'boundary', 'feedback', 'control' etc." (Ellis, 1995(a); 200). In that sense, then "...[systems thinking]...was dominated by...positivi[st] and functionali[st] characteristic[s]...of the scientific method." (Jackson, 1991; 5). Accepting this as a basis, this form of systems thinking has been identified as "...the *traditional* systems approach." (Jackson, 1991; 5) (Italics in the original).

The pioneering work in the field of traditional systems thinking was directed towards the development of a "...universally applicable General System Theory (GST) in an attempt to learn about the nature of 'real world' systems." (Ellis, 1995(a); 200). A second developmental strand of traditional systems thinking was pursued to bring about "...methodologies for intervention, design and change in large scale man made systems." (Ellis, 1995(a); 200). A third developmental strand of traditional systems thinking was associated with gaining an understanding of organisations in systems terms. Indeed, traditional systems thinking "...embraced strands...such as organizations as systems, general system theory, contingency theory, operational research, systems analysis, systems engineering, and management cybernetics." (Jackson, 1991; 5).

It is beyond the scope of this thesis to carry out a detailed review and appraisal of traditional systems thinking. It is considered sufficient for the purposes of this thesis to have shown, through this brief review, that traditional systems thinking is rooted in the positivist paradigm of the natural sciences and the functionalist paradigm of the social sciences.

4.3 PLURALISTIC SYSTEMS THINKING

The traditional form of systems thinking emphasises 'real world' problem solving where the problems are well defined. In the traditional school, there was a pragmatically oriented search for methodologies suited to analysing, designing and implementing large-scale man-made systems. It was from such activities during, and immediately following World War Two, that methodologies such as Systems Analysis (SA), Systems Engineering (SE) and Operational Research (OR) were developed. Such methodologies were, and indeed still are, particularly well suited to dealing with well-defined problems of a task-oriented nature. Later developments produced methodologies such as System Dynamics (SD).

However, the "...traditional approach became the subject of increasing levels of criticism from the late 1970's onwards." (Ellis, 1995(a); 200). The main criticism came from an emerging body of scholars and practitioners that have become known as 'soft' systems thinkers. Whilst the term 'soft' is adequate it does not reveal the true nature of this form of systems thinking. It is a necessary but not sufficient term.

The criticisms of the traditional approach were "...founded on the premise that the traditional, or 'hard' (i.e. scientific) approach was not capable of dealing with increasingly complex strategic problem situations involving conflicting human perceptions." (Ellis, 1995(a); 200).

The 'bone of contention' was that methodologies such as SA, SE, OR, and SD were inappropriate when faced with ill-structured or poorly defined 'messy' problem situations that could be subject to multiple interpretations. It is this argument that leads to the assertion that the 'soft' form of systems thinking should be termed 'pluralistic' systems thinking rather than 'soft' systems thinking. The fact that 'soft' systems approaches are considered useful and appropriate in poorly structured problem situations indicates that it can be difficult for participants in the problem situation to arrive at consensus on just what the problem is. Therefore, it is argued that the participants, in the system that contains the problem situation, are most unlikely to adopt a unitarist perspective. Therefore, it is asserted that multiple perspectives suggest that a pluralist stance is more appropriate. Consequently, it is argued that the term 'pluralist' systems thinking is more appropriate. This argument will be taken up in Chapter Five when contemporary developments in systems thinking are considered. Nevertheless, it was from the growing disquiet with the traditional approaches "...that...[pluralist]...systems thinking emerged during the late 1970's and early 1980's." (Ellis, 1995(a); 200).

The 'pluralist' group of systems thinkers developed methodological approaches that included Soft Systems Methodology (SSM) (Checkland, 1981, 1991); Interactive Planning (IP) (Ackoff, 1981); Cognitive Mapping (CM) (Eden 1983); Viable Systems Model (VSM) (Beer, 1981) and Interactive Management (IM) (Warfield, 1989, 1994).

Again, it is not intended to provide a detailed treatment of the pluralist methodologies as this would be beyond the scope of this thesis. However, it is important to note that this form of systems thinking utilises interpretivist social theory as an underpinning framework.

4.4 CRITICAL SYSTEMS THINKING

An important fact emerging from the development of 'pluralist' methodologies was that the "...notion of 'systems' changed with the first break from the positivist approaches with Checkland's (1981) development of...(SSM)." (Ellis, 1995(a); 201). An important aspect of this development was that "...systems were thought of as mental constructs and systemicity was seen as being contained in the process of enquiry." (Ellis, 1995(a); 201).

The developments and benefits realised by the use of pluralist systems thinking were not met with universal approval. Indeed, there were many, possibly with personal stakes to protect, who argued that (e.g.) SSM was really SE in disguise. It was not too long before the traditionalist and pluralist camps were literally 'at war' and developmental work largely ground to a halt. However, this 'hard' versus 'soft' dichotomy led, in part, to the early work in critical

systems thinking (CST) as "...radical forms of thinking began to surface within the systems movement." (Ellis, 1995(a); 208).

CST emerged during the late 1970's and "...the first steps...consisted of radical attacks upon other forms of management science." (Jackson, 1991; 183). The traditional approach:

> "...already under fire from the...[pluralist]...thinkers, came under further attack from Marxist...scholars...[who argued]...that any critical management science should consider the origins of values, the relations between organizations and society, the historical development of organizations, and the relationship between management science and development within capitalism." (Jackson, 1991; 183).

This attack was intense and sustained. However, proponents of the emerging critical strand were criticised for not suggesting anything better than that which already existed. An initial response to this justifiable criticism was Critical Systems Heuristics (CSH) (Ulrich, 1994), followed by Total Systems Intervention (TSI) (Flood and Jackson, 1991(a); 1991(b)).

It can be argued that both the traditional and pluralist forms of systems thinking suffered from many weaknesses. Ellis (1995(a)) has asserted that uppermost amongst these weaknesses is that there is little use of social or change theories or, indeed, any theory of organisational change. Both traditional and pluralist systems approaches, whilst relatively strong in terms of practice, were seen to be weak in terms of an underpinning theoretical basis for sustainable organisational change. This issue will also be discussed more fully later in this thesis.

> It was from such a critique that CST was developed to include:
>
> "...five major commitments...[in that it]...seeks to demonstrate critical awareness; it shows social awareness; it is dedicated to human emancipation; it is committed to the complementary and informed development of all the different strands of systems thinking at the theoretical level; and it is committed to the complementary and informed use of systems methodologies." (Jackson, 1991; 184-185).
>
> A deeper understanding and appreciation of the nature and scope of CST can be gained by carrying out a review of, and commenting on, each of the five commitments outlined above.

4.4.1 Critical Awareness

Intervention in organisational systems undergoing change is inherently complex. In that context there are four systemic factors that interventionists need to take into account during an intervention activity. These are:

- The nature of the system that contains the change situation;
- The methodological approach adopted;

- The theoretical underpinning of the methodology, or process of inquiry, that guides the interventionist;
- The outcomes and consequences of the intervention.

The importance of these factors is further emphasised by taking into account two major issues that are associated with critical awareness. The first of these two issues is concerned with "...closely examining the assumptions and values entering into...existing systems designs or any proposals for a systems design." (Jackson, 1991; 185). It was the work of Ulrich (1994) that provided one of the "...tools for enhancing this...[aspect]...of critical awareness...[through the development of Critical Systems Heuristics]..." (Jackson, 1991; 185). The second major issue of critical awareness "...concerns understanding the strengths and weaknesses and the theoretical underpinnings of...methods, techniques and methodologies." (Jackson, 1991; 185). The first of these issues is linked to factors one and four above. The second of the two issues is associated with factors two and three above.

4.4.2 Social Awareness

Interventionists, in addition to being aware of the need for critical awareness, must also take into account the social characteristics of the organisational system under conditions of change. Organisational culture has a significant bearing on the manner in which an organisation reacts, not only to the process, but also to the outcomes, of interventional inquiry. This "...awareness involves recognising that there are organizational and social pressures that lead to certain systems theories and methodologies being popular for guiding interventionists at particular times." (Jackson, 1991; 185).

Traditionally structured, machine bureaucracy organisations are unlikely to respond positively towards pluralist systems approaches. Such organisations are more likely to be oriented towards "Theory E change strategies...[in which]...[s]hareholder value is the only legitimate measure of success." (Beer and Nohria, 2000; 134). Such an approach "...is change based on economic value...[which is a]... "hard" approach...[and]... usually involves...use of economic incentives..." (Beer and Nohria, 2000; 134). The 'Theory E' approach to organisational change (Beer and Nohria, 2000) is clearly first order in nature. The essential point to be made is that interventionists must be sensitive to, and cater for, the social make up of organisational systems. In organisations of a machine bureaucracy social nature, the 'Theory E' approach is likely to be welcomed as an appropriate intervention methodology.

On the other hand, organisations that are not of a centralised bureaucratic nature are likely to welcome pluralist systems methodologies. Organisations that behave more like an adaptive organism will respond well to "Theory O strategies...[that]...are geared toward building up the corporate culture: employee behaviors, attitudes, capabilities and commitment." (Beer and Nohria, 2000; 135). This is typical of second order change and "...in this "soft" approach to change, the goal is to develop corporate culture and human capability through individual and organisational learning..." (Beer and Nohria, 2000; 134).

A typology that exemplifies this is shown in Figure 4.1 below.

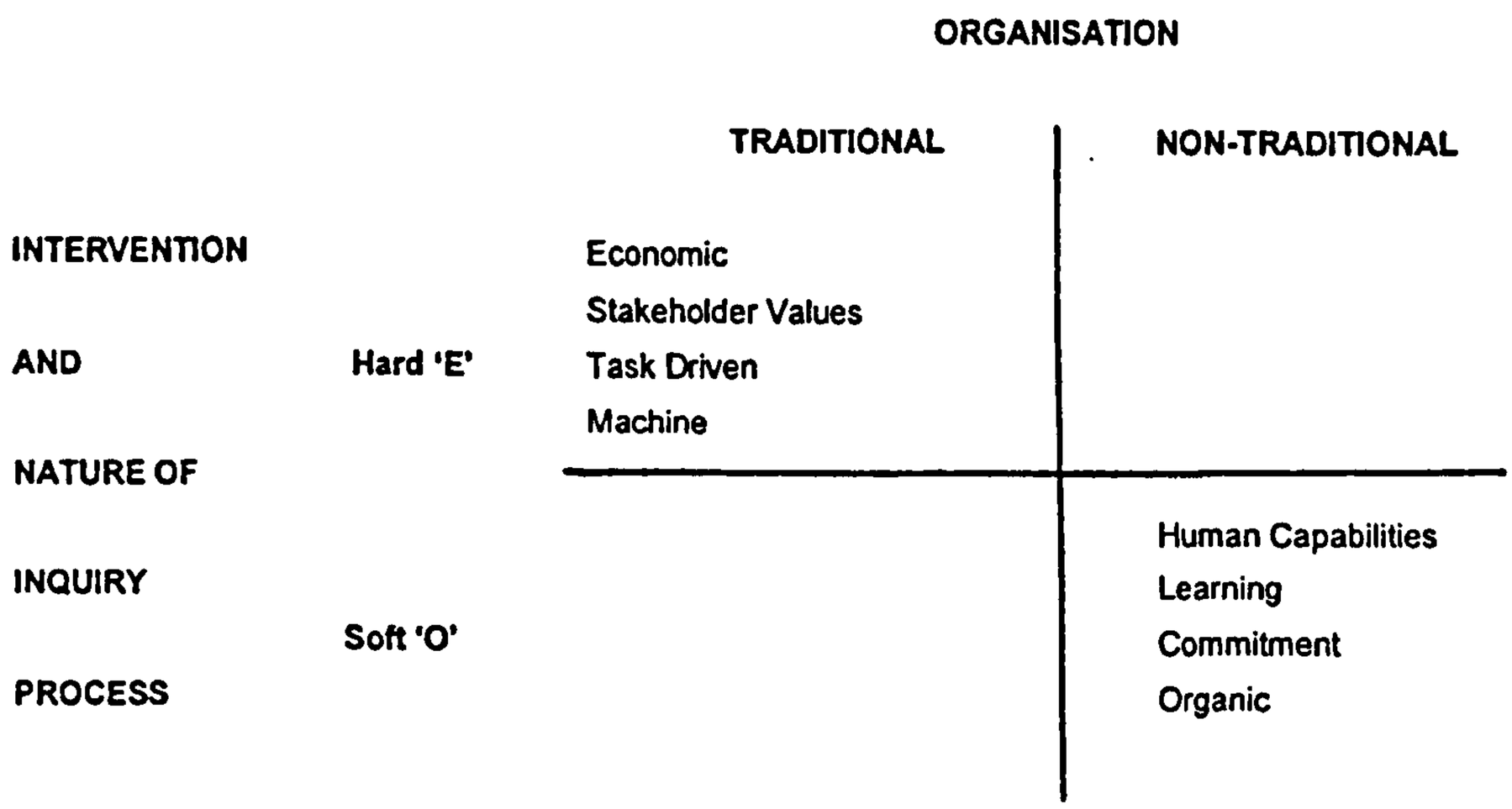


Figure 4.1 Typology of Organisational Intervention Processes for Theories 'E' and 'O'

4.4.3 Human Emancipation

During the discussion of 'social awareness' it was intimated that non-traditional organisations would be more likely to promote learning and to develop human capabilities. This implies a growing awareness of the power of "...human emancipation...[that]...seeks to achieve for all individuals the maximum development of their potential." (Jackson, 1991; 185).

The promotion of human emancipation must be clearly related to an intervention and, more specifically, to the methodologies employed during the process of inquiry associated with organisational change. This is necessary as "...human beings have technical, practical and emancipatory interests in the functioning of organizations and society." (Jackson, 1991; 186). In methodological terms these interests can be addressed in that:

> "Methodologies that serve the technical interest assist material well-being by improving the productive potential and...steering capacities of...[organisational]...systems. Methodologies that serve the practical interest aim to promote...mutual understanding among...individuals and groups....Methodologies serving the emancipatory interest protect the domain of the practical interest from inroads by technical reason and ensure the proper operation of the practical interest..." (Jackson, 1991; 186).

The immediately obvious question is 'How?' How can systems based intervention methodologies serve and protect human interests in the context of organisational change? The (CST) declared commitment to human emancipation is quite clear in terms of 'what' it wants to achieve. It is however, much less forthcoming with respect to 'how' this commitment is to be realised. It has been argued that a "...systems perspective that can support all these various interests has an important role...in human well-being..." (Jackson, 1991; 186). In support of this argument it has been proposed that CST "...wants to put hard, organizations-as-systems, and cybernetic methodologies to work to support the technical interests, soft methodologies to work

to assist the practical interest, and emancipatory methodologies to work to aid the emancipatory interest." (Jackson, 1991; 186).

Whilst such intentions are laudable, they are couched in terms of 'what' CST would like to achieve. Indeed Ellis (1995(b)) has argued that CST has singularly failed in this aim. This failure is particularly acute where emancipatory interests are concerned as no systems based intervention methodology specifically addresses this issue.

However, the promoters of CST assert that this "...dedication to human emancipation requires an equal commitment to the complementary and informed development of all...systems approaches." (Jackson, 1991; 186). This is a bland and, to date, unrealised commitment. This research programme has, it will be argued later, gone some way to eradicating this serious gap in CST but that further work is still needed.

4.4.4 Complementary Theoretical Development

This chapter has already alluded to the differences between traditional and pluralist systems thinking. Reference has also been made to the reduced levels of developmental work caused by disagreements between the proponents of the different strands of systems thinking. By the early 1980's it appeared that "...systems thinking was on the verge of being able to present itself as offering a holistic response to a very wide range of management problems." (Jackson, 1994; 217). However, the profound differences of views caused a "...major obstacle...[of]...fragmentation and...failure of the academic and practitioner groupings working on the different strands...to acknowledge the shortcomings, as well as the strengths, of their own approaches and the validity of other kinds of systems research." (Jackson, 1994; 218).

The 'warring factions' were in the process of destroying all previous work. Tension caused by disagreement can be a rich source of creative idea generation. But, to take advantage of this creative tension it must be recognised that the competing "...strands of the systems movement express different rationalities stemming from alternative theoretical propositions." (Jackson, 1991; 186). CST advocates that such "...alternative positions must be respected, and the different theoretical underpinnings and the methodologies to which they give rise developed in partnership...[and that]... the claim of any one...rationality... to absorb all others must be resisted." (Jackson, 1991; 186). Rather than seeing the different strands as being in a competitive, and thereby weakening, relationship it has been suggested that "...the existence of a range of systems approaches, each driven by a different theoretical position, can be seen as a strength..." (Jackson, 1991; 186).

Complementary development of the theoretical underpinnings of the different strands is deemed to be essential and that CST "...is suggested as a way for the discipline to progress beyond the fragmentation." (Jackson, 1994; 213).

4.4.5 Complementary Development at the Methodological Level

This commitment of CST emerged from the related commitments to critical and social awareness. However, it is argued that the real origin is rooted in the work of Jackson and Keys (1984) which resulted in the 'System of Systems Methodologies' (SOSM). A wider discussion of SOSM will be provided later in this thesis but, for present purposes, it is sufficient to record that the SOSM was "...constructed on the basis of the grid of problem contexts..." (Jackson, 1994; 224). This grid provided "...one way of tracking the development of systems thinking as a discipline." (Jackson, 1994; 224). This grid is reproduced below as **Figure 4.2**.

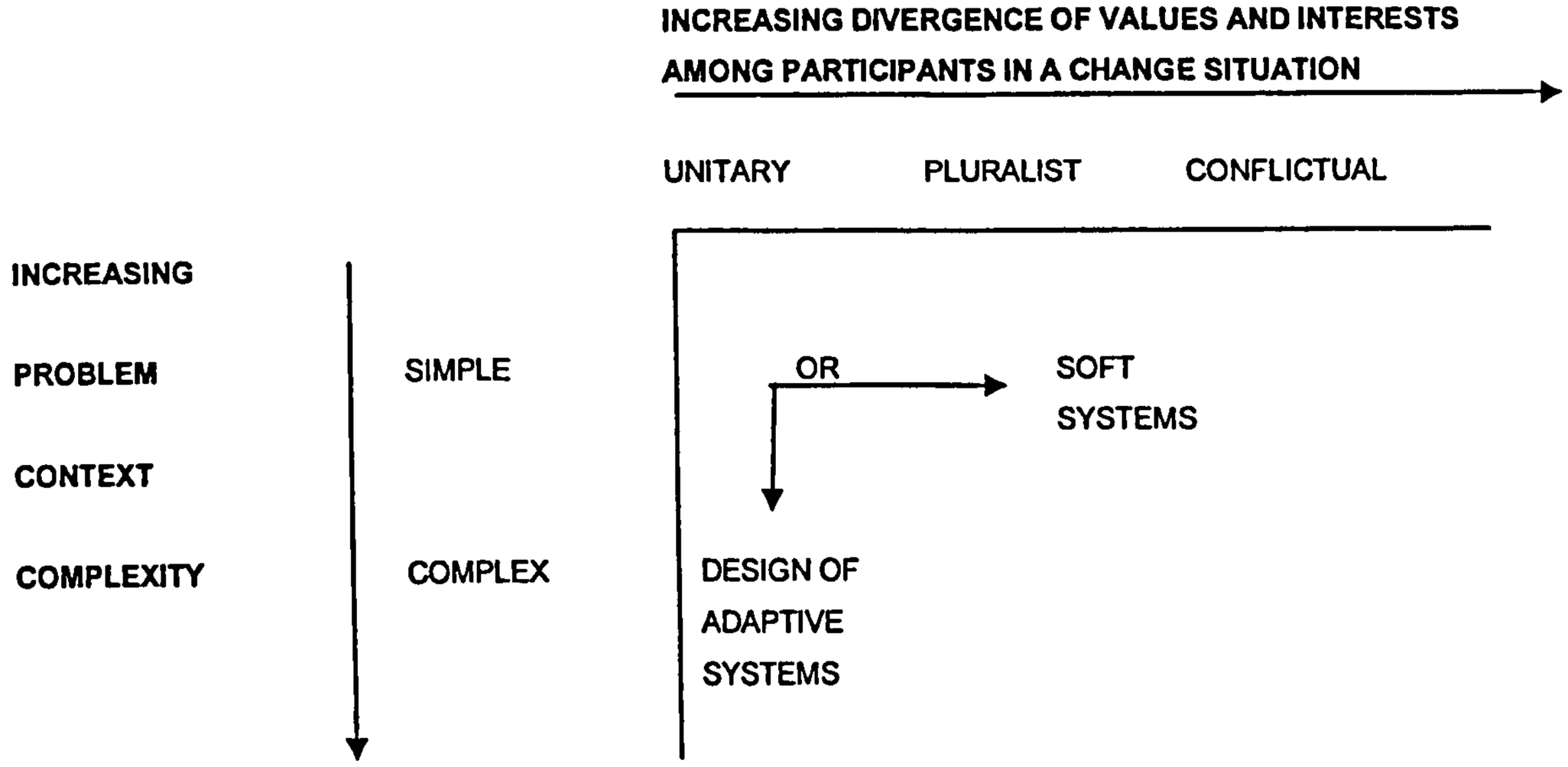


Figure 4.2 Progress in Systems Thinking
(Adapted from Jackson, 1994; 214; Figure 1)

This grid, and the SOSM, shall be discussed in more detail in Chapter Five. However, it is immediately apparent that use of the different systems based methodologies cannot be based upon a 'pick and mix' approach favoured by those who advocate exclusive pragmatism in organisational change situations. It is recognised that pragmatism is an essential feature, (Ellis, et al. 1995), if action to effect improvement is to emerge from an intervention. However, Jackson (1994; 224) argues that pragmatism - which he defines as 'mixing approaches without recognising the different theoretical underpinnings' - alone, is most unlikely to produce sustainable organisational change.

To use the various systems based intervention methodologies in a complementary manner "...requires a meta-methodology that respects all the other features of critical systems thinking and employs these, together with a full understanding of each...systems approach, to describe procedures for operationalizing a pluralistic employment of methodologies in practice." (Jackson, 1994; 224-225).

4.5 A THEORETICAL UNDERPINNING FOR SYSTEMS THINKING

The epistemological and ontological framework for organisational change was discussed in Chapter Three. This discussion was based on the social theory concepts outlined by Burrell and Morgan (1979). These concepts will be extended a little further to provide a theoretical basis for systems thinking.

The Burrell and Morgan (1979) framework for social analysis, set out in **Figure 3.8** above, provided a means for relating "...systems methodologies to the wider sociological perspective." (Jackson, 1991; 21). The Burrell and Morgan (1979) framework was found to be useful in that it helped to establish a framework within which systems thinking scholars could relate intervention processes to the social reality of organisations.

Jackson (1991; 19) argues "...systems methodologies are...built upon assumptions about the nature of systems thinking (or social science) and social systems...". This perspective assisted in the development of a recognisable theoretical underpinning for systems thinking. This underpinning, in turn, established a basis for developments in systems thinking that will be discussed in Chapter Five.

The theoretical underpinning of systems thinking will be established by using the Burrell and Morgan (1979) framework as a basis. The framework can help to "...relate systems methodologies to different sociological paradigms, and to learn much about what they take for granted about social science and society." (Jackson, 1991; 19).

4.5.1 Systems Thinking in the Functionalist Paradigm

The functionalist paradigm is associated with an objective sociology of regulation in which systems are considered to "...have a hard, easily identifiable existence independent of...observers." (Jackson, 1991; 19). Such an underpinning assists us, as observers, in understanding how such systems operate by searching for and finding "...regularities in the relationships between sub-systems and the whole." (Jackson, 1991; 19).

The theoretical position adopted is that of an emphasis on the construction of quantitative or mathematical models of the system that aid explanation and understanding. This helps in terms of establishing a purpose for studying such systems, "...to understand the status quo...[thus facilitating]...the prediction and control of the system." (Jackson, 1991; 20).

4.5.2 Systems Thinking in the Interpretivist Paradigm

The interpretivist paradigm is associated with a subjective sociology of regulation and systems are seen "...to be much "softer", to elude easy identification and to possess...existence only as the creative constructions of human beings." (Jackson, 1991; 20).

The theoretical position adopted within this paradigm is that of being able to "...understand such systems by...subjectively...[interpreting]...the points of view and intentions of human beings who construct them..." (Jackson, 1991; 20). The human presence, in such systems, is assumed to possess free will in terms of choice of system design and operation. Therefore, the analysis of such systems does not search for regular causal relationships that lend themselves to quantitative analysis and it is "...not normally possible to construct a quantitative model of such a system." (Jackson, 1991; 20). Information about such systems can only be gained "...by getting involved in its activities; by "getting inside" it." (Jackson, 1991; 20). Such a posture also assists in understanding the status quo thus providing a basis for prediction and control of the system.

4.5.3 Systems Thinking in the Radical Structuralist Paradigm

The radical structuralist paradigm is associated with the objective sociology of radical change. Systems studied from the perspective of this paradigm are "...seen to...[possess]...a hard existence external to us." (Jackson, 1991; 21).

The theoretical position adopted within this paradigm is associated with being able to "...discover causal regularities governing...[system]...behaviour...[without the need]...to pay much attention to...human intentions." (Jackson, 1991; 21). Although quantitative modelling of systems, being analysed from within this paradigm, is possible it is considered that "...the purpose of such study is to understand radical change." (Jackson, 1991; 21).

Radical change is seen as a phenomenon that creates the need to place emphasis "...upon contradictions in the system and on conflict between different groups in the system...[facilitating]...the emancipation of people from...existing social structures." (Jackson, 1991; 21).

4.5.4 Systems Thinking in the Radical Humanist Paradigm

The radical humanist paradigm is associated with the subjective sociology of radical change. Systems studied from the perspective of this paradigm are "...seen to be the creative construction of human beings." (Jackson, 1991; 21).

The theoretical position adopted within this paradigm makes it necessary to "...analyze such systems...[by attempting]...to understand the intentions of the human beings who create them." (Jackson, 1991; 21). The modelling of systems under this paradigm requires a qualitative approach that will facilitate learning in terms of involvement in the activities of the system. This theoretical stance places emphasis "...upon gaining understanding of...social arrangements that are seen as constraining human development...[thus facilitating]...the emancipation of people from...existing social structures." (Jackson, 1991; 21).

4.5.5 Commentary

The social analysis framework of Burrell and Morgan (1979) stimulated interest and research into the theoretical and philosophical underpinnings of systems thinking during the early 1980's. However the framework "...did not always cast the clearest light over some points of interest in the systems field." (Jackson, 1991; 27).

The sociologically based language used by Burrell and Morgan (1979) was not always well received nor indeed understood by many in the fields of systems and management sciences. Additionally "...translation...needed to be done to make the analysis clear...[and the]...action orientation and problem centeredness of systems and management science posed additional complications in carrying over ideas." (Jackson, 1991; 27).

The framework was found to be helpful for systems thinkers in terms of a sociologically oriented frame of reference for a process of inquiry. Indeed a research programme carried out at City University attempted to use the framework to establish the containing paradigm for the work. Initially the research programme was firmly established in the interpretivist paradigm and Checkland's (1981) Soft Systems Methodology (SSM) was used as the process of inquiry. However, when the research programme shifted towards using 'harder' techniques, the question arose 'how do we change from the interpretivist to the functionalist paradigm?' There were no known rules to govern this change. A paradigm shift was needed and it was not known how to bring this about. Clearly, the framework was weak in this respect and it was necessary to create 'rules' to assist in this paradigm shift.

As a partial response to this dilemma, Ellis and Flood (1987) developed a Phased Methodological Approach (PMA) to methodology choice under complex problem conditions. The PMA approach will be dealt with in more detail in Chapter Seven. However, and additionally, Jackson and Keys (1984):

> "...sought to provide a "system of systems methodologies" - an alternative framework that would serve a similar purpose to Burrell and Morgan's grid in organizational analysis but would be more suited to the language, concerns, and internal development of management science. It was designed to relate different systems methodologies to each other on the basis of the assumptions they made about the nature of problem situations or "problem contexts"." (Jackson, 1991; 27).

4.6 CONCLUDING SUMMARY

Chapter Four can be thought of as an introductory platform for an in depth discussion of Contemporary Systems Thinking that will follow in Chapter Five. To develop this platform, consideration has been given to the traditional form of systems thinking that encompasses Systems Analysis (SA), Systems Engineering (SE), Systems Dynamics (SD), Operational Research (OR) and Management Sciences (MS) amongst others. It has been argued that the traditional forms of systems thinking are applicable to first order change situations, because of the unitarist nature of such change, but are entirely inappropriate for inherently pluralist second order change. This assertion raises the question of whether it is the methodology, or the user of the methodology, that is unable to deal with a particular order of change. This is an important question for systems thinking in general, and it will be addressed later in this thesis.

In considering 'soft' systems approaches, as part of the platform for Chapter Five, it has been postulated that the 'soft' approaches should be thought of as 'pluralist' systems thinking precisely because of the consensus seeking, and learning context of such approaches.

A third aspect of the platform for Chapter Five is that of Critical Systems Thinking (CST). The five underpinning commitments of CST were established, and discussed as principles relative to the methodological, organisational, theoretical, and practical aspects of intervention in typical organisations undergoing change.

Finally, a theoretical underpinning for systems thinking was established using the Burrell and Morgan (1979) social analysis framework as a basis. This showed how the framework assisted systems thinkers in overcoming the need to operate in a multi-paradigmatic world. It also helped in connecting theory to practice in terms of intervention in complex organisational change situations that were poorly understood with respect to first and second order change. Indeed, it was argued that such a theoretical underpinning was a necessary precursor to Contemporary and Critical Systems Thinking that will be discussed in Chapter Five.

CHAPTER FIVE

SYSTEMS THINKING - A CONTEMPORARY AND CRITICAL PERSPECTIVE

5.1 INTRODUCTION

In Chapter Four a perspective on systems thinking was developed that outlined:

- 'Traditional' systems thinking;
- 'Pluralist' systems thinking;
- Critical Systems Thinking (CST);
- A theoretical underpinning for systems thinking using the social analysis of Burrell and Morgan (1979).

A natural progression from Chapter Four is contained in this Chapter Five in the form of an in-depth review, discussion, and evaluation of Contemporary and Critical Systems Thinking (CST).

This Chapter Five will form an important part of the theoretical basis for the development of the Systemic Theory of Organisational Change (STOC). Therefore, this Chapter Five will provide a linkage from Chapters Three and Four to Chapter Six in which Critical Systems Thinking (CST) will be utilised, in conjunction with the epistemological and ontological framework of organisational change, to lead to the Systemic Theory of Organisational Change (STOC).

Chapter Five will cover:

- The Organisational Metaphor Analysis of Morgan;
- The Critical Systems Heuristics (CSH) of Ulrich;
- Total Systems Intervention (TSI) of Flood and Jackson;
- Multi-methodology (MM) of Mingers.

5.2 CONTEMPORARY SYSTEMS THINKING

The Burrell and Morgan (1979) framework was "...useful as a starting, or reference, point for the development of a theoretical underpinning for systems methodologies...[and helped to]...to overcome the criticism that systems practitioners are strong on action, but weak in terms of a valid theory on which to base intervention in problem situations." (Ellis, 1995(a); 203-204). Indeed it was recognising the validity of such criticism that provided motivation for this, and other, research programmes. Morgan's ground breaking work (1986, 1997) into 'metaphor analysis', which established an alternative approach to organisational behaviour and analysis, provided a catalyst for major developments in systems thinking throughout the late 1980's and 1990's. It is this work that will be used as a starting point for the review of these developments.

5.3 METAPHOR ANALYSIS OF ORGANISATIONS

The usefulness of Morgan's work becomes immediately apparent by taking, as a starting point, the often-used metaphor that describes systems as open adaptive whole entities. In this sense, it is important to recognise that:

> "...systems methodologies are very often used in the organizational context to bring about changes in structures, processes, and attitudes, it will obviously provide further insight into their nature, and relative strengths and weaknesses, if we can uncover the image or images of organization embedded in each systems...[based intervention]...methodology." (Jackson, 1991; 23-24).

Understanding organisations, particularly under conditions of complex change, presents difficulties for managers and it is argued that "...managers...have to become skilled in the art of "reading" the situations they are attempting to organize or manage." (Morgan, 1997; 3). Morgan (1997; 4) goes on to assert "...all theories of organization and management are based on implicit images or metaphors that lead us to see, understand, and manage organizations in distinctive yet partial ways."

Metaphor is an often-used aspect of every day language that can be used "...as a device for embellishing discourse...[and]...exerts a formative influence on...how we think, as well as how we express ourselves on a day-to-day basis." (Morgan, 1997; 4). Using metaphor as an aid understanding organisations can provide powerful insight, as:

> "Organizations are many things at once! They are complex and multifaceted. They are paradoxical. That's why the challenges facing management are often so difficult. In any given situation there may be many different tendencies and dimensions, all of which have an impact on effective management." (Morgan, 1997; 347).

Valuable insight into organisations can be gained by setting out several 'images' of organisations that are all based on metaphors. These include:

- Organisations as 'Machines';
- Organisations as 'Organisms';
- Organisations as 'Brains';
- Organisations as 'Cultures';
- Organisations as 'Political Systems';
- Organisations as 'Psychic Prisons';
- Organisations as 'Flux and Transformation';
- Organisations as 'Instruments of Domination'.

(Source: Morgan, 1997).

The metaphors provide "...a *way of thinking* that is crucial for understanding, managing, and designing organizations in a changing world." (Morgan, 1997; 8) (Italics in the original). Although Morgan (1997) investigated eight metaphors in some detail, those most often used for the purposes of guiding a systems based intervention activity include "...organizations as machines, organisms, brains, cultures, and coercive...[political]...systems." (Jackson, 1991; 24). The characteristics of these five metaphors will be outlined to provide a basis for a discussion of their strengths and weaknesses.

5.3.1 Organisations as Machines

This is probably the most 'popular' view of an organisation that is visualised as a machine designed and built to do work in the interests of the owner. Indeed, it was with the "...invention and proliferation of machines, particularly along with the industrial revolution...that concepts of organization...became mechanized. The use of machines...required that organizations be adapted to the needs of machines." (Morgan, 1997; 15).

The owners and managers of organisations established during the early part of the twentieth century recognised the need to develop working practices that were based on the realisation "...that the efficient operation of their new machines...required major changes in design and control of work." (Morgan, 1997; 15). The drive was for productivity to be achieved by the concept of division of labour as advocated by Adam Smith in his seminal work 'The Wealth of Nations' (1776). The owners and managers became obsessed by division of labour and "...sought to increase efficiency by reducing the discretion of workers in favor of control by their machines and supervisors. New procedures and techniques were...introduced to discipline workers to accept the...rigorous routine of factory production." (Morgan, 1997; 15).

> A particularly important developmental strand was associated with the work of:
>
> "...the German sociologist Max Weber, who observed the parallels between the mechanization of industry and the proliferation of bureaucratic forms of organization...[and]...noted that the bureaucratic form routinizes the process of administration exactly as the machine routinizes production." (Morgan, 1997; 17).
>
> An important concern for Weber was the effect of bureaucratic structures and processes on the human condition. He observed that "...the bureaucratic approach had the potential to routinize and mechanize almost every aspect of human life, eroding the human spirit and capacity for spontaneous action." (Morgan, 1997; 17).

A second strand of development was the work of practitioners and theorists such as Fayol and Taylor. They developed what has since become known as 'classical management and scientific management theories'. Those associated with this strand of thinking "...were firm advocates of bureaucratization and devoted their energies to identifying detailed principles and methods through which this kind of organization could be achieved." (Morgan, 1997; 17). The important difference between the classical and scientific management schools was that the

former "...focused on the design of the total organization, whereas the scientific managers focused on the design and management of individual jobs." (Morgan, 1997; 17). The work of Fayol (Classical Administrative Management) and Taylor (Scientific Management) made important contributions to management and organisational theory. Indeed this work formed a bedrock for management theory and it "...is through the ideas of these theorists that so many mechanistic principles of organization have become entrenched in our everyday thinking." (Morgan, 1997; 17).

The strengths and weaknesses of the machine metaphor can help in understanding the fact that "...metaphors only create partial ways of seeing, for in encouraging us to see and understand the world from one perspective they discourage us from seeing it from others." (Morgan, 1997; 27). A detailed analysis of the strengths and weaknesses of the machine, and indeed, any other of the metaphors to be examined, is beyond the scope of this thesis. However, paraphrasing Morgan (1997; 27-31), a brief critique of the machine metaphor will be undertaken.

The machine metaphor is associated with "...understanding organizations as a rational, technical process...[that]...tends to underplay the human aspects..." (Morgan, 1997; 27). The strengths of a mechanistic approach to managing are similar to those for efficient operation of a machine, viz:

- The task to be performed is well defined and understood by all those involved in its execution;
- The organisational environment is stable and non-turbulent;
- The managers have sufficient rational-legal authority;
- Precise control over operations is required;
- Individual discretion and creativity is not permitted;
- The owner or manager of the organisation treats human beings as a factor of production and compliance is the norm;
- All changes are planned and are first order in nature such that the results of change can be predicted with a high degree of certainty.

The weaknesses of mechanistic structures include:

- Overbearing and rigid bureaucracy;
- The de-humanisation of lower level workers;
- Emphasis of, and acceptance of managerial power and status;
- Lack of recognition of needs and expectations of lower level workers;
- Adherence to rules inhibits creativity;
- Rigid differentiated structure prevents adaptation in the face of second order change.

5.3.2 Organisations as Organisms

This mode of understanding organisations can be considered as an important development in "...organization theory over the past sixty years, for the problems of

mechanistic visions of organization...led theorists away from mechanical science...toward biology as a source of ideas for thinking about organization." (Morgan, 1997; 34).

Morgan (1997) identifies several strands of organisation theory that are contained within the organismic metaphor including:

- Organisations as open systems;
- Organisational adaptation to the containing environment;
- Life cycles of organisations;
- Factors in organisational development;
- 'Species' of organisation;
- Ecological models of organisation.

It is beyond the scope of this thesis to provide a detailed discussion of all of the above strands of organisation theory. For the purposes of this thesis the salient characteristics of the first two of the strands will be examined.

The 'open systems' approach was associated with, amongst others, the work of von Bertalanffy and is predicated on the "...principle that organizations, like organisms, are "open" to their environment and must achieve an appropriate relation with that environment if they are to survive." (Morgan, 1997; 39).

An organisation can be thought of as a system that contains other systems "...in that they always contain wholes within wholes." (Morgan, 1997; 39). Morgan (1997) goes on to argue that organisations have individual human beings who belong to various groups that, in turn, belong to departments and larger divisions. Defining a "...whole organization as a system...[facilitates understanding of]...the other levels as sub-systems...even though they are complex open systems on their own account." (Morgan, 1997; 42).

Organisational systems consist of social relationships in combination with the technical functions that transform the input factors into system outputs; such a combination conceptualises organisations as sociotechnical systems. This "...sociotechnical view of organization...[takes into]...account...relations between technical, social, managerial, strategic, and environmental requirements...[that will assist understanding of]...the relations between critical subsystems and the environment." (Morgan, 1997; 42).

The 'open systems approach' to organisations encourages "...[attempts to]...establish congruencies or "alignments" between different systems and to identify and eliminate potential dysfunctions." (Morgan, 1997; 42). The open systems approach visualises internal congruency between interacting managerial, technological, strategic, structural, and human/cultural sub-systems. The approach also requires that the organisational system achieve congruent interaction with the containing environment. Indeed, Kast and Rosenzweig (1985) argue that internal and external congruency is necessary for an organisation to be effective as a system. Open systems theory brings important systems concepts such as homeostasis, entropy,

requisite variety, equifinality and system evolution into consideration. Taking these concepts in collective context points "...the way to theories of management and organisation that...[breaks]...free of bureaucratic thinking...[taking instead the]...perspective known as "contingency theory"..." (Morgan, 1997; 43).

The main characteristics of contingency theory are summarised as follows:

- An organisation is an open system that needs to be managed such that internal needs and environmental variables are balanced;
- There is no one best form of organisational structure. Organisational structure is contingent upon task and environmental variables;
- A primary managerial task is to achieve alignment and good fits;
- Managerial style is contingent upon the nature of the task being managed.

(Source: Morgan, 1997; 44).

The strengths of the organismic metaphor are summarised as follows:

- There is an emphasis on understanding the relationships between the organisation as an open system and its containing environment;
- Organisational management can be improved by systematic attention to survival needs of the organisation as a complex system;
- The emphasis on survival as a key primary task orients managers to consider organisational goals within the enduring process of survival;
- There is virtue in organic forms of organisation in terms of innovative capabilities;
- The contingency aspects encourage organisational change through the process of organisational development.

(Source: Morgan, 1997; 67-68).

The limitations and weaknesses of the organismic metaphor are summarised below:

- There is a tendency to view organisations and their containing environment in 'concrete' terms;
- Organisations are products of creative human visions, ideas, norms and beliefs resulting in fragile and tentative shapes and structure;
- It can be misleading to suggest that organisations need to adapt to or select their environments as they are active in shaping their environment;
- The assumption of functional unity is, at best, a 'pipe dream' as harmony between organisational sub-systems is the exception rather than the rule;
- There is an inherent danger, in that images or theories become normative guidelines for shaping practice, of the metaphor being considered as an ideology.

(Source: Morgan, 1997; 69-71).

5.3.3 Organisations as Brains

This metaphor of organisational analysis is associated with learning. In the context of this thesis it is particularly relevant in terms of dealing with second order change and, to a lesser degree, with first order change.

This metaphor raises an interesting point associated with the possibility of designing an organisation that is capable of learning with "...the capacity to be as flexible, resilient, and inventive as the functioning of the...[human]...brain..." (Morgan, 1997; 74). A further query asks whether it is "...possible to distribute capacities for intelligence and control *throughout* an enterprise so that the system as a whole can self-organize and evolve along with emerging challenges?" (Morgan, 1997; 74) (Italics in the original).

These are the issues that underpin the brain metaphor of organisational analysis in terms of thinking "...about organizations as living brains..." (Morgan, 1997; 74). Neurological research has generated many metaphors to aid understanding of the human brain with a "...focus on the idea that the brain is an information processing system." (Morgan, 1997; 74). Needless to say, this is far from being the only concept that has emerged. Others include:

- The brain as a control system that transmits information by electrical impulses;
- A television system that can receive and then reassemble patterns and images from a multiplicity of visual 'data';
- A library or memory 'bank';
- A system of chemical reactions that transmits messages and initiates action;
- A 'black box' that links stimuli and behaviour.

(Source: Morgan, 1997; 74).

Designing a complex organisational system that can 'learn' in a manner similar to a brain is a question of concern to "...information theorists...interested in problems of artificial intelligence under the umbrella of...cybernetics." (Morgan, 1997; 83). Cybernetics is rooted in the principles of feedback and circular causality and a "...core...[feature is]...the ability of a system to engage in self-regulating behaviour...[associated with]...processes of information exchange..." (Morgan, 1997; 84). A system that employs negative feedback will engage in "...error detection and correction automatically so that movements beyond specified limits in one direction initiate movements in the opposite direction to maintain a desired course of action." (Morgan, 1997; 84). Clearly, negative feedback in systems can reduce error by timely corrective action.

Cybernetics is associated with effective communication and learning within organisational systems and there are, as one would expect, some principles:

- An effective organisational system must be capable of sensing, monitoring, and scanning the environment;
- The organisational system must relate information deduced from the environment to the operational norms that guide system behaviour;

- Organisational systems must be able to detect deviation from operational norms;
- Having detected deviation from operational norms the system must be capable of initiating corrective action by using negative feedback.

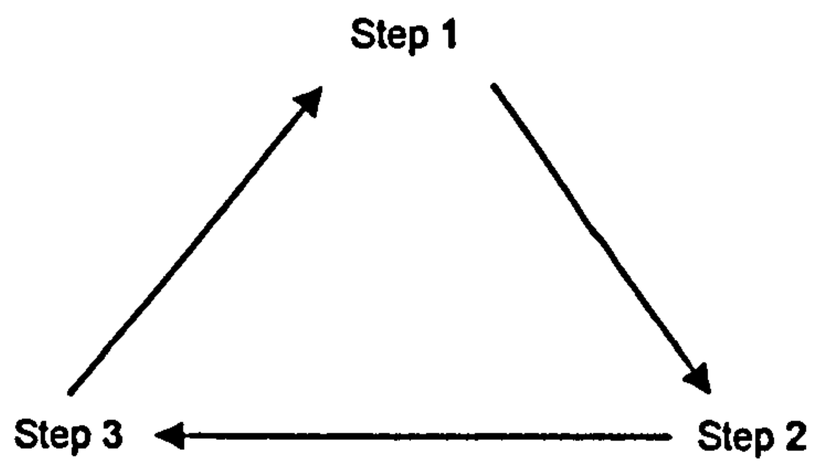
(Source: Morgan, 1997; 86).

An effective organisational system will use these cybernetic principles to aid communication, learning and to create a control mechanism within which intelligent self-regulation can operate. However, such a system is limited in that the learning capability "...can maintain only the course of action determined by the operating norms...guiding it." (Morgan, 1997; 86). This is acceptable provided "...the action defined by those standards is appropriate for dealing with the changes encountered." (Morgan, 1997; 86). However, when the standards are incapable of dealing with changes then "...the intelligence of the system breaks down, for the process of negative feedback ends up trying to maintain an inappropriate pattern of behaviour." (Morgan, 1997; 86). It can be inferred that simple negative feedback, and the related organisational learning, is only capable of dealing with first order change. It is necessary to draw a distinction "...between the process of learning and the process of learning to learn." (Morgan, 1997; 86). The simple learning process associated with negative feedback in organisational systems can only deal with first order change. More is needed if organisational systems are to deal effectively with second order change.

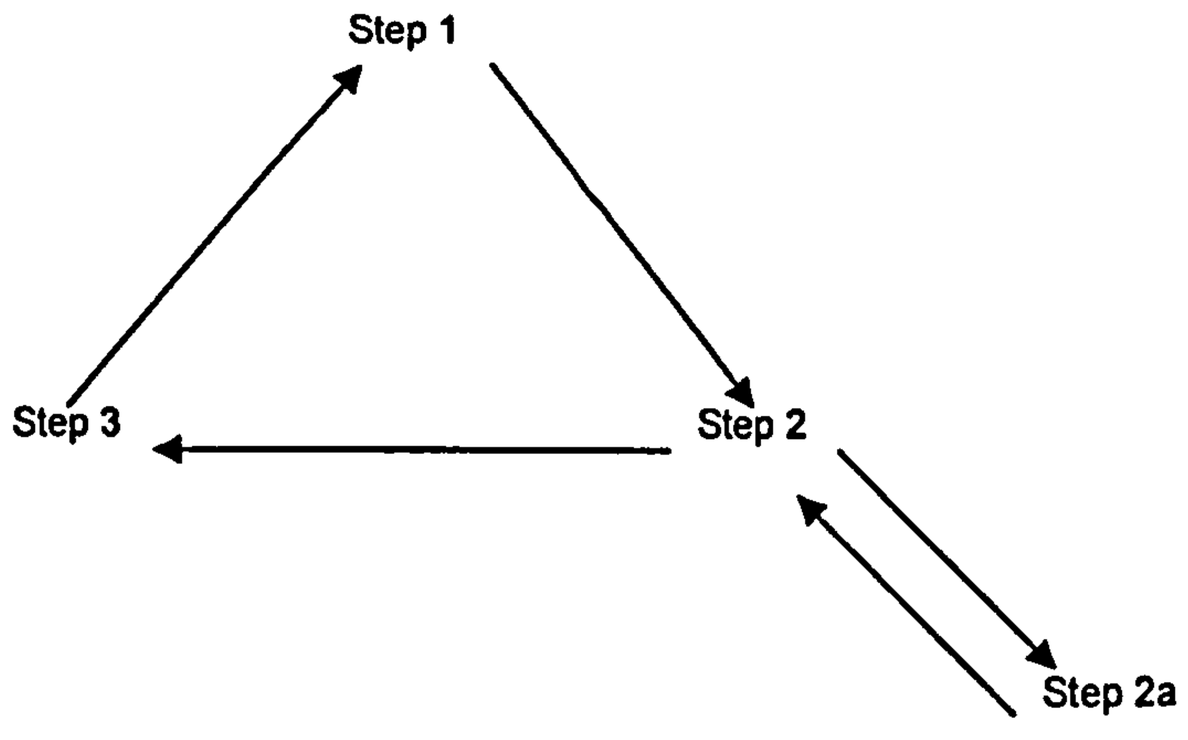
Cybernetic systems based on simple negative feedback learn "...in the sense of being able to detect and correct deviations from pre-determined norms, but they are unable to question the appropriateness of what they are doing." (Morgan, 1997; 86). It is concluded that such systems deal very effectively with first order change, but that they are unable to deal with second order change particularly when the norms and standards need to be adjusted, influenced or questioned. In other words learning itself is insufficient for dealing with second order change. It is necessary for the system to be able to 'learn to learn' and it "...is this kind of self-questioning ability that underpins the activities of systems that are able to learn to learn and self-organize." (Morgan, 1997; 86). In organisational cybernetic terms the "...essential difference between the two types of learning is identified...[as]...a distinction between "single-loop" and "double-loop" learning." (Morgan, 1997; 86).

Single and double-loop learning are conceptualised in **Figure 5.1** below.

Single-loop learning rests in an ability to detect and correct error in relation to a given set of operating norms:



Double-loop learning depends on being able to take a "double look" at the situation by questioning the relevance of operating norms:



Step 1 = the process of sensing, scanning, and monitoring the environment.
Step 2 = the comparison of this information with the operating norms.
Step 2a = the process of questioning whether operating norms are appropriate.
Step 3 = the process of initiating appropriate action.

Figure 5.1 Single and double-loop learning
(Source: Morgan, 1997; Exhibit 4.2; 87)

If organisations are to become proficient at managing both first and second order change then they must develop the capability for single and double-loop learning. "...many organizations have become proficient at single-loop learning, developing an ability to scan the environment, set objectives, and monitor the general performance of the system in relation to these objectives." (Morgan, 1997; 88). Single-loop learning capability permits organisational managers to develop first order change skills only. Although such skills are necessary to keep organisational performance 'in-line' with declared objectives, they are simply inadequate for dealing with complex second order change that demands system adaptation.

First order change and single-loop learning are associated with bureaucratic, machine like organisational forms. Such a regime encourages differentiation and rigid hierarchies in which "...information and knowledge rarely flow in a free manner...[and in which]...[d]ifferent sectors of the organization...often operate on the basis of different pictures of the total

situation..." (Morgan, 1997; 88). Single-loop learning actually inhibits the creative thinking necessary for managing second order change in that challenges to "...policies and operating standards tend to be exceptional rather than the rule...[indeed]...single-loop learning systems...may actually serve to keep an organization on the wrong course." (Morgan, 1997; 89). This revelation reinforces the need for a Systemic Theory of Organisational Change (STOC) that embodies single and double-loop learning. Single-loop learning dominates managerial style and activities to such an extent that artificial barriers are created and then perpetuated by bureaucratic systems that form the basis for reward systems. Argyris (1990) has shown that the dominance of single-loop learning encourages vulnerable people to "...engage in "defensive routines" designed to protect themselves...by obscuring or burying issues and problems...[becoming]...skilled in...impression management that can make situations...look better than they actually are." (Morgan, 1997; 89). Argyris and Schon (1978) have argued that such defensive routines have become normative to the extent that they "...[are]... a central part of the culture of an organization, generating shared norms and patterns of "groupthink" that prevent people from addressing key aspects of the reality with which they are dealing." (Morgan, 1997; 89).

This concern is right and proper. Until such concerns are dealt with organisations will never recognise, let alone cope with, second order change. Despite the 'hand wringing' of Morgan, Argyris, and others, there are relatively few concrete suggestions that will bring about understanding and a means of managing second order change.

The strengths of the brain metaphor are summarised below:

- The requirements for and of learning organisations are identified;
- It offers a powerful way of thinking about the need for, and the role of, information in organisations in terms of the development of learning organisations;
- It offers a means of re-thinking management principles in terms of Beer's Viable System Model (VSM).

(Source: Morgan, 1997; 116).

The main weaknesses of the brain metaphor can be identified as:

- Using the brain as an organisational metaphor involves self-reference in terms of brains looking at brains;
- Important issues associated with conflict, power and control can be overlooked due to the emphasis on learning and self-organisation;
- The concept of a 'learning organisation' is an ideal that does not recognise the necessity of power and mind set shifts;
- There is an emphasis on single-loop learning that fails to deal with second order change.

(Source: Morgan, 1997; 117-118).

5.3.4 Organisations as Cultures

Modern organisations exist in a complex 'global' operating environment and "...although...societies share much in common, it would be a mistake to dismiss cross-national differences in culture as being of little significance." (Morgan, 1997; 122). National cultures have been developed over many years and now exhibit significant variety that reveals differences "...in national social characteristics and views of...styles and philosophies of organization and management." (Morgan, 1997; 122).

Functionalist theories of management were developed in a western context. Largely because of this "...Western management theorists...take special interest in the character and culture of their *own* countries and the links with organizational life." (Morgan, 1997; 120) (Italics in the original). The concept of 'culture' has an agricultural derivation but in modern parlance we are referring to "...the pattern of development reflected in a society's system of knowledge, ideology, values, laws, and day-to-day ritual." (Morgan, 1997; 120).

The agricultural metaphor used to conceptualise society "...has considerable relevance for our understanding of organizations." (Morgan, 1997; 120).

It has been suggested that, not only do 'we' live in societies dominated by organisations, but also live in times of globalisation. This phenomenon, although of interest in its own right, is well beyond the scope of this thesis; indeed investigating globalisation would require another thesis! Suffice to say that whether 'we' live and work in the UK or the USA or Singapore or Australia, "...large organizations are likely to influence most of our waking hours...[and for many, daily life is dominated by]...beliefs, routines, and rituals that identify it as a distinctive...[organizational]...cultural life when compared with that in more traditional societies." (Morgan, 1997; 121).

The meaning attached to 'work' depends on the locus of power in terms of where, and under what forms of control, the work activity is carried out. Societal development, in terms of industrial organisations, is often "...accompanied by a disintegration of traditional patterns of social order, as common ideals, beliefs, and values give way to more fragmented ones based on the occupational structure of the new society." (Morgan, 1997; 121). The development of an industrialised form of society usually results in a division of labour that "...creates a problem of integration, or what may be more accurately described as a problem of "cultural management."" (Morgan, 1997; 121). This suggests that, in today's industrial and globalised organisational world, whether people work in New York, or London, or Singapore, or Sydney, they "...all belong to the same industrial culture...[and]...are all members of organizational societies...[with a]...life experience...different from those of individuals living in more traditional societies..." (Morgan, 1997; 121). Therefore, it can be argued "...that it is...more useful to talk about the culture of industrial *society* rather than...industrial societies because...differences between countries often mask more important commonalities." (Morgan, 1997; 122) (Italics in the original).

The foregoing argument permits the conclusion that "Important dimensions of modern culture are rooted in the structure of industrial society, the organization of which is itself a cultural phenomenon." (Morgan, 1997; 122).

The influence of national culture on organisations is strong. However, in the same way that "...individuals in a culture can have different personalities while sharing much in common, so too with groups and organizations." (Morgan, 1997; 129). This phenomenon has been "...recognized as "corporate culture"...[as o]rganizations are mini-societies that have their own distinctive patterns of culture and subculture." (Morgan, 1997; 129).

Organisations 'see' and describe themselves in a variety of ways to outsiders often as a means of presenting themselves in a particular light favourable to their self-image. These descriptions, according to Morgan (1997), can include that of a close-knit team or family, or the concept of 'being the best' in their field. Whatever self descriptions are used, they are founded on "...patterns of belief or shared meaning...and supported by various operating norms and rituals...[that]...exert a decisive influence on the overall ability of the organization to deal with the challenges it faces." (Morgan, 1997; 129).

Organisational culture is "...a process of reality construction that allows people to see and understand...events, actions, objects, utterances, or situations in distinctive ways...[that]...help us to cope with the situations being encountered and also provide a basis for making our own behavior sensible and meaningful." (Morgan, 1997; 138).

The culture of any organisation has to be created in terms of constructing organisational reality. According to Morgan (1997) this 'reality' is made up of shared values, beliefs, meanings, understanding, and sense. Therefore we can argue that "...the nature of a culture is found in its social norms and customs and that if one adheres to...[the accepted]...rules of behavior one will be successful in constructing an appropriate reality." (Morgan, 1997; 139).

It can also be asserted that "...the culture metaphor offers a fresh way of thinking about organization...[and]...that the challenge of creating new forms of organization and management is...a challenge of cultural change." (Morgan, 1997; 143). Taking this argument further it is contended that such a change must be second order in nature as this will involve "...transforming the mind-sets, visions, paradigms, images, metaphors, beliefs, and shared meanings that sustain existing business realities and of creating a...language and code of behavior through which the desired new reality can be lived on a daily basis." (Morgan, 1997; 143).

The culture metaphor for organisational analysis appears to provide a useful basis for managing second order organisational change. However, organisational culture can create such a strong sense of belonging amongst members, that the cohesion of the organisation produces a 'we are always right' belief system. This, in turn, allows for the development of fixed and rigid attitudes towards change such that all suggested changes are rejected out of hand.

Under such conditions not only is second order change resisted but first order change is also seen as 'something to be avoided'.

Having rehearsed the arguments pertaining to the concepts associated with the culture metaphor, the strengths and weaknesses of the metaphor can be identified.

The major strengths of the culture metaphor include:

- Drawing attention to the symbolic significance of the rational aspects of organisational life including structure, hierarchy, rules and routines that underpin social construction and meaning;
- Showing how organisation is rooted in systems of shared meaning;
- The emphasis on the importance of organisational design;
- The influence of ideologies, values, beliefs, language, norms, and social practices that shape organisational activity;
- Making people take ownership of their impact on organisational behaviour in terms of both stability and change;
- The contribution made to understanding the process of organisational change in terms of the recognition that 'organisation' is an abstract concept that resides in the heads of the members of the organisation.

(Source: Morgan, 1997; 145-150).

The limitations and weaknesses of the culture metaphor are summarised as:

- The idea that there are 'good' and 'bad' cultures leads to the view that a 'strong' organisational culture is essential for success;
- Modifications to an existing culture can bring about more 'contented' and therefore harder working employees;
- Managers making an assumption that 'what is good for the organisation is good for employees' results in ideological control of 'values engineering';
- Employees can react negatively to such forms of control causing resentment, mistrust and even acts of sabotage;
- Managers frequently fail to understand that culture is self-organising and evolving;
- The culture metaphor can become infused with political flavour.

(Source: Morgan, 1997; 150-152).

5.3.5 Organisations as Political Systems

This metaphor is possibly the most interesting in terms of understanding resistance to change in organisations. Indeed, the political metaphor "...applied to problem situations...[provides a means for analysing]...relationships between individuals and groups as competitive and involving the pursuit of power." (Flood and Jackson, 1991(a); 12). The metaphor deals with issues of interests, power and conflict in an organisational context.

Organisational managers are often concerned with issues reflecting their own interests in terms of power, conflict and control. "Managers frequently talk about authority, power, and superior-subordinate relations...as political issues involving the activities of rulers and ruled." (Morgan, 1997; 154). In this sense organisations can be thought of as 'systems of government' in which the "...political metaphor can...be used to unravel the politics of...organizational life." (Morgan, 1997; 154). Developing this concept reveals much about "...the problems and legitimacy of management as a process of government...and the recognition and interplay of competing interests as a means of creating a...form of social order...[by grasping]...important qualities of organization that are often...ignored." (Morgan, 1997; 154-155).

Morgan (1997) provides a framework which outlines how organisations - like national governments - employ a system of 'rule' through which to govern and maintain control. This framework is summarised:

- Autocratic or absolute government in which power is concentrated in the hands of an individual or group. Control of critical resources is often a source of power;
- Bureaucratic or government through written rules and rational-legal authority;
- Technocratic or the exercise of power through using knowledge or expertise in solving problems;
- Co-deterministic or the combination of opposing parties in a coalition to exercise power in the form of joint management of mutual interests with each party using its own particular power base;
- Representative democratic or the exercise of rules through elected officers who are mandated to act on behalf of constituent interests for a specific period of time;
- Direct democratic or the exercise of power by all group members with equal rights and full participation in decision-making.

(Source: Morgan, 1997; 157).

Analysing organisations as 'systems of government' can provide useful insights into the internal mechanisms of control that can be employed. This alone is not enough to gain understanding of "...the political dynamics of organization, it is also necessary to explore the detailed processes through which people engage in politics." (Morgan, 1997; 160). This suggests that we need to analyse organisations as 'systems of political activity' in terms of "...the conflicts and power plays that sometimes occupy center stage, and in the...interpersonal intrigues that provide diversions in...organizational activity." (Morgan, 1997; 160). Political activity is often manifest in situations where "...people think and act differently...[creating]...tension that must be resolved through political means." (Morgan, 1997; 160). The analysis of organisations as 'systems of political activity' is focussed "...on relations between *interests*, *conflict*, and *power*." (Morgan, 1997; 160) (Italics in the original).

Human 'interests' involve "...predispositions embracing goals, values, desires, expectations, and other orientations and inclinations that lead a person to act in one way rather than another." (Morgan, 1997; 161). In an organisational context, the 'interests' of an individual involve three "...interconnected domains relating to...task, career, and personal life." (Morgan,

1997; 161). The interconnection between the three domains can affect individuals who 'live' their interests in a personal mode "...and often see others as "encroaching"...and readily engage in defenses or attacks..." (Morgan, 1997; 161). Such political activity is designed to protect personal position and is often seen as 'turf protection' on the part of individuals. The reasons behind such activity are not difficult to find when it is recognised that "*Task interests* are connected with the work one has to perform...[and that people]...bring to the workplace aspirations and visions as to what their future may hold providing the basis for *career interests*." (Morgan, 1997; 161) (Italics in the original). Such behaviour is reinforced by individuals who bring to the workplace "...their personalities, private attitudes, values, preferences, and beliefs and sets of commitments...allowing these *extramural interests* to shape the way they act in relation to both job and career." (Morgan, 1997; 161) (Italics in the original). Clearly, the three overlapping domains of interest provide fertile ground for political activity in organisations. A consequence of this activity can be resistance to both first and second order change.

Conflict, the second factor to be considered in the analysis of 'organisations as political systems', is endemic in all organisations and we need look no further than the traditional organisation chart to understand why this should be so. In fact the 'organogram' is a representation of a system designed to produce conflict; this conflict "...may be personal, interpersonal, or between rival groups or coalitions...[and]...may be built into...structures, roles, attitudes...or arise over scarcity of resources. (Morgan, 1997; 167). The conflict in organisations that arises when interests come into collision "...may be explicit or covert...[and whatever]...the reason...[or]...form it takes, its source rests in some perceived or real divergence of interests." (Morgan, 1997; 167).

It has been argued that many organisations encourage political activity as they are "...designed as systems of simultaneous competition and collaboration." (Morgan, 1997; 167-168). People operating in an organisational system need to work together to achieve common goals, yet they are often "...in competition for limited resources, status, and career advancement." (Morgan, 1997; 168). It is these dimensions of organisational conflict that are "...symbolized in the hierarchical organization chart, which is both a system of cooperation, in that it reflects a rational subdivision of tasks, *and* a career ladder that people are motivated to climb." (Morgan, 1997; 168) (Italics in the original). The typical pyramid structure of a hierarchy shows that there are more jobs at the bottom of the organisation than at the top; the tendency toward conflict is clear in such a structure.

The third factor associated with 'organisations as political systems' is that of power which "...is the medium through which conflicts of interest are...resolved...[and]...influences who gets what, when, and how." (Morgan, 1997; 170). As interests fuel the emergence of conflict, and conflict is related to power then it is argued that interests, conflict, and power are elements of an 'organisation as a political system'.

Power has been recognised as an important aspect of organisational analysis and this is particularly the case under conditions of organisational change. A particular problem with power lies in its definition relative to explaining behaviour in organisations. There are those who

view "...power as a resource...[whilst]...others view it as a social relation characterised by...dependency..." (Morgan, 1997; 170-171).

The debate over defining power can be contextualised by the view that "...power involves the ability to get another person to do something that he or she would not otherwise have done...[relative to]...conditions under which one person, group, or organization becomes dependent on another." (Morgan, 1997; 171).

Such a 'definition' is closely related to both sources of power and the manner in which that power, contained within these sources, is utilised. There are many sources of power available within organisations including:

- Formal, rational legal authority granted by position in the hierarchy;
- Control over scarce resources;
- The use of structure, position, and rules;
- Control over decision-making processes;
- Control of knowledge and information;
- Boundary control;
- Capable management of ambiguity and uncertainty;
- Control and manipulation of technology;
- Using interpersonal alliances and control of the informal organisation;
- Controlling counter-organisations;
- Managing meaning and organisational symbolism;
- Managing gender relations;
- Using power already held.

(Source: Morgan, 1997; Exhibit 6.3; 171).

The sources of available power, summarised above, reveal some of the "...power dynamics within an organization...[through which]...organizational members can...exert their influence." (Morgan, 1997; 172).

The political metaphor "...reflects what is sometimes known as a "pluralist" frame of reference, for it emphasizes the plural nature of the interests, conflicts, and sources of power that shape organizational life." (Morgan, 1997; 199-200). The concept of pluralist organisations suggests that "...authoritarian tendencies are held in check by the free interplay of interest groups..." (Morgan, 1997; 200). Indeed, this freedom of action is exemplified by the "...vision of...[an organisation in which]...different interest groups bargain and compete for a share in the balance of power and use their influence to realize...a negotiated order that creates unity out of diversity." (Morgan, 1997; 200).

The pluralist concept of organisational behaviour can be contrasted with the so-called 'unitary' and 'radical' frameworks. The unitary frame of reference 'sees' organisations "...as an integrated whole where the interests of individual and...[organization]...are synonymous...[with emphasis on organizational]...sovereignty...and the importance of individuals subordinating

themselves...as a means of realizing and satisfying their true interests and the common good." (Morgan, 1997; 200). Unitary organisations are characterised by long-term paternalistic management with a cohesive culture "...based on respect for management's right to manage." (Morgan, 1997; 200).

In contrast, the radical frame of reference attempts to understand organisations in terms of "...antagonistic class interests, characterized by deep-rooted social and political cleavages and held together as much by coercion as by consent." (Morgan, 1997; 200). The coercive aspect is most important where organisational change is concerned and this will be returned several times in this thesis. This is sometimes interpreted as a Marxist perspective of organisations and it "...suggests that the interests of the disadvantaged...can...[only]...be furthered...through radical changes in the...[organizational]...structure...that...[will]...displace those currently in power." (Morgan, 1997; 200).

The three frames of reference outlined above are relevant to the analysis of organisations within the context of systemic organisational change. This is one major reason why the political metaphor is considered to be both interesting and helpful in the development of a STOC. This view is reinforced by considering the fact that there are organisations that function best as "...unitary teams, others as vibrant political systems with...pluralist politics...and others as battlefields where rival groups engage in ongoing warfare." (Morgan, 1997; 200). The three frames of reference can be compared and contrasted as shown in Figure 5.2 below.

Organisations can be characterised as 'mini-states' in which the relationship between individuals and society is compared to the relationship between an individual and an organisation. Unitary, pluralist, and radical - or coercive - views of organisations are shown in the following terms:

	Unitary	Pluralist	Radical (Coercive)
Interests	Emphasis on achieving common goals. Organisation is viewed as united in pursuit of goals with all parties working as an integrated team.	Emphasis on diversity of group. Organisation is regarded as a loose coalition with only passing interest in the formal goals of the organisation.	Emphasis on oppositional nature of class interests. Organisation is seen as a battleground where rival forces engage in 'turf wars' to achieve incompatible goals.
Conflict	Conflict is regarded as a rare transient phenomenon that can be dealt with by managerial action. It is often attributed to deviant behaviour.	Sees conflict as an inherent and ineradicalbe aspect of organisational affairs and stresses positive or functional aspects.	Conflict is regarded as inevitable as part of a wider class battle that will change organisational structure. It is recognised that conflict may be suppressed and can exist in a latent form.
Power	Ignores rules of power; regards authority and control as the means for describing the managerial power used to guide the organisation towards common goals.	Regarded as a crucial variable; the medium for conflict resolution. Organisation is seen as a plurality of power holders who draw power from a variety of sources.	Seen as a key feature; a phenomenon that is unequally distributed and follows class division. Power relations are seen as reflections of society at large and closely linked to wider processes of social control.

Figure 5.2 Unitary, Pluralist, and Radical (Coercive) Frames of Reference

(Adapted from: Morgan, 1997; Exhibit 6.6; 202-203)

The framework shown in Figure 5.2 above contributes to the basis of the System of Systems Methodologies (SOSM). The SOSM, in turn, is an important and fundamental component of the meta-methodology Total Systems Intervention (TSI) that will be dealt with in more detail later in this chapter.

People working in organisations recognise that political activity is an inherent feature. The political metaphor "...helps us accept the reality of politics as an inevitable feature of organizational life and...to recognize its constructive role...[in evaluating]...all aspects of organizational functioning..." (Morgan, 1997; 209). Other strengths of the political metaphor include:

- Provision of a recognition that organisational goals, structure, technology, job design, leadership style, and other formal aspects of function have a political dimension;
- The modelling of interests, conflict, and power provides a systematic way of understanding the relationship between politics and organisation in terms of the key role of power in determining political outcomes;
- Placing the role and use of power in a central position for effective organisational analysis;
- Placing emphasis on the fact that whilst organisational goals can be rational for some people, they may not be for others;
- Assistance in finding ways of overcoming the limitations associated with the concept that organisations are always rational and integrated systems;
- Pointing out the strains caused by differentiation and the tension that can be the result of diverse interests;
- Politicising our understanding of human behaviour in an organisational setting in terms of 'hidden agendas' associated with structural and motivational biases;
- Recognition of the socio-political implications that different types of organisation play in terms of the societal roles and responsibilities of organisations relevant to the consequences of change programmes.

(Source: Morgan, 1997; 208-211).

Although the strengths of the political metaphor are manifold, it is also necessary to identify several limitations. These are summarised as follows:

- The inherent nature of political activity in organisations leads to politicisation of organisations; in seeing organisations as political systems we are more likely to behave politically;
- Politically oriented behaviour can induce a cynical response by others;
- Cynicism emanating from politically oriented behaviour causes mistrust;
- Instead of using the political metaphor to gain new organisational insights the metaphor can be reduced to a tool used to advance personal interests;
- Adoption of manipulative stances emphasises cynical, ruthless behaviour and turns organisations into 'corporate jungles';

- Assuming a plurality of interests and a plurality of power holders is simply unrealistic in terms of unequal and antagonistic structures of interest and power.

(Source: Morgan, 1997; 211-213).

The work of Burrell and Morgan (1979) and Morgan (1986, 1997) has assisted by providing a basis, in social theoretical terms, for developments in systems thinking during the 1980's and 1990's. Having outlined the basic principles and philosophy of Critical Systems Thinking (CST) in Chapter Four, attention is now directed toward the associated methodological developments of Total Systems Intervention (TSI), Critical Systems Heuristics (CSH), and Multi-Methodology (MM). The treatment of all of these developments will be limited to an outline treatment only, concentrating on principles and methodology in each case.

The CSH provides a limited input to the development of the STOC and the CPIM. However, it is important that a short treatment of CSH is provided in this thesis, as it is a most important contribution to the development of the emancipatory aspect of CST. CSH can also be of value in addressing second and third order change in terms of relevance to the subjectivity associated with power and political activity evident in complex change situations. The Twelve Critically Heuristic Questions for Social System Design, together with the Taxonomy of Problem Solving Dimensions, shown in **Figures 5.8 and 5.7** respectively, can provide methodological assistance for managing second and third order change within the CPIM.

5.4 CRITICAL SYSTEMS HEURISTICS (CSH)

5.4.1 Principles

Critical Systems Heuristics (CSH) is associated with Dr Werner Ulrich. The exposition of CSH is contained in his seminal work "Critical Heuristics of Social Planning: A New Approach to Practical Philosophy. Wiley, (1994)".

A fundamental concern of Ulrich that led to the development of CSH was that of a lack of an adequate philosophical and "...epistemological basis for socially rational planning." (Ulrich, 1994; 15). One of the main reasons for this was "...that the crucial questions in planning are not theoretical or technological questions of knowledge, but practical, i.e., political and moral questions..." (Ulrich, 1994; 15). CSH was developed in response to an unresolved problem associated with practical reason contained in the question "*How can we rationally identify and justify the normative content of our actions?*" (Ulrich, 1994; 15) (Italics in the original).

The systems approaches epitomised by the 'hard' and 'soft' schools failed to provide means for "...critically reflecting either upon the goals attained and the means used by hard systems thinking, or upon the nature of the consensus achieved and the changes brought about through soft systems thinking." (Flood and Jackson, 1991(a); 197). The work undertaken by Ulrich attempted to establish "...an appropriate philosophy for an emancipatory systems approach, and to develop a method which can be used by planners and concerned citizens

alike to reveal the "normative content" of actual and proposed systems designs." (Flood and Jackson, 1991(a); 197-198). The issue of 'normative content' is linked to "...value assumptions that...flow into planning and...the consequences...for those affected by the planning." (Flood and Jackson, 1991(a); 198).

The principle of 'purposeful systems' is associated with "...the fundamental design task of the social planner...[being]...to design for the development of intrinsic motivation and critical reflection on the part of those who will have to work and live with his designs." (Ulrich, 1994; 335). In meeting this requirement, the task facing a social system designer is to design a purposeful system that incorporates the functions of Inquiry, Action, and Valuation.

In terms of Inquiry the purposeful system **S** "...must produce meaningful knowledge in respect to its purpose (**S** ought to become a purposeful inquiring system)." (Ulrich, 1994; 336). With respect to Action the purposeful system **S** "...must secure the purposeful use of this knowledge (**S** ought to become a purposeful action system)." (Ulrich, 1994; 336). And finally, concerning Valuation, the purposeful system **S** "...must responsibly evaluate its production and use of knowledge from the standpoint of...the client and those who do not benefit but might be negatively affected (**S** ought to become a purposeful, morally responsible, valuation system)." (Ulrich, 1994; 336). The concept of a purposeful system is in keeping with the need to manage second order change. Indeed, a primary purpose for any intervention process must be to produce, utilise and evaluate knowledge in the interests of effective and sustainable change.

The principle of purposeful systems is inextricably linked to the principle of the 'systems idea'. The principle of the 'systems idea' was related, by Ulrich, to the work of Kant who "...uses the systems concept as a critical idea of reason, namely, as an idea that reminds us precisely of the unavoidable incomprehensiveness and selectivity of every definition of a system..." (Ulrich, 1994; 21). It is suggested that the 'systems idea' as such is not predicated on knowing the total system. However, it is argued that system designers should undertake a "...critical effort to reflect on...the *lack* of comprehensiveness in our understanding of and design for (social) systems...to make transparent...the normative implications of our systems concepts and designs." (Ulrich, 1994; 21) (Italics in the original).

Ulrich (1994) suggests that man's search for knowledge is underpinned by three basic questions postulated by Kant:

- What can I know?
- What ought I to do?
- What may I hope?

The question 'What can I know?' is speculative in that "...it characterizes the planner's interest in *mapping social reality*, and comprehending the conditioned character of the maps." (Ulrich, 1994; 260) (Italics in the original). Maps can be thought of as mental models that represent phenomena, providing a linkage to the principle of "...the systems idea provid[ing] the necessary standard for reflection on the deceptiveness of social maps..." (Ulrich, 1994; 260).

The second question 'What ought I to do?' forms the basis of the principle of the 'moral idea'. The principle of the moral idea "...is indeed the practical equivalent of the systems idea, in that it requires an agent to reflect on the total group of individuals who might be affected by his action." (Ulrich, 1994; 260). The design of any social system must involve boundary judgements that "...are in need of critical reflection...because...[decisions associated with the system design imply]...the *moral imperfection* of all our designs, and hence the need for reflecting on the...potential consequences of...imperfection." (Ulrich, 1994; 261) (Italics in the original).

The third question 'What may I hope?' is both practical and theoretical in that it establishes a foundation for the principle of the 'guarantor idea'. The question is better if it is re-formulated as "...If I do what I ought to do, what may I then hope?" (Ulrich, 1994; 261). The language of Kant, on which this principle is based, can be re-phrased to create a socially responsible planning scenario which incorporates the condition that "...[p]rovided the planners and decision makers pursue their plans in a morally responsible way, what are the sources of guarantee on which they (ought) to rely to make certain that improvement will actually come about?" (Ulrich, 1994; 261). Clearly this third question, in both practical and theoretical terms, is directed at "...conditions of adequate social mapping and design...[and]...also...the conditions of successful *implementation* of these conceptual efforts." (Ulrich, 1994; 261) (Italics in the original). This raises the concept of a critical "...*guarantor of design*, a source of guarantee presupposed in each design effort...[that can be brought about]...by involving a large spectrum of both experts and witnesses, by building a basis of consensus between the involved and the affected..." (Ulrich, 1994; 261) (Italics in the original).

5.4.2 Methodology

Critical Systems Thinking (CST) was, for some time, subject to the criticism that it was 'Shakespearean in nature'; that is it was 'much ado about nothing'! This arose from the lack of a recognisable methodology through which to guide effective intervention in organisational problem situations. Indeed, Critical Systems Heuristics (CSH) formed the first of two attempts to create an intervention methodology grounded in a critical theory framework.

The methodology of CSH incorporates two parts designed to:

> "...[firstly]...help planners to make transparent to themselves and others the presuppositions that...enter into social system designs...[with the]...second part...[offering]...a practical tool which ordinary citizens can use to engage planners in rational discourse about the partiality of their plans." (Flood and Jackson, 1991(a); 204).

The second part of the methodology of CSH involving rational discourse can be thought of as:

"...the polemical employment of boundary judgements...[which necessarily ensure that]...the planners (the involved) must not only be self-reflective about their designs, but also subject their designs to debate with the "witnesses" - in practice, representatives of those affected but not involved." (Flood and Jackson, 1991(a); 204).

The methodology of CSH is based upon twelve critically heuristic categories that are "...used to interrogate system designs and potential designs." (Flood and Jackson, 1991(a); 204). These categories, designed to create necessary and sufficient conditions for testing social systems rationality, are useful to planners, involved, and affected alike for bounding the social system S in focus. In other words, CSH attempts to develop "...a systematic list of social roles and corresponding concerns...[related]...to necessary boundary judgements." (Ulrich, 1994; 247). If a designer, or planner, wishes to bound a social system S, he "...has to trace the normative content of the necessary boundary judgements...[by referring]...to the group of...actors who ought to define what the social reality in question is and what it ought to be." (Ulrich, 1994; 247).

The process of bounding a social system S is conceptualised in Figure 5.3 below.

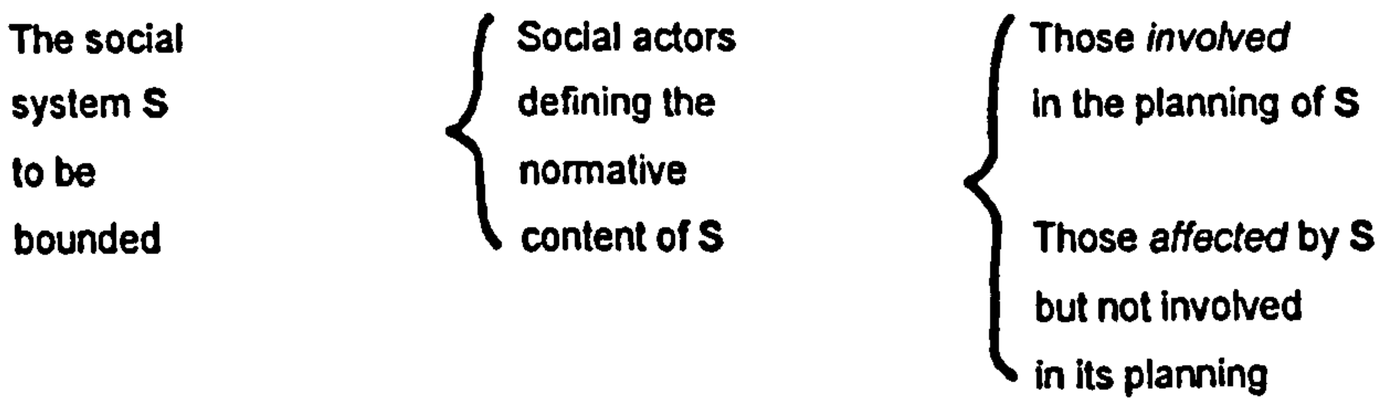


Figure 5.3 The Process of Bounding a Social System S
(Adapted from: Ulrich; 1994; 248) (Italics in the original).

The boundary judgements for social system design are usually of two basic types:

- The social system in total contained by its environment (T1);
- Those affected by the system versus those involved in system design (T2).

(Source: Ulrich, 1994; 248).

The boundary judgements can be conceptually modelled as shown in Figure 5.4 below.

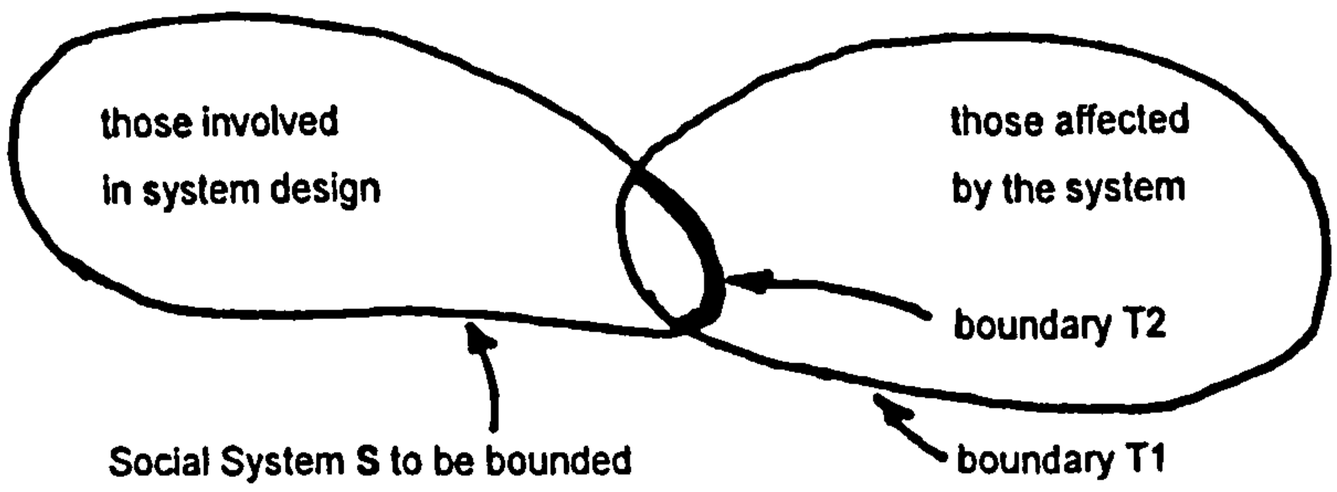


Figure 5.4 Basic Boundary Judgements
(Adapted from: Ulrich, 1994; 248; Figure 4/2)

Those who will participate in the system design have a "...spectrum of participation...[that]...ranges...from being given opportunity to voice...concerns to an immediate decision consequence." (Ulrich, 1994; 248-249). However, those who are likely to be affected by the design of the system are "...understood...as having to live the social reality in question, and...to bear at least some of the consequences of the planning outcome." (Ulrich, 1994; 249).

The boundary T1 in Figure 5.4 above represents the "...total group...of those to be involved and/or affected...[by the design of]..."*the social system S*"" (Ulrich, 1994; 249) (Italics in the original).

The boundary T2 in Figure 5.4 above involves judgements associated with contrasting those who are involved with the system design (but not affected) with those who are affected but not involved. There is also an issue related to those who are both involved with and affected by the system design.

Clearly, the problem "...of bounding the two groups of the affected and the involved...[requires that both]...boundary judgements...[T1 and T2 should be taken into account]..." (Ulrich, 1994; 249). The two boundary judgements, T1 and T2 can be encapsulated as:

- How can we draw the boundary between the total system, **S** and the containing environment? Put another way we can ask what elements belong within the total system, **S** (or the system that contains the problem situation), and what elements belong to the environment that contains the system, **S**? (T1);
- How can we develop the boundary between the involved and the affected (T2)?

(Source: Ulrich, 1994; 249).

These two judgements, T1 and T2, "...are crucial boundary judgements towards which...[a planner]...must work...[and the]...judgements...will be the *result*, rather than the point of departure, of the process of unfolding and ill-structured and unbounded problem." (Ulrich, 1994; 249) (Italics in the original). These critical judgements must begin with defining "...the essential planning purpose and...bound[ing] the two groups of the involved and the affected by breaking them down into manageable *subgroups*." (Ulrich, 1994; 249) (Italics in the original).

Those involved in designing the purposeful system are influenced by:

- Sources of motivation in terms of contribution to the purposes to be served by the system and whose purpose and values govern system design;
- Sources of control with respect to provision of means, resources, decision authority and power;
- Sources of expertise relative to skills and knowledge for system design.

(Source: Ulrich, 1994; 250).

The three influences outlined above lead to three 'subgroups' that make up the involved group:

- The "Client" influenced by sources of motivation;
- The "Decision Maker" influenced by sources of control;
- The "Planner" influenced by sources of expertise.

(Source: Ulrich, 1994; 250).

The three subgroups are not mutually exclusive but should be seen as "...wide enough to cover the...involved group...[and]...are intended to be exhaustive with respect to that group." (Ulrich, 1994; 250).

Turning to those who are affected by the social system design, the:

> "...second...group of social actors defining the normative content of S,...those *affected* but not involved, it is obvious that this group is less easy to specify...as it is potentially very large, and its members do not "qualify" as such by making some well-defined contribution." (Ulrich, 1994; 251) (Italics in the original).

Attempting to identify the subgroups can only be undertaken by developing a cost related taxonomy of social planning:

- Socio-ecological costs:

Quality of individual lives;

Quality of general community life;

Natural environment quality.

- Socio-economic costs:

Re-distribution effects within the community;

Re-distribution effects within the total state;

Re-distribution effects at inter-state level;

International re-distribution effects with respect to developed and developing states;

Costs imposed on future generations.

- Socio-political costs:

Undermining of civil rights;

Consequences for democratic processes;

Private interest undermining of governmental processes;

Corporate interests or governmental intervention undermining free market trading;

Creation of structural conflict such as inflation or recession.

(Source: Ulrich, 1994; 251).

Clearly this taxonomy can raise more questions than it answers in terms of both first and second order change management. This is because it is impossible for everyone who may be affected by social system design to become involved. This has particularly significant implications for radical second order system change. Indeed, for the planner of social systems "...the best we can do is to give the planner a category that captures the essential *role* played

by those who...will argue the case of the affected...and...[this]...role...is that of a *witness...*" (Ulrich, 1994; 252) (Italics in the original).

For second order system change the role of 'witness' permits the voice of the affected to be heard as "...by virtue of their own affectedness...[they]...can bear witness to the ways in which all those who cannot voice their concerns may be affected..." (Ulrich, 1994; 252). This concept creates a framework that can be modelled as shown in **Figure 5.5** below.

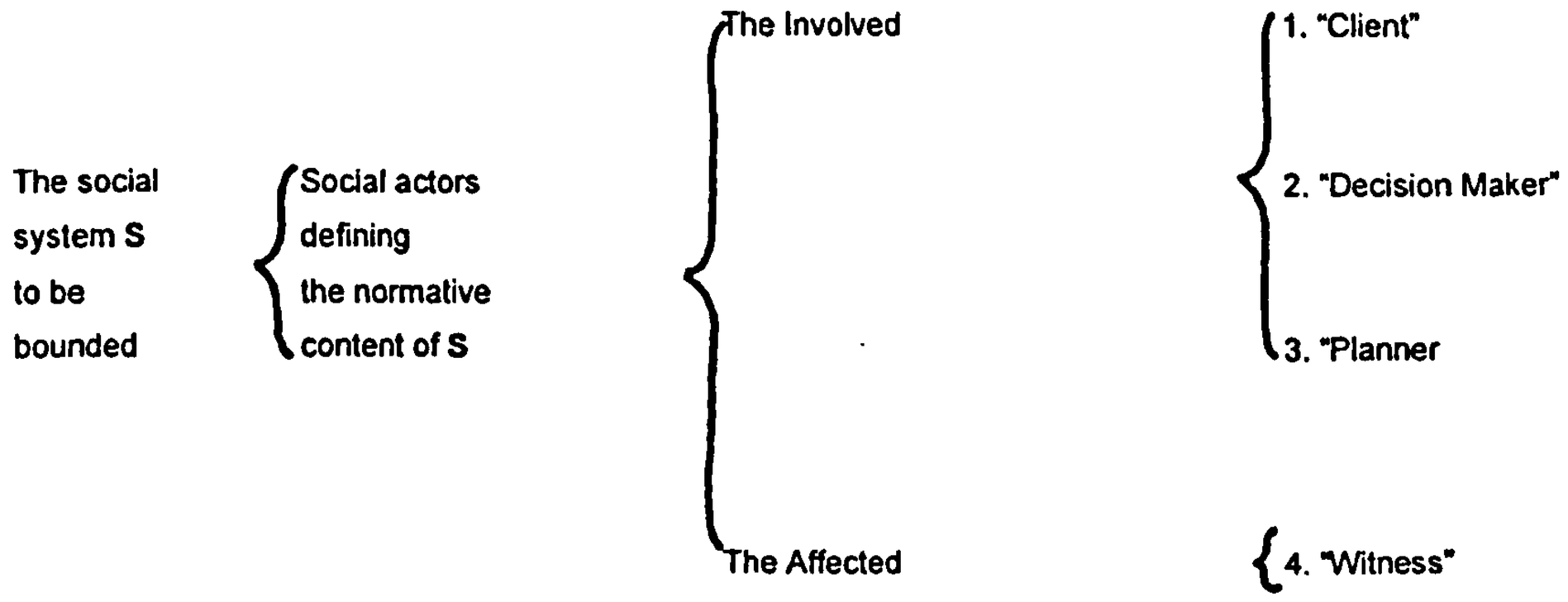


Figure 5.5 Relationships between Involved, Affected and Influences
(Adapted from Ulrich, 1994; 252)

Figure 5.5 above establishes a basis for a methodological process of inquiry. This process of inquiry must include the involved and the affected, related to the appropriate influences, such that the relevant boundary judgements associated with system (S) design can be made. However, it is necessary to ascertain "*Who* should...[make]...input...[to the process of inquiry?]..." (Ulrich, 1994; 253) (Italics in the original). The 'who' question is answered by referring to the influence groups identified in **Figure 5.5** above. However, the planner has to "...conceptualize the essential inputs..." (Ulrich, 1994; 253) needed from the four influence groups referred to in **Figure 5.5** above. This means that it becomes essential for a system planner to "...complement the "who" question by...[asking]..."what?"...[form these inputs should take?]..." (Ulrich, 1994; 253).

For the first influence group, that is the client of the system, the 'what' question is answered by the client trying "...to communicate to the planner his purposes, i.e., his interests, his values, his preferences with respect to what would be an "improvement"..." (Ulrich, 1994; 253).

The second (decision makers) influence group are defined as "...the complex of persons who can produce and control changes in S's measure of improvement..." (Ulrich, 1994; 255). It is useful for the system planner to determine who belongs to this second influence group as there are important boundary judgements regarding "...*what* means or conditions are necessary to serve the client's purpose, i.e., to increase the measure of improvement, and who is in control of these means or conditions." (Ulrich, 1994; 255) (Italics in the original).

The third influence group are the planners themselves and "...the "what" question must aim at the sources of expertise required for mapping and improving S, and at the appropriate relationship between the "experts" and the "decision makers."" (Ulrich, 1994; 255).

These three influence groups are collectively identified as the 'involved'. The fourth influence group are the 'affected' witnesses who "...represent the crucial *source of legitimation.*" (Ulrich, 1994; 256) (Italics in the original). The witnesses do not "...contribute resources of expertise, nor do their purposes motivate the planning effort..." (Ulrich, 1994; 256). This influence group provides a contribution to the design of S "...that goes beyond...[securing]...improvement for the client; it extends to the costs and risks imposed on all those who do not belong to the client...[influence group]." (Ulrich, 1994; 256-257). In this context of organisational change through system design it can be argued "...that the affected must be given the chance of emancipating themselves from being treated merely as a means for the purposes of others." (Ulrich, 1994; 256).

From this analysis it is clear that the involved and the affected influence groups are very likely to have conflicting concerns, expectations, and needs of the system design, and pluralistic relationships are likely to exist. This argument can be extended to incorporate organisational change, in that the various groups involved in the design and implementation of, particularly second order, organisational change, will have different concerns, expectations, and needs of the proposed change. Such differences are "...rooted in different *Weltanschauungen* ("world-views"), i.e., in different visions of what social reality and human life in it ought to be...[and]...the planner must trace the different visions that possibly separate the affected from the involved." (Ulrich, 1994; 256) (Italics in the original). This leads us to a proposed set of "...twelve categories of pragmatic planning...[as a basis for the methodology of CSH]..." (Ulrich, 1994; 256) as shown in **Figure 5.6** below.

Influence Group	Central Issues – in terms of S		
1. *Client* 2. Purpose 3. Measure of Improvement	Sources of *motivation* of S	The *Involved*	The *Social System* S to be Bounded
4. *Decision-maker* 5. Components 6. Environment	Sources of *control* of S		
7. *Planner* 8. Expertise 9 Guarantor	Sources of *expertise* and implementation of S		
10. *Witness* 11. Emancipation 12. Weltanschauung	Sources of *legitimation* of S	The *Affected*	

Figure 5.6 The Twelve Categories for Pragmatic Mapping of Social System Design
(Adapted from Ulrich, 1994; 258; Table 4/4)

The Twelve categories shown above in **Figure 5.6** are useful "...for describing the normative content of systems maps and designs..." (Ulrich, 1994; 258). These critically heuristic categories lead to the concept of pragmatic mapping in terms of the need to ask

questions related to the actual and ideal mappings of social system design. With particular reference to second order change, it must be recognised that we are dealing with social system design. Therefore, the pragmatic questions are framed (within an 'actual' and 'ideal' contexts) as 'What *is* the actual mapping?'; and 'What *ought* the ideal mapping to be?'.

It is these questions, using the twelve critically heuristic (normative) categories that form the methodological approach of CSH. They emerge from the four influence groups of client, decision maker, planner, and witnesses and are important in terms of boundary judgements associated with the design of S. Each of the four influence groups generates questions as follows:

> "The questions relating to the client concern the sources of motivation...[and]...are about its "value basis." The questions relating to the decision maker examine sources of control...[and]... are about the design's "basis of power." The questions relating to the...[planner]...seek the sources of expertise employed in the design; they concern its "basis of know how." And the questions relating to the witnesses reflect on the sources of legitimation considered in the design; they ask for its "basis of legitimation.""(Jackson, 1991; 190-191).

The four sets of critically heuristic questions - using three questions in each set - give:

> "...the complete set of 12 boundary questions. The first question...[in each set]...is about the social roles of the involved or the affected; the second refers to role-specific concerns; and the third refers to key problems surrounding the determination of boundary judgements with respect to that group." (Jackson, 1991; 191).

The twelve questions are powerful in terms of the manner in which they reveal the normative content of the design of S. This power is best demonstrated when the questions are formulated "...in an "is" mode and an "ought" mode, and the answers contrasted." (Jackson, 1991; 191). Ulrich (1994) however, suggests that the questions must be rooted within a 'purposeful systems' context. This is best viewed in the form of a process model as shown in **Figure 5.7** below.

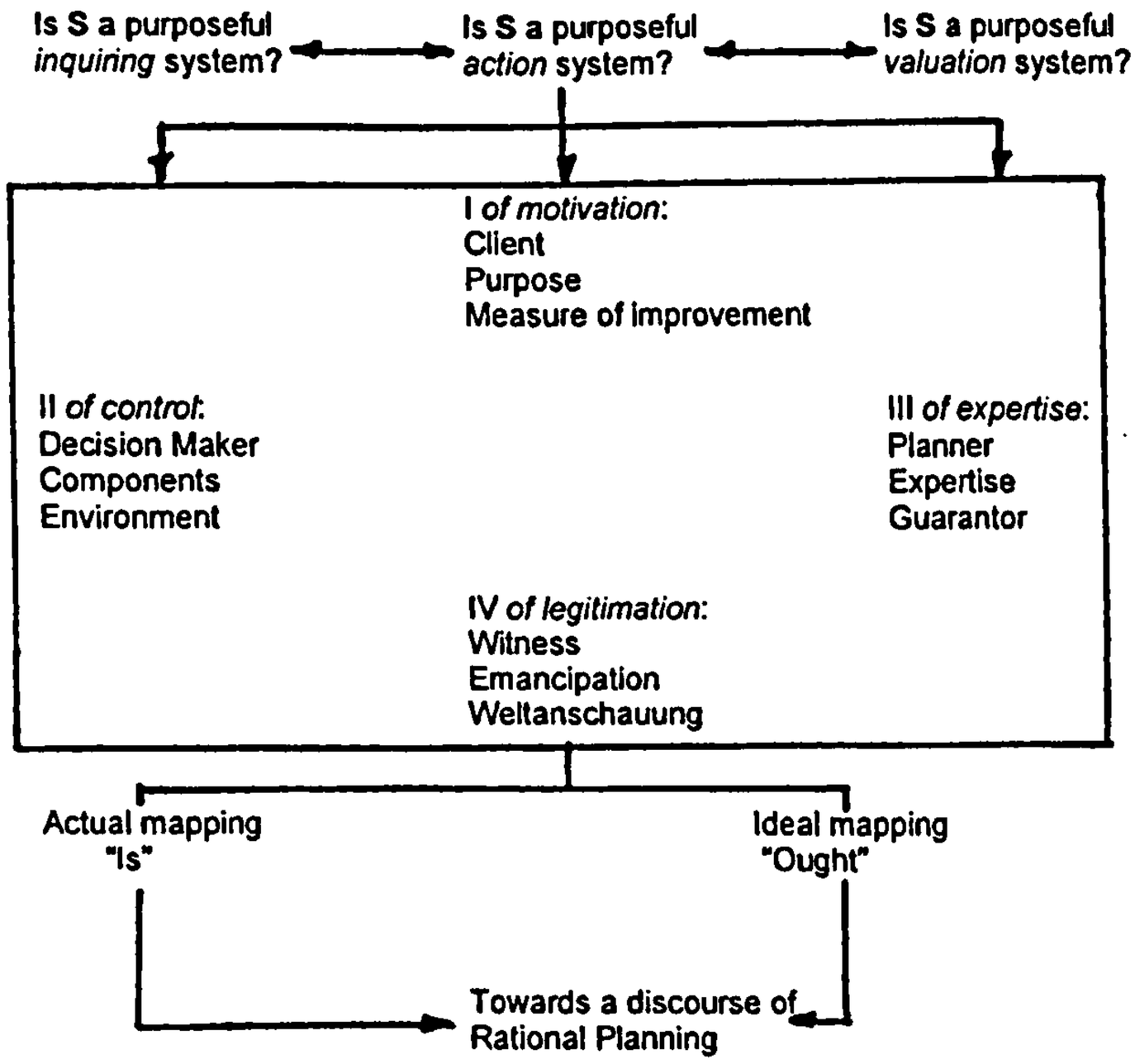


Figure 5.7 Taxonomy of Problem Solving Dimensions in terms of System Purposefulness

(Extracted and adapted from Ulrich, 1994; 342; Table 6/4)

Figure 5.7 provides a taxonomical and contextual framework for 'rational' system design that takes into account the needs and expectations of all four influence groups. This methodological framework can also form a basis, within the CPIM, for the management of second order organisational change, and summarising the twelve critically heuristic questions in Figure 5.8 below will conclude this section.

1. Who is/ought to be the client of the system design?
2. What is/ought to be the purpose of the system design?
3. What is/ought to be the measure of success of the system design?
4. Who is/ought to be the decision maker?
5. What conditions of successful planning and implementation of the system are, or can be, controlled by the decision maker?
6. What conditions are not under the control of the decision maker? (i.e., are in the environment)
7. Who is/ought to be involved as a planner?
8. Who is/ought to be involved as an expert, and what form might the expertise take?
9. Where do the involved seek a guarantee that their planning will be successful?
10. Who amongst the witnesses represents the concerns of the affected?
11. How is/ought the affected given an opportunity to emancipate themselves from the experts?
12. What worldview is/ought to underpin the system design?

Figure 5.8 Twelve Critically Heuristic Questions for Social System Design

(Adapted from Jackson, 1991; 191)

5.5 TOTAL SYSTEMS INTERVENTION

5.5.1 The Need for Total Systems Intervention (TSI)

A strength of CSH lies in its focus on the relationship between the involved and the affected in terms of the normative content of system design. Ulrich argues that it is necessary to "...put recalcitrant planners into a position where they have to enter into dialogue...[using]...the polemical employment of boundary judgements." (Jackson, 1991; 192). The employment of reasoned argument, in Kantian terms, is associated with the concept that "...an argument is polemical if it is used with a solely critical intent against a dogmatically asserted validity claim." (Jackson, 1991; 192). This leads to an important point with respect to organisational change. For change to be both effective and sustainable it is vital that the planners of the change should engage with those who will be asked to implement the proposed change. Ackoff (1981) asserts 'plan or be planned for'!

Those who will be affected by system design or organisational change "...can employ boundary judgements against planners...[using polemic argument that will]...assert alternative boundary judgements...[to]...shift the burden of proof onto the planners..." (Jackson, 1991; 192). Such an approach means that "...agreement among all affected citizens can finally lead to conclusions about what ought to be done...[resulting in a]...dialectical solution...[that brings]...the systems rationality of the planners...into contact with the "social rationality" of those who have to live in and experience...social systems designs." (Jackson, 1991; 192). From this it can be recognised that a "...degree of social awareness is shown by Ulrich's insistence that the systems rationality of planners is always tested against the social rationality of the affected...[and that the]...emancipatory potential of the methodology can hardly be in doubt." (Jackson, 1991; 193). Clearly this is an important issue for both first and second order organisational change in that any change is unlikely to be either effective or sustainable without real co-operation from those who will be affected by the proposed change. Emancipation of the affected from the planners is vital for successful implementation of organisational change programmes.

However, a perceived weakness of CSH is that it does not appear to be "...committed to the complementary and informed use of all varieties of the systems approach at the theoretical level." (Jackson, 1991; 193). It is this point that leads into a consideration of the development of Critical Systems Thinking (CST) and the associated meta-methodology, Total Systems Intervention (TSI).

5.5.2 The Development of Critical Systems Thinking Relative to TSI

The systems movement during the late 1970's and early 1980's was, as previously mentioned, beset by 'internecine warfare' between the 'hard' and 'soft' schools of thought. The emergence of a critical school of thought and the "...first steps in its evolution consisted of radical attacks upon other forms of management science." (Jackson, 1991; 183).

Systems thinking and approaches in the 1970's were dominated by problem solving methodologies such as Operational Research, Systems Analysis, Systems Engineering, and Systems Dynamics. These approaches were eminently "...suitable for tackling well defined problems...[of a first order change type]...but were found to have limitations when faced with complex...[second order change issues]...involving people with a variety of viewpoints and frequently at odds with one another." (Jackson, 2000; 355).

The response of the established systems movement to the growing sense of unease with the so-called 'hard' systems approaches was the development of:

> "...organizational cybernetics to tackle complexity; soft systems methodology and interactive planning to handle subjectivity; critical systems heuristics to help the disadvantaged in situations involving conflict; and pragmatic pluralism to manage diversity. In theoretical terms, the positivism that had dominated systems thinking until the 1970's was supplemented, as a source of support for applied work, by structuralism, interpretivism, "radicalism" and postmodernism." (Jackson, 2000; 355).

Many of the 'softer' approaches have already been discussed earlier in this thesis and there is no need to expand further. However, the emergence of the 'soft' school of systems thinking during the 1980's also came under attack from the new 'critical thinkers' as the 1980's closed. It has, more recently, been argued that:

> "Critical systems thinking has supplied the bigger picture, has allowed systems thinking to mature as a transdiscipline, and has set out how the variety of methodologies, methods and models now available can be used in a coherent manner to promote successful intervention in complex organizational and societal problem situations." (Jackson, 2000; 355).

Two eminent systems thinkers, Ackoff and Checkland, have argued that systems approaches needed to take into account the inherent subjectivity contained in 'real-world' problem situations. The Ackoff/Checkland view that subjectivity could only be addressed through consensus seeking participative debate was challenged because the:

> "...recommendations of soft systems thinking remain regulative...[as]...no attempt is made to ensure that the conditions for genuine debate are provided...[Indeed, the]...kind of open, participative debate...essential for the success of the soft systems approach...is impossible to obtain in problem situations where there is fundamental conflict between interest groups that have access to unequal power sources." (Jackson, 2000; 356).

Such a challenge from Jackson reinforces the hypothesis, articulated earlier in this thesis, that a critical theory of organisational change is necessary if change is to be both effective and sustainable. It became clear that "...all systems methodologies had their limitations; their weaknesses as well as their strengths." (Jackson, 2000; 356).

It has already been seen that social theory assisted in creating a basis for critically aware interventions in complex second order organisational change situations. The inclusion of social theory in such situations "...allows an overview to be taken of different ways of analysing and intervening in organizations...[through the use of]...sociological paradigms and organizational analysis...[and]...images of organization..." (Jackson, 2000; 356). In encouraging understanding of "...the strengths and weaknesses, and the theoretical underpinnings of...systems methodologies to be unearthed, the social sciences drew attention...to the importance of the social context in which the methodologies were used." (Jackson, 2000; 357). The recognition of methodological strengths and weaknesses was referred to as 'social awareness' that "...involved recognizing that there are organizational and social pressures that lead to certain systems theories and methodologies being popular for guiding interventions at particular times." (Jackson, 2000; 357). Having produced useful and cogent criticisms of both 'hard' and 'soft' approaches, Jackson and Keys (1984) and Ellis and Flood (1987) established research programmes designed to provide systems based approaches that would attempt to answer the question 'which methodology - when?'. The output from these programmes was TSI.

5.5.3 The System of Systems Methodologies (SOSM)

Understanding and accepting "...that different systems approaches had different strengths and weaknesses...[led to the view]...that they could be seen as a set with individual approaches...being more or less appropriate to particular problem situations. (Jackson, 2000; 357). In a similar vein, an argument, which suggested that a 'Phased Methodological Approach' (PMA), based on the concept of paradigm switching dependent upon the initial and developing perspectives on a problem situation, was developed by Ellis and Flood (1987).

However, it was the work of Jackson and Keys (1984), and subsequently Flood and Jackson (1991(a)), which led to the development of TSI as a meta-methodology within a CST theoretical framework.

The initial work of Jackson and Keys (1984) set out to investigate "...relationships between different systems-based methodologies and practically at discovering the efficacy of particular approaches in various problem contexts." (Jackson, 2000; 358). The outcome of this research programme was the 'System Of Systems Methodologies' that would permit "...a classification of systems methodologies that would allow for their "complementary and informed" use." (Jackson, 2000; 358).

The System of Systems Methodologies (SOSM) is "...an "ideal type" grid of problem contexts that can be used to classify systems methodologies according to their assumptions about problem situations." (Jackson, 2000; 358). The SOSM has just two dimensions; one that defines "...the nature of the systems in which the problems of concern are located and the other...[defines]...the nature of the relationship between the participants who have an interest in the problem situation and its improvement." (Jackson, 2000; 358). The dimension defining the nature of the problem containing systems provides just two ideal types of system that are

classified as either simple or complex. The dimension, which defines the nature of participant relationships, provides just three ideal types of participant relationships that are classified as unitary, pluralist, or coercive. The combination of these classifications produces a six-celled grid of problem contexts that is shown in **Figure 5.9** below.

		PARTICIPANTS		
		UNITARY	PLURALIST	COERCIVE
SYSTEM	SIMPLE	Simple Unitary	Simple Pluralist	Simple Coercive
	COMPLEX	Complex Unitary	Complex Pluralist	Complex Coercive

Figure 5.9 The Grid of Problem Contexts

(Adapted from Jackson, 2000; 359; Figure 10.1)

The grid of problem contexts raises an awareness of the "...need for a variety of problem solving methodologies...[that provides]...a very convenient means of classifying available systems approaches..." (Jackson, 2000; 358). Having established the problem context grid the next step "...was to relate existing systems based, problem solving methodologies to it." (Jackson, 2000; 358). This was achieved by relating the various systems based intervention methodologies to the problem context grid using the system and participant relationship characteristics as the means.

The two system 'types' have been identified as 'simple' and 'complex'; 'simple' systems are characterised as having:

- A small number of elements;
- Relatively few interactions between system elements;
- Pre-determined element attributes;
- Highly organised interactions between system elements;
- Well-defined laws that govern system behaviour;
- Low levels of evolution over time (first order change dominates);
- Sub- systems that do not have goals;
- Closed environmental approaches to system management;
- Inertia with respect to behavioural influences.

(Source: Flood and Jackson, 1991(a); 33).

'Complex' systems, on the other hand, are characterised as having:

- A large number of elements;
- A high number of inter-elemental interactions;
- Non-deterministic elemental attributes;

- Loosely organised inter-elemental interactions;
- Probabilistic behaviour;
- First order evolution over time;
- Purposeful sub-systems that generate their own goals;
- Open environmental approaches to system management;
- Active with respect to behavioural influences.

(Source: Flood and Jackson, 1991(a); 33-34).

The three participant relationship 'types' have been identified as 'unitary', 'pluralist', and 'coercive'. 'Unitary' relationships are characterised as involving participants who:

- Share common interests;
- Have compatible values and beliefs;
- Largely agree upon means and ends;
- All participate in decision-making;
- Act in accordance with agreed objectives.

(Source: Flood and Jackson, 1991(a); 34).

'Pluralist' relationships can be characterised as involving participants who:

- Possess basically compatible interests;
- Have values and beliefs that diverge to some extent;
- Do not necessarily agree upon means and ends but are able to reach compromise;
- All participate in decision-making;
- Act in accordance with agreed objectives.

(Source: Flood and Jackson, 1991(a); 34).

Finally, 'coercive' relationships can be characterised as involving participants who:

- Do not share common interests;
- Possess conflicting values and beliefs;
- Do not agree on means and ends and cannot achieve genuine compromise;
- Who might coerce other members of the group to accept decisions;
- Cannot agree on setting common objectives.

(Source: Flood and Jackson, 1991(a); 34-35).

Having established the characteristics of both dimensions it is important to relate the different 'schools' of systems approaches and thinking to the problem contexts. This can be achieved in several ways depending on the perspective or worldview being used and Jackson (2000; 361) has argued that:

- Simple - Unitary is associated with 'Hard' systems approaches;
- Complex - Unitary contains Organisations as Systems and Organisational Cybernetics;
- Simple - Pluralist and Complex - Pluralist are associated with 'Soft' systems approaches;
- Simple - Coercive and Complex - Pluralist are both associated with 'Emancipatory' systems approaches.

The relationship between Critical and Emancipatory Systems Thinking will be addressed in Chapter Six.

The problem context grid of **Figure 5.9** can also be related to **Figure 4.1** above and argue that the 'traditional' organisation using the 'Theory E' approach is contained within the Simple - Unitary context. Similarly the 'non - traditional' organisation, using the 'Theory O' approach, is contained within both the Simple - Pluralist and Complex - Pluralist contexts. Within the totality of the SOSM problem context framework, shown in **Figure 5.9** above, it becomes clear that the work of Beer and Nohria (2000) is not systemic as it fails to address all possible combinations of problem situations faced by organisations undergoing change. Nevertheless it is now possible to argue that the SOSM problem context grid does assist in the search to develop a Systemic Theory of Organisational Change (STOC).

A suggested 'grouping' of systems based intervention methodologies relative, to the problem context grid of the SOSM, allows us to develop the SOSM to its conclusion. This is shown in **Figure 5.10** below.

	UNITARY	PLURALIST	COERCIVE
SIMPLE	S - U OR SA SE SD	S - P SSD SAST	S - C CSH
COMPLEX	C - U VSD GST STS CT	C - P SSM IP IM CM	C - C

Key:

SA = Systems Analysis
OR = Operational Research
SSD = Social System Design
CSH = Critical Systems Heuristics
STS = Socio Technical System Theory
CT = Contingency Theory
IP = Interactive Planning
CM = Cognitive Mapping
SE = Systems Engineering
SD = Systems Dynamics
SAST = Strategic Assumption Surface Testing
VSD = Viable Systems Diagnosis
GST = General Systems Theory
SSM = Soft Systems Methodology
IM = Interactive Management

Figure 5.10 Grouping of Systems Methodologies Relative to Problem Contexts
(Adapted from Flood and Jackson, 1991(a): 42; Figure 2.2)

It is also possible to provide a linkage between the metaphor analysis of Morgan (1997) and the SOSM. This underpins the SOSM with relevant social theory through which intervention can be appropriately directed. This is shown in **Figure 5.11** below.

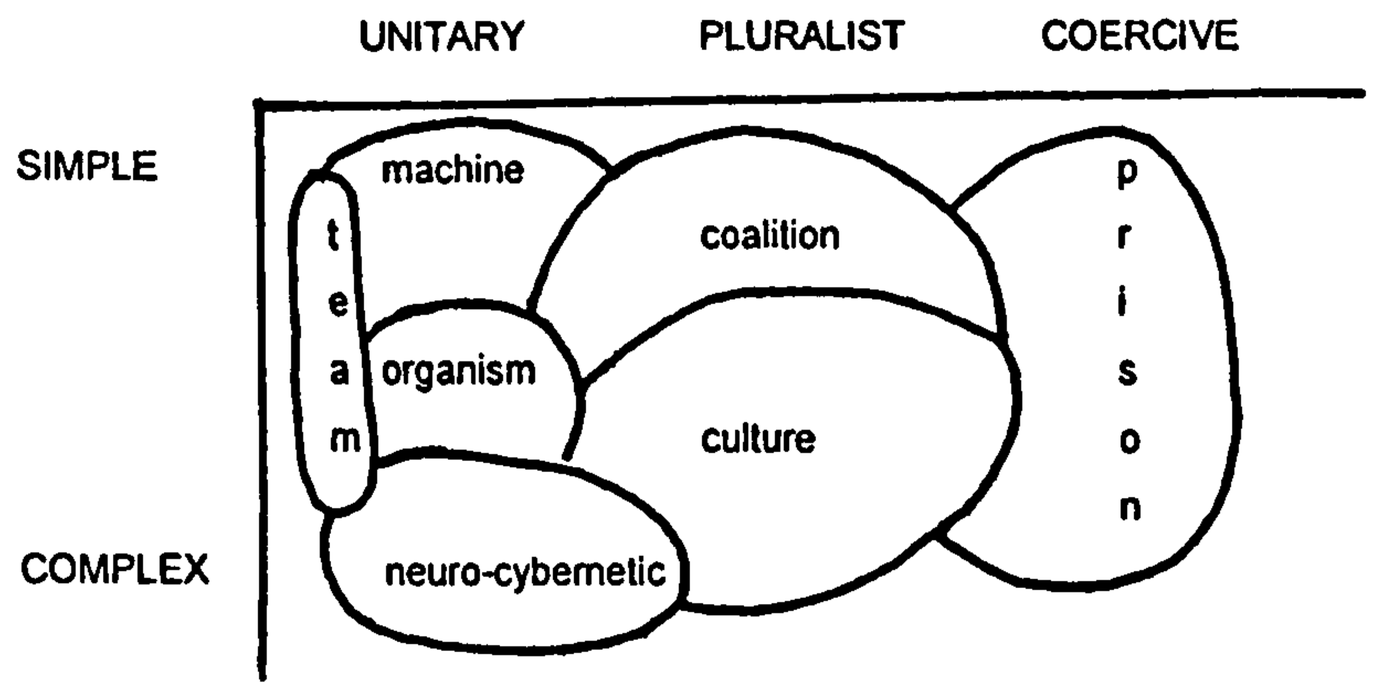


Figure 5.11 The System of Systems Methodologies Relative to Metaphor

(Adapted from Flood and Jackson, 1991; 42; Figure 2.3)

Clearly the SOSM provides a beneficial approach to methodology choice as it:

> "...attempt[s] to reveal what was being assumed in terms of "systems" and "participants" in using each type of systems methodology...[enabling]...users...to assess their relative strengths and weaknesses for the task at hand and to be fully aware of the consequences of employing each approach." (Jackson, 2000; 360).

A marked strength of the SOSM is that it also encourages those engaged in intervention in organisational change situations to:

> "...pause on each occasion they are confronted with a problem situation and ask what methodology is most appropriate in terms of the nature of the context and what the participants are seeking to achieve...[given the need to produce effective and sustainable organizational change]..." (Jackson, 2000; 360).

However, the SOSM was designed to incorporate the two dimensions of system complexity (two categories), and participant relationships (three categories). This can be interpreted as a limitation on the capability of an interventionist when dealing with complex second order change, as the SOSM framework does not incorporate either the order of change or the dynamic effect of time during an intervention. Amongst other developments, a third dimension, that will include the order of change, will be incorporated in Chapters Six and Seven when the STOC and the CPIM will be developed.

5.5.4 Total Systems Intervention (TSI)

The SOSM provided a platform, based in Critical Systems Thinking, for the development of the meta-methodology TSI. This work was carried out during the late 1980's by Flood and Jackson (1991(a); 1991(b)).

TSI was claimed to be "...a new approach to planning, designing, "problem solving" and evaluation...[using a]...process...[that]...employs a range of metaphors to encourage

creative thinking about organisations and the difficult issues that managers have to confront." (Flood and Jackson, 1991(a); 45). The metaphors of Morgan (1997) are related to the various systems based intervention methodologies, using the SOSM, to guide the intervention process.

The meta-methodology, TSI, can also be thought of as a:

"...final element in the maturation of critical systems thinking...capable of guiding practitioners in...pluralistic practice...[towards]...[c]hoice of an appropriate...methodology...that ensures it addresses...the main concerns of the particular organization involved." (Jackson, 2000; 368).

In summary, TSI utilises the metaphors of Morgan (1997) in combination with the SOSM and "...knowledge of the individual systems approaches in an interactive manner that is deemed to be particularly powerful and fruitful." (Jackson, 2000; 368).

TSI is underpinned by the theory and philosophy of CST that has been discussed earlier in this chapter. However, TSI is also predicated upon seven principles that are to be found in the three phases of TSI and these are:

- Organizations are too complicated to understand using one management model with problems that are too complex to tackle with quick fixes;
- Organizations, their concerns, issues and problems need to be investigated using systems metaphors;
- Organizational issues and problems that are pinpointed through metaphor analysis can then be linked to appropriate methodologies that will guide the ongoing intervention;
- Different metaphors and methodologies can be used in a complementary manner to address the issues and problems;
- Appreciation of strengths and weaknesses of different methodologies can help to relate them to appropriate organizational concerns and issues;
- The process of TSI sets out a systemic cycle of inquiry that incorporates iteration between the three phases;
- Facilitators, clients, witnesses and involved are engaged in all the phases of the TSI process.

(Adapted from Jackson, 2000; 368-369).

The process of inquiry that is known as TSI is made up of three phases; Creativity, Choice, and Implementation. Each phase incorporates a Task to be accomplished, the Tools available for that task, and the Outcomes that are expected from the phase. Each phase will now be briefly described.

The Creativity phase of TSI is very important. It is during this phase that the issues and concerns facing the organisation are brought to the surface and confronted by those involved.

For this phase the Task is to use systems metaphors as organising structures to assist all stakeholders to think creatively about the organisation using questions such as:

- What metaphors shed light on the problems and concerns that face the organisation?
- What are the important issues that each metaphor analysis reveals?
- In the light of the metaphor analysis what issues and concerns are most important?

The Tools available to assist in this process of analysis are the metaphors identified by Morgan (1997). Different metaphors concentrate attention on different aspects of the organisation and examples include:

- Organisation as a machine;
- Organisation as an organism;
- Organisation as a brain;
- Organisation as a culture;
- Organisation as a coalition;
- Organisation as a coercive system.

The logical and emergent Outcome from the creative metaphor analysis is a set of crucial issues and concerns that form a basis for methodology choice in the next phase. These logical outcomes form a dependent link between the Creativity and Choice phases of TSI.

The second phase of the TSI process of inquiry is that of Choice. The input to this second phase is the logical outcome from the Creativity phase. In this second phase the Task is to choose an appropriate systems based intervention methodology (or set of methodologies) that will suit the characteristics of the situation facing the organisation.

The Tools available are the problem context arrangements provided by the SOSM. This provides the interventionist with a means of unearthing the important assumptions contained within the methodologies identified within the ideal typology grid of the SOSM. The combination of the problem context information with the metaphor analysis provides a sound basis for choice of dominant and dependant methodologies. It is this methodological choice that forms the logical Outcome of this phase which again provides the link to the next phase. (Based on Jackson, 2000; 369-370).

The final phase of TSI is that of Implementation and the Task is to utilise the chosen systems based intervention methodology, or methodologies, that were selected as appropriate for the problem situation during the choice phase. The dominant methodology provides an approach to change that should tackle the major issues faced by the organisation.

The Tools available in this phase are the various systems based intervention methodologies themselves. The Outcome will be the implementation of the co-ordinated changes that are vital for effective and sustainable change.
(Based on Jackson, 2000; 370-371).

TSI, as a meta-methodology, does not address the importance of first and second change phenomena. It is this limitation in TSI, which will be shown in the subsequent chapters of this thesis, which led the author to develop and extend both the SOSM and TSI itself in the form of the CPIM. A substantive and rigorous critique of TSI will be undertaken later as an integral part of the development of the STOC.

TSI is a meta-methodology that makes demands on an interventionist in terms of "...multi-methodological competence and various ethical commitments...[that]...clearly asks a great deal from would-be users, but it does not detail whether or how the relevant competence can be obtained." (Jackson, 2000; 373). Such demands have led to a related but different approach to methodology choice and this will be addressed as the final section of this chapter.

5.6 MULTI-METHODOLOGY

5.6.1 Why Multi-methodology?

The SOSM was developed, as a precursor to TSI, to facilitate the selection of an appropriate systems based intervention methodology for use in organisational problem and change situations. A basic, if implicit, assumption made by Jackson and Keys (1984) was that the selected systems based methodology would be used in its entirety.

The SOSM and indeed TSI have been subjected to intense scrutiny and criticism during the last ten years or so. The scrutiny and criticism acted as a catalyst in a search for alternative methods that would help in selecting and applying systems based methodologies in organisational problem and change situations. This work has been led by Mingers in collaboration with Brocklesby and Gill.

It can, quite reasonably, be asked why is it necessary to develop yet another meta-level process of inquiry that can be used in establishing an intervention mechanism? Why is it that the systems movement seems to be obsessed with, what appears to be, a never ending search for methodologies? To many practising managers who operate at the 'sharp end' of organisational life, the academics and scholars engage in theoretical 'navel gazing' with little real concern for the applicability of their work in organisations (Ellis, 1995(b)).

The critical systems thinkers refute this by arguing that, unless practice is underpinned by sound and appropriate theory, then little real learning by organisational managers occurs during the problem management activities associated with organisational change. This is why almost all organisational change initiatives focus on first order change whilst ignoring second order change. This is also why many change initiatives fail to realise the available potential and do not achieve either effectiveness or sustainability over the longer strategic term. In other words, managers, by ignoring the need for theoretically supported intervention processes, often do not utilise appropriate methodologies through which to pursue the change initiatives they are attempting. Such failures are costly in both financial and human terms and there is a crying need for managers to recognise these costs of failure. It is this context that makes the continual

search for improved methodology worthwhile and useful in the real world of organisational problem management.

Indeed, it is vital for practitioners to understand that "...methodology means a structured set of guidelines for activities undertaken to improve the effectiveness of an intervention." (Mingers, 1997; 1). Previous discussion of several of the systems based methodologies has indicated that they "...are based...on particular philosophical assumptions concerning the nature of the organizational world and the appropriateness of various forms of action. These sets of assumptions form a particular view of the world that is sometimes called a *paradigm*." (Mingers, 1997; 1) (Italics in the original). The three schools of systems thinking, already identified in this thesis, can be recognised as paradigms. As a reminder these paradigms are:

- 'Hard' or positivist or traditional;
- 'Soft' or interpretivist or pluralist;
- 'Emancipatory' or critical.

At first glance it would appear that the three paradigms of systems thinking "...are *incommensurable* because their underlying assumptions are...irreconcilable." (Mingers, 1997; 2) (Italics in the original). This 'paradigm incommensurability' has exercised the minds of the systems thinking scholars over the past twenty years. Indeed it was at the root of the dispute between scholars of the opposed 'hard' and 'soft' schools. It was this that provided the imperative for scholars of the 'critical' school to search for approaches to methodology selection that would recognise that commensurate use and development of the systems based methodologies is a strength and not a weakness.

This perspective led, firstly to the SOSM and then to TSI. The scrutiny and critique of TSI has led Mingers and his collaborators to the:

> "...idea of *multi*methodology. That is, combining together more than one methodology (in whole or part) within a particular intervention. Thus it is not the name of a single methodology, or even of a *specific* way of combining methodologies together. Rather it refers to the whole area of utilizing a plurality of methodologies or techniques within the practice of taking action in problematic situations." (Mingers, 1997; 2) (Italics in the original).

Such ideas led on to:

> "...a whole range of logical possibilities depending on factors such as: whether the methodologies are mixed in the same intervention or across different interventions; whether they come from different paradigms; or whether parts of (rather than whole) methodologies may be combined." (Mingers, 1997; 2).

Whilst the use of methodologies from the same paradigm is unlikely to be problematic, it is clear that such a combinatorial approach is not without difficulties. This is particularly the

case where "...mixing...[all or part of]...methodologies from different paradigms within the same intervention...[is undertaken]..." (Mingers, 1997; 2). Of particular concern is the issue of choosing between methodologies for use in an intervention in terms of "...managing the diversity of methodologies within an intervention...particularly...[in]...the case of multi-paradigm partitioning..." (Mingers, 1997; 2). This concern has led Mingers and his collaborators to argue that "Multimethodology can be seen as a particular form of *methodological pluralism.*" (Mingers, 1997; 2) (Italics in the original).

Prior to discussing Multi-methodology in more detail, it is appropriate to explore the conceptual and theoretical framework of pluralism as it will be utilised in the development of the STOC.

5.6.2 Pluralism in the Management and Systems Sciences

The most prevalent approach to investigation was contained in the positivist methodology of the natural sciences; indeed:

> "...the enormous success of natural science led to its methods...[including]...a belief in universal laws, empirical verification through induction, and observer - and value freedom...being seen as the most reliable way of generating knowledge, not just in the natural sciences but in the social sciences as well." (Mingers, 1997; 3).

The prevalence of positivism was challenged during the 1970's by Kuhn (1996) and Popper (1972) who "...demonstrated fatal flaws in...induction, and theory - and observer - independent observation." (Mingers, 1997; 3). This had a significant impact in the social science where:

> "...it legitimated the rise of various schools of interpretivism such as phenomenology, ethnomethodology, and hermeneutics...[leading to]...similar situations...in organizational studies, and in OR/systems with the development of soft OR and soft systems methodology (SSM)." (Mingers, 1997; 3).

The emergence of new, or alternative, paradigms of knowledge that support investigation and inquiry is in line with the argument that "...a paradigm developed for one set of phenomena is ambiguous to other closely related ones" (Kuhn, 1996; 29). The problems for social science have already been discussed earlier in this chapter. However, it became clear that paradigm incommensurability led to an "...artificial situation...[that]...could not endure as researchers and practitioners found that no one paradigm could capture the richness of real-world situations." (Mingers, 1997; 3). This dichotomy led to a realisation in "...all the disciplines...[that]...the acceptance of paradigm isolation and incommensurability...[had broken]...down and...the debate has turned to various forms of pluralism, in both methodological and philosophical terms." (Mingers, 1997; 3).

Attempting to 'slot' problems neatly into idealised boxes has be-devilled the systems movement. Indeed from the very early days of OR "...practical problems were not seen to fit into neat disciplinary boundaries, and as OR became established...interdisciplinary teams...[became]...the order of the day." (Mingers, 1997; 4). The emergence of soft systems analysis, contained within the interpretivist paradigm, changed the problem to "...one of methodology choice...[and]...how should a practitioner know which approach to use and when?" (Mingers, 1997; 4).

The next 'paradigm shift' was the emergence of CST that has been labelled by Mingers and others as 'critical management science'. It was during the developmental work associated with this new paradigm that Jackson and Keys (1984) produced "...the first meta-theoretical framework - the system of systems methodologies (SOSM)." (Mingers, 1997; 5). It was the work associated with the SOSM that "...identified pluralism as the desired way forward for systems thinking...[that led to the later]...use of the term "complementarism"." (Mingers, 1997; 5). The pluralist or complementarist approach of Flood and Jackson (1991(a)) and Jackson (1991; 2000) produced TSI as a "...meta-methodology to assist in the choice of appropriate methodology(ies) in particular situations..." (Mingers, 1997; 5).

It can be seen that the pluralist form of systems thinking is strongly related to CST through the principle of complementary use and development of systems methodologies and operationalised through the meta-methodology of TSI. Nevertheless, even though "...the critical systems approach and TSI are forms of multimethodology...and they are well developed both theoretically and practically, is there any need to pursue other possible types of multimethodology?" (Mingers, 1997; 6). As "...TSI represents only one possible example of multimethodology..." (Mingers, 1997; 6), Mingers asserts that it is necessary to have such choice and the approach taken by Mingers and his collaborators will be briefly explained.

5.6.3 Combinations and Dimensions of Multi-methodology

Within the Critical Systems Thinking paradigm TSI is a meta-methodology that facilitates the selection of appropriate systems based methodologies for bringing about improvement in problem situations. This approach also provides a theoretically sound process of inquiry that is pluralist in that it permits a cross paradigm mixing of methodologies in a complementary manner. Within a pluralist context it can be argued that the "...essence of multimethodology is to utilize more than one methodology, or part thereof, possibly from different paradigms, within a single intervention." (Mingers, 1997; 6).

A reasonable response to the 'essence of Multi-methodology' claim is that there really us very little difference between TSI and Multi-methodology. However, this is to ignore the fact that TSI expects the selected methodology to be used in its entirety, whereas Multi-methodology explicitly suggests that selected methodologies can be used in total or partially in a combinatorial mode. It is suggested that there "...are several ways in which such combinations can occur, each having different problems and possibilities." (Mingers, 1997; 6).

The various combinations "...can be seen as a set of logical possibilities, or as the preferred *modus operandi* of particular agents." (Mingers, 1997; 6) (Italics in the original).

A partial view of various combinations is shown in **Figure 5.12** below.

	One/more method-ologies	One/more paradigms	Same/different intervention	Whole/partial methodology	Example
A	One	One	-	Whole	SSM only
B	More	One	Different	Whole	SSM/Strat Choice
C	More	One	Same	Whole	Simulation/ Queuing Th'ry
D	More	One	Same	Part	Cog Mapping in SSM
E	More	One	Same	Part	Cog Mapping + root def'n
F	More	More	Different	Whole	Simulation/ SSM
G	More	More	Same	Whole	VSM + IP
H	More	More	Same	Part	JSD in SSM
I	More	More	Same	Part	Cog Mapping + SD

Figure 5.12 Possible Methodology Combinations
(Adapted from Mingers, 1997; 7; Table 1.1)

An interpretation of the Mingers' combinatorial proposal, shown in **Figure 5.12** above, is offered taking into account paradigmatic and/or methodological isolationism and pluralism. This interpretation is based on **Figure 5.13** below.

Combination	Paradigm	Methodology
A	Isolated	Unitary
B and C	Isolated	Unitary (Whole)
D and E	Isolated	Pluralist (Part)
F and G	Pluralist	Pluralist (Whole)
H and I	Pluralist	Pluralist (Part)

Figure 5.13 Interpretation of Mingers' Combinatorial Approach

Combination A is the classic application of a single methodology, in its unitary totality, which is theoretically underpinned by a single (interpretivist) paradigm. Such a combination could also be that of using Systems Engineering (SE) in the design and implementation of a complex man made system within the functionalist paradigm.

Combinations B and C are both paradigmatically isolated. That is the methodologies, used in their unitary entirety, are theoretically underpinned by a single paradigm in each case. Here the paradigms are interpretivist and functionalist respectively.

Combinations D and E are also both paradigmatically isolated. However, in these combinations, the methodologies are partially used in a pluralistic sense. The underpinning paradigm in both cases is that of interpretivism.

Combinations F and G are both paradigmatically pluralist in that the underpinning paradigms are functionalist and interpretivist. The selected methodologies are used in pluralist totality with each other in a manner similar to dominant and dependent methodological selection within TSI.

Combinations H and I are also paradigmatically pluralist; again the theoretical underpinning comes from the functionalist and interpretivist paradigms. The selected methodologies are used in partial pluralistic manner.

Mingers (1997) suggests that these combinations can be 'named':

- A is 'Methodological Isolationism';
- B is 'Paradigmatic Isolationism';
- C is 'Methodology Combination';
- D and H are 'Methodology Enhancement';
- E is 'Single Paradigm Multimethodology';
- F is 'Methodology Selection';
- G is 'Whole Methodology Management';
- I is 'Multi-paradigm Multimethodology'.

This 'naming' can be confusing and may put off potential users of Multi-methodology. The combination of underpinning paradigms is, of course, similar to the complementarism associated with TSI. The issue of pluralism is important, and it is necessary to understand "...arguments as to why multimethodology (sometimes called "methodological pluralism", or "multi-paradigm intervention and research") is desirable." (Mingers, 1997; 8).

Methodological pluralism is a phrase that can also be associated with TSI in that systems based intervention methodologies are used in pluralistic and indeed multi-paradigmatic modes. It should however, be noted that the phrase methodological pluralism can be understood in several ways:

- 'Loose pluralism' asserts that a discipline *as a whole must support* and encourage the variety of paradigms and methods used within it. It does not specify how or when they should be used;
- 'Complementarism' is appropriate where *different paradigms are viewed as internally consistent, and based on different assumptions about their context of use*, such that

each paradigm would be also be seen as appropriate within a particular research application;

- 'Strong pluralism' argues that *most, if not all*, intervention situations would be dealt with in a more effective manner if a blend of methodologies from different paradigms were to be utilised.

(Adapted from Mingers, 1997; 9) (Italics added for emphasis).

Loose pluralism is considered to be consistent with isolationist approaches. Examples of such approaches include the use of a specific methodology such as SE or SSM to the exclusion of all other approaches. Mingers (1997) does not examine this form of methodological pluralism any further. It is concluded that loose pluralism is not seen as pluralist by Mingers.

The complementarist mode of methodological pluralism is consistent with the approach advocated by TSI. It is implicit that Mingers (1997) does not support this approach as he suggests that the arguments in favour of 'strong pluralism' are persuasive because:

> "...real-world problem situations are...highly complex and multidimensional. Different paradigms each focus attention on different aspects of the situation and so multimethodology is necessary to deal effectively with the full richness of the real world. Second[ly]...an intervention is not usually a single, discrete event but is a process that...proceeds through a number of phases...[that]...pose different tasks and problems for the agent....Third, further consideration of the philosophical and theoretical aspects of multimethodology is timely since many people are already combining methodologies..." (Mingers, 1997; 9).

A further point, in Mingers' terms, in favour of strong pluralism is that:

> "...methodologies tend to be more useful in relation to some phases...[of an intervention]...than others, so the prospect of combining them has immediate appeal. Even where methodologies do perform similar functions, combining a range of approaches may well yield a better result." (Mingers, 1997; 9).

It is worth taking issue with the views expressed by Mingers (1997) regarding strong pluralism. The claims made are also applicable to TSI, which is also a means of selecting systems based intervention methodologies for Multi-methodology application. Indeed, one can envisage using TSI as a meta-level selection process for combining various methodologies that are appropriate to the problem situation under investigation. Therefore, in practical terms, TSI and Multi-methodology (seen as strong pluralism) are very similar.

Whilst it is recognised that taking a multi-paradigmatic approach will provide considerable advantages in terms of situational richness, it is argued that Multi-methodology has similar weaknesses to TSI in terms of first and second order change. In this context, Multi-methodology does not have any advantages over TSI.

Clearly, adopting "...a particular paradigm is like viewing the word through a particular instrument such as a telescope, an X-ray machine, or an electron microscope. Each reveals certain aspects but is completely blind to others" (Mingers, 1997; 9). This is a most useful metaphor as it supports the contention that "...in adopting only one paradigm one is inevitably gaining only a limited view of a particular intervention or research situation...ignoring the wider social context." (Mingers, 1997; 9). This is of particular significance in helping an interventionist recognise the second order change phenomenon that are often ignored in complex organisational change with the inevitable result of failure and ineffectiveness. It is imperative for interventionists to recognise that this "...argument is a strong one in support of multi-paradigm research...[and suggests]...that it is always wise to utilize a variety of approaches". (Mingers, 1997; 9). Such views strongly support the claim made in this research programme that a STOC is a vital ingredient in developing sustainable and effective change.

In this context Mingers (1997), and his collaborators, developed a multi-dimensional framework that supports strong pluralism and multi-paradigmatic intervention processes. This is outlined in **Figure 5.14** below.

The framework suggests "...that it is useful to distinguish our relations to, and interactions with, three worlds - the material world, the social world, and the personal world....The framework also...distinguishes between the objective, the institutional, and the subjective worlds." (Mingers, 1997; 9-10).

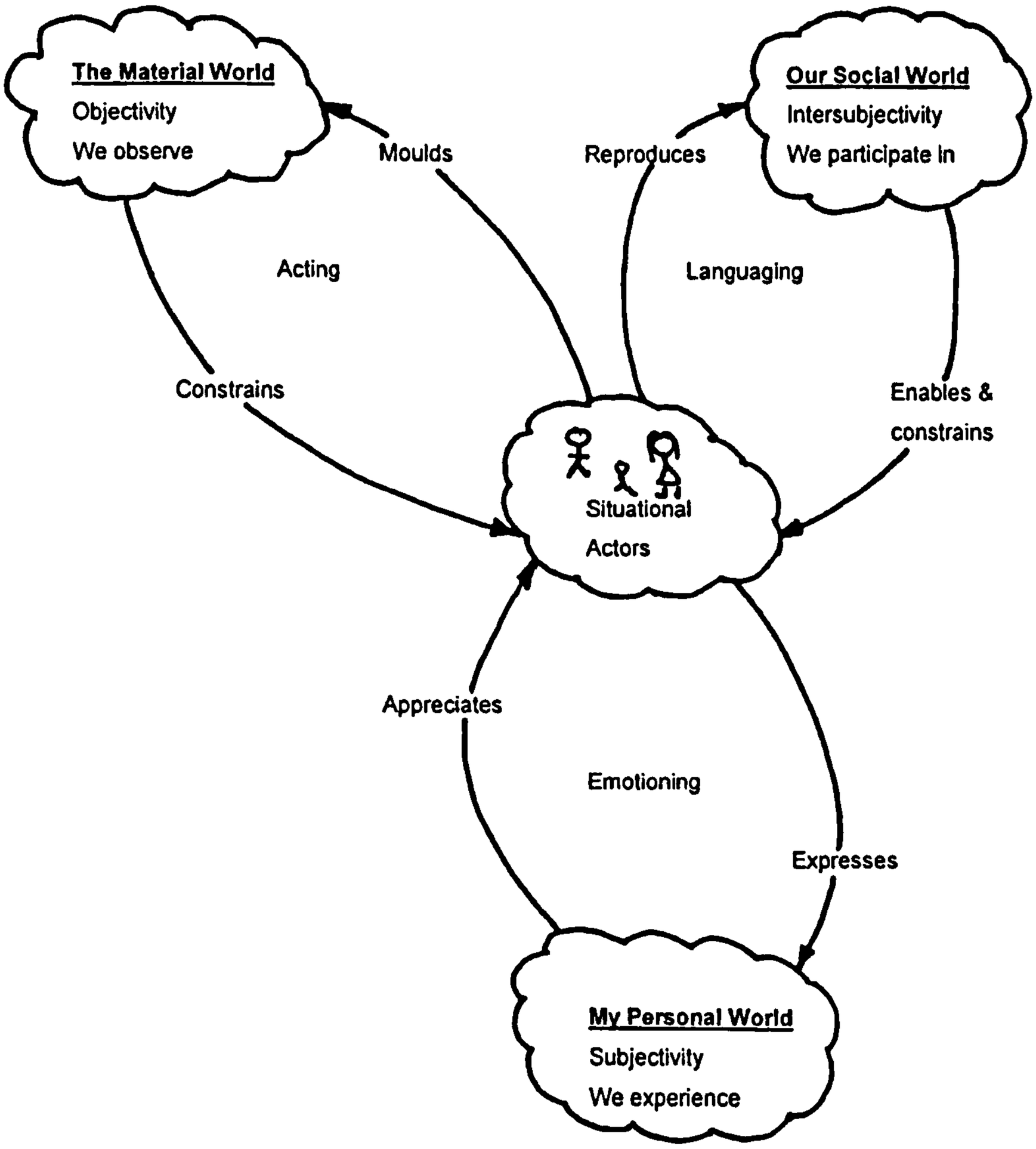


Figure 5.14 Multi-dimensional Framework for Multi-paradigmatic Intervention Processes
(Adapted from Mingers, 1997; 10; Figure 1.1)

Mingers (1997; 10-11) discusses the framework shown in Figure 5.14 above; it is this discussion that forms the basis for the description and commentary that now follows.

The 'material world' exists and is external and independent of the interventionist. An interventionist can influence and shape this world through actions but is subject to its constraints. Mingers (1997) argues that the relationship of the interventionist to this world is one of external observation rather than participation - as with social activities, or experience - as with personal mental states, and that this world can be characterised as objective as it exists independent of the interventionist as an observer. However, descriptions of this world are not objective as it is the totality that may, or may not, be true. Human beings have developed within this material world becoming capable of communication and self-reflection. This linguistic capability leads to personal and social worlds.
(Adapted from Mingers, 1997; 10-11).

The 'personal world' of an interventionist is exemplified through individual thoughts, emotions, feelings, experiences, and beliefs. This is a subjective world that is experienced in that it is generated by and accessible only to the individual. This subjectivity can be expressed

to others and the perspective, of that essentially same world, of others can be communicated backwards. Again, the totality of the experience is accessible only to the interventionist. (Adapted from Mingers, 1997; 11).

The 'social world' is shared, and participated in, by all those involved in an organisational change situation. This participation is inter-subjective in that participants construct this world; yet the world goes beyond, and pre-exists, any specific human being involved in the situation. This world is made of a multiplicity of layers of language, meaning, social practices, rules, and resources that both facilitate and constrain actions. A primary dimension is that of power and it is a world of valid interpersonal norms and relationships. (Adapted from Mingers, 1997; 11).

Intervention in a real-world organisational change situation is a "...complex interaction of substantially different elements." (Mingers, 1997; 11). There are situational factors "...that are relatively hard and observer-independent, particularly material and physical processes, that we can observe and model." (Mingers, 1997; 11). On the other hand, there are "...aspects that are socially constituted, dependent on particular cultures, social practices, languages, and power structures, that we must come to share and participate in." (Mingers, 1997; 11). In addition, there are "...aspects that are individual such as beliefs, values, fears, and emotions that...[need to be expressed and understood]..." (Mingers, 1997; 11).

5.6.4 The Process of Multi-methodology

It has already been argued that intervention in an organisational change or problem situation is not a single or discrete event. Intervention of this nature is "...a process that has phases or, rather, different types of activities, that will predominate at different times...[and]...a combination of approaches may be necessary to provide a comprehensive outcome." (Mingers, 1997; 11).

The process of a systems based intervention is considered to consist of a series of interdependent activities:

- Appreciation of the problem situation as experienced by the interventionists and expressed by those who 'own' the problem(s);
- Analysis of the structure and constraints associated with the situation;
- Assessment of the ways in which the might be modified in terms of improvement or sustainable change;
- Action to implement the suggested changes.

(Adapted from Mingers, 1997; 12).

This process, in terms of the dynamic of time relevant to any systems based intervention, can be modelled as shown in **Figure 5.15** below.

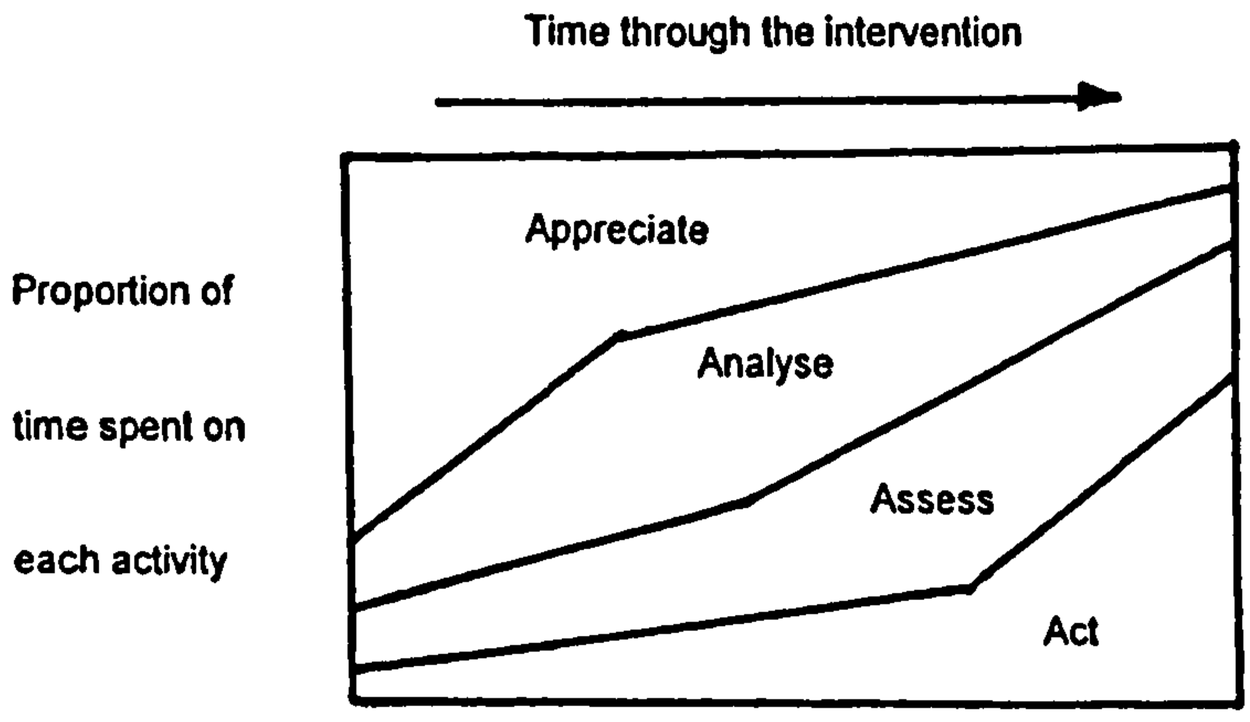


Figure 5.15 Phases of an Intervention
(Adapted from Mingers, 1997; 12; Figure 1.2)

At the outset of an intervention it is vital that relevant information is gathered. This will assist in gaining a rich appreciation of the problem or change situation and this is particularly important for the management of second order change. Clearly, this phase "...cannot be..."observer-independent"..." (Mingers, 1997; 12). An interventionist, in the role of observer, must try to understand "...the situation "as it really is"...[and]...will be conditioned by the...[interventionists']...experience and...access to the situation." (Mingers, 1997; 12). We can think of this phase as asking 'what does this situation contain?'

Having 'appreciated' the problem or change situation the interventionist must analyse why this situation exists. In this context it is helpful to "...understand the history that has generated it, and the particular structure of relations and constraints that maintain it." (Mingers, 1997; 12).

The interventionist must now assess how to bring about the changes required "...consideration must be given to ways in which the situation could be changed...[by]...focusing attention away from how things are...[to]...the extent to which structures and constraints can be changed within the general limits of the intervention" (Mingers, 1997; 12).

Having asked the what, why and how questions relative to understanding the situation and initiating necessary change, the interventionist needs to work out the action(s) required. Such "...action must be undertaken that will effectively bring about agreed changes." (Mingers, 1997; 12).

Figure 5.15 above reveals that the four phases "...are not seen as discrete stages that are enacted one by one. Rather, they are aspects of the intervention that need to be considered throughout, although their relative importance will...[vary]...as the...[intervention]...progresses." (Mingers, 1997; 12).

The process of Multi-methodology, as outlined above, contains three interdependent and interacting systems:

- A Problem Content System (PCS);
- An Intellectual Resources System (IRS);
- An Intervention System (IS).

(Source: Mingers, 1997; 419-420).

It is these three systems that define the context of Multi-methodology and the following commentary is offered:

- The PCS defines the historical nature of the problem situation in terms of the real world of those involved in the situation;
- The IRS consists of the methodological supporting theoretical framework, the methodologies and problem solving techniques that can be brought to bear on the problem situation;
- The IS contains the interventionists, problem owners, actors, and those likely to be affected by the outcomes of the intervention.

(Source: Mingers, 1997; 419).

The Multi-methodology context is modelled as shown in Figure 5.16 below.

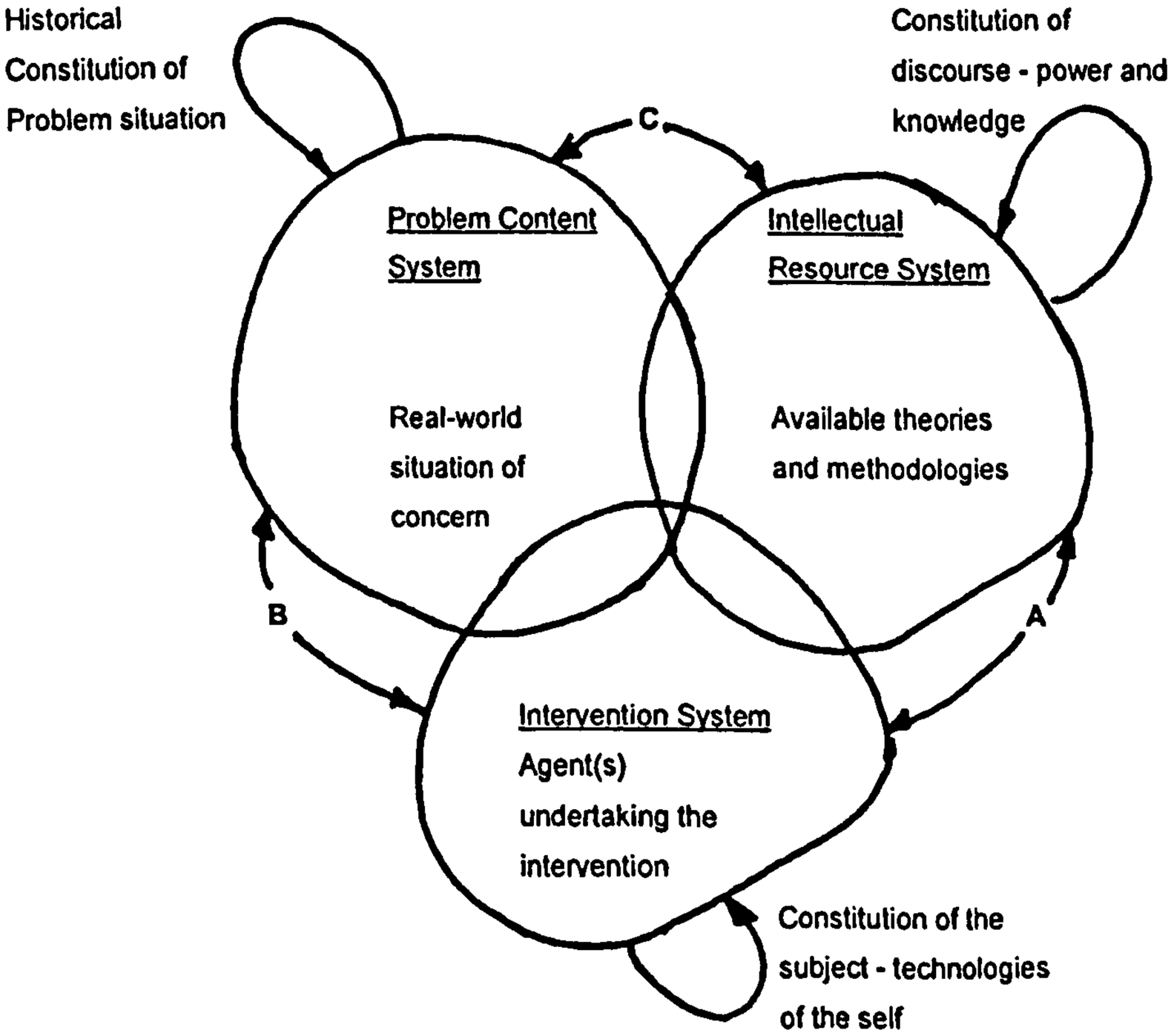


Figure 5.16 The Multi-methodology Context

(Adapted from Mingers, 1997; 420; Figure 15.1)

Important relationships are labelled **A**, **B**, and **C** in Figure 5.16 above. The relationships between the three systems "...that are unique to a particular intervention and it is a consideration of these that will guide the agent...[as an interventionist]...in their methodology

choices." (Mingers, 1997; 420). These relations and the associated dimensions are identified in sets of questions that are specific to the relationship. The questions "...are about the *design of the intervention* whereas CSH...[questions]...are about the actual problem situation." (Mingers, 1997; 421) (Italics in the original).

For relationship **A** questions include:

- What is my level of critical awareness/understanding of potential methodologies?
- What is my level of experience and skills in using these methodologies?
- What is my personality/cognitive skill comfortable with?
- To what extent can I work within different paradigms?
- To what extent am I comfortable with the values that underpin particular methodologies?
- Nature of relationship B - IS to PCS - e.g. what might I be able to use in this situation?
- Nature of relationship C - PCS to IRS - e.g. what methodologies might be relevant to this situation?

(Source: Mingers, 1997; 421).

For relationship **B** questions include:

- What has initiated this engagement?
- What history of interactions do I possess relative to this situation?
- In what ways am I committed to any of the actors in this situation?
- Who do I see as clients/victims/problem owners?
- What are the expectations of the actors relative to my role?
- What resources are available to me during this intervention?
- Do I have access to power sources?
- Nature of relationship A - IS to IRS - e.g. what methodological experience do I have that might be useful and what may I have to learn?
- Nature of relationship C - PCS to IRS - e.g. what methodologies may, or may not, be viewed as legitimate within this situation?

(Source: Mingers, 1997; 421).

For relationship **C** questions include:

- What is the culture of the organisation/situation relative to the proposed methodology?
- What is the history associated with using this methodology in similar situations?
- What other methodologies might be useful in this situation given the issues/tasks/concerns that initiated this intervention?
- To what extent are the values implicit in the chosen methodologies appropriate to the situation?
- Nature of relationship A - IS to IRS - e.g. will the experience of the interventionist permit the use of a particular methodology in this situation?
- Nature of relationship B - IS to PCS - e.g. does the history of the interventionist with the organisation suggest particular methodologies?

(Source: Mingers, 11997; 421-422).

These sets of relationships constitute contextual domains "...at the point of engagement in an intervention...[in terms of the issues that]...will determine both the initial actions taken and the planning or design of the intervention...as a whole" (Mingers, 1997; 422).

It is beyond the scope of this thesis to engage in an in depth review of the philosophical bases of Multi-methodology. Suffice to say that the philosophical and theoretical bases are dealt with by Mingers (1997, 2000) using both 'critical pluralism' and 'critical realism' for the underpinning of his work.

Mingers (1997) asserts that the questions he uses to develop the contextual domains for Multi-methodology are different to the twelve critically oriented questions framed by Ulrich (1994). However, close examination of Mingers' questions reveals more than a passing resemblance to those postulated by Ulrich. It is therefore argued that Ulrich has influenced Mingers' work. The questions developed by Mingers (1997) can be useful to an interventionist in dealing with both first and second order change within the context provided by the CPIM. This will become evident in Case Studies that will be presented in Chapters Eight and Nine.

During any intervention, involving the use of systems based methodologies, it is essential that the interventionist(s) "...reflect critically about the process and design of each unique intervention in order to construct an appropriate combination of methodologies and techniques." (Mingers, 1997; 429). Multi-methodology embodies two frameworks that are used to assist in ensuring that an appropriate combination is achieved in practice.

Before developing these two frameworks it will be useful to consider, within the context of Multi-methodology, the explanatory terminology associated with the process of inquiry. Within the systems movement, terms "...such as "methodology", "method", and "technique" are commonly used, often with a variety of meanings." (Mingers, 1997; 429). The different interpretations attributed to these seemingly innocuous words can be a source of considerable confusion. Mingers is to be applauded for wanting to clarify the meaning he attributes to these terms which are summarised as follows:

- A paradigm is understood to be a worldview based on a set of fundamental philosophical assumptions that define the nature of research associated with an intervention in an organisational change or problem situation;
- A methodology is a structured set of guidelines or activities to assist an individual in undertaking research associated with an intervention in an organisational change or problem situation;
- A method is a fixed procedure - often known as a 'cookbook' approach - which an interventionist will use to carry out specific tasks within an intervention;
- A technique is a specific activity that has a clear and well-defined purpose within the context of either a methodology or indeed a method.

(Adapted from Mingers, 1997; 430).

Within the systems movement, and particularly with the pluralist thinkers, a methodology is seen as developing 'what' needs to be done to bring about improvement in a problem or change situation. It is also considered to be a process (Checkland, 1981, 1991) that is designed to create a learning environment that facilitates a transition from 'mess' to order. Cleary then a technique, and indeed a method are both employed in 'how' the transition from mess to order is achieved. "The methodology specifies what type of activities should be undertaken, and the techniques...[and methods]...are particular ways of performing these activities." (Mingers, 1997; 430).

An intervention is often carried out within one or more paradigms. Mingers (1997) asserts that a paradigm is the worldview that underpins an intervention. It is very important to note the singularity contained in Mingers' view as a weakness of his assertion, and it contradicts his earlier point, in that Multi-methodology can and does employ more than one paradigm during a complex intervention. The theoretical issues associated with the multi-paradigmatic aspects of Multi-methodology have been considered by Mingers but the pragmatic aspects appear to have been neglected. Nevertheless the "...philosophical dimensions of a paradigm...[provides]...the *why* for the methodology, i.e. providing the grounds for the types of activity that the methodology generates." (Mingers, 1997; 430) (Italics in the original).

Having established the need to be concerned with 'what', 'how', and 'why' questions implicit in systems based interventions in organisational problem and change situations, we turn our attention to the multi-dimensionality and activity features of such interventions. Mingers (1997) combines these two features to produce the first of his two frameworks as shown in Figure 5.17 below. The multi-dimensionality features are outlined in Figure 5.14 above; the phases of a Multi-methodology intervention in terms of different activities have been discussed in Figure 5.15 above.

Activity → / Dimension ↓	Appreciation of	Analysis of	Assessment of	Action to
Social	social practices, power relations	distortions, conflicts, Interests	ways of altering existing structures	generate empowerment and enlightenment
Personal	individual beliefs, meanings,	differing perceptions and personal rationality	alternative con-ceptualisations and con-structions	generate accommod--ation and consensus
Material	physical circumstances	underlying causal structure	alternative physical and structural arrangements	select and implement best alternatives

Figure 5.17 Framework for mapping a Multi-methodology Intervention

(Adapted from Mingers, 1997; 430; Figure 15.2)

It is this framework that guides the process of Multi-methodology and the "...logic of this framework is that a fully comprehensive intervention needs to be concerned with the three

different worlds - material, personal, and social - and the four different phases." (Mingers, 1997; 431). The twelve boxes in the matrix create "...questions about particular aspects of the situation...that need to be addressed...[through]...ongoing debate, construction and reflection among the agents and actors participating in the intervention." (Mingers, 1997; 431). The framework can facilitate consideration of "...particular methodologies, mapping them onto the framework to see to what extent they address these questions, and to appraise their relative strength in each box." (Mingers, 1997; 431).

SSM, for example, "...contributes to exploring the personal dimension and is particularly strong...for analysis and appraisal, although...[it is also useful]...for appreciating the social dimension." (Mingers, 1997; 431). The Viable System Model (VSM), on the other hand can be "...seen as relating essentially to the material and social worlds, providing a model of organisational structure based on objectivist analysis of biological organisms...[but lacking the means to]...address the individual participants' views and beliefs." (Mingers, 1997; 431).

An alternative way of using the framework is to "...address the boxes and ask which methodologies can be of assistance in that particular aspect of an intervention thus generating a range of possibilities to choose from." (Mingers, 1997; 431).

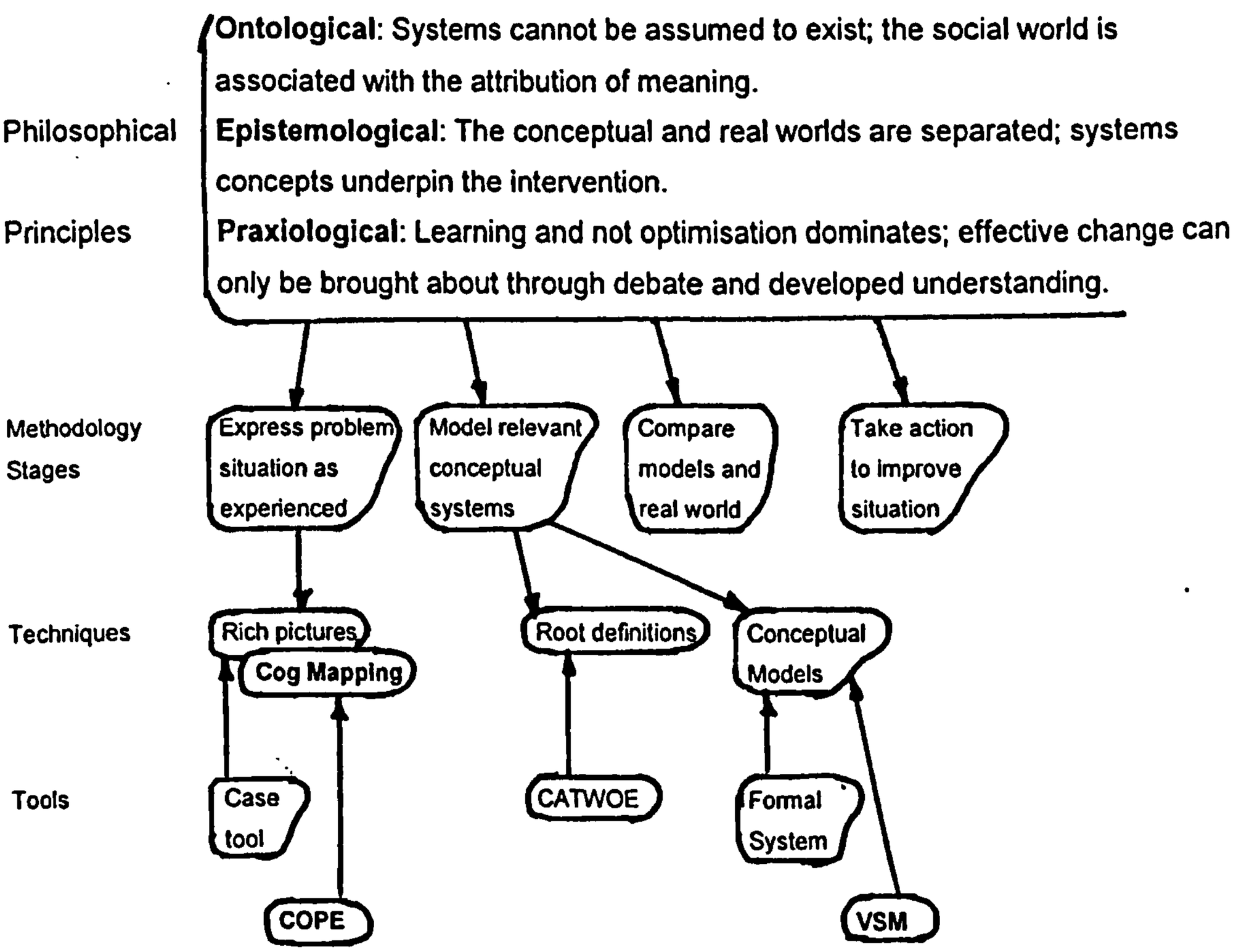
Mingers (1997) argues that either approach will produce mappings that will facilitate an effective Multi-methodological intervention. This claim can be challenged as it is likely that the stakeholders in any given intervention will hold quite different views with respect to the situation. The pluralistic nature of organisational reality is a fundamentally important aspect of methodology selection and the mapping framework shown in **Figure 5.17** does little to address this issue.

The second facilitating framework of Multi-methodology has been developed to bring about a "...linking together...[of]...parts of methodologies, possibly from different paradigms...[requiring]...detailed study of the different methodologies to see where fruitful links can be created..." (Mingers, 1997; 433-434). It is this 'decomposing framework' that attempts to address the important issue of multi-paradigmatic interventions which utilise methodologies that are, on the face of it, theoretically incompatible with one another. In other words multi-paradigmatic interventions should be a "...linking process...[which]...requires that methodologies be decomposed in some systematic way to identify detachable elements and their functions or purposes." (Mingers, 1997; 434). The bases for this decomposition are "...the distinctions...between philosophical principles (*why*), methodological stages (*what*), and techniques (*how*)." (Mingers, 1997; 434) (Italics in the original).

A systems based intervention methodology is a conceptual model of what needs to be done during an organisational change or problem situation. The methodological stages are "...justified by the principles, and actualised by a set of activities or techniques...that may be complementary to each other in that several must occur, or they may be substitutes..." (Mingers, 1997; 434). The decomposition, or detachment, can occur "...either at the level of techniques or at the level of methodological stages...[with the]...former being more

straightforward...[and] particularly useful in methodological enhancement." (Mingers, 1997; 434).

The decomposition of SSM is used as an example in which the methodological stages are linked with techniques from a variety of social theory paradigms. This is expressed in Figure 5.18 below.



Key:

Xxx Part of SSM

Yyy Alternative from another methodology

Point of detachment or decomposition

Figure 5.18 Decomposition framework (of SSM) for Multi-methodology
(Adapted from Mingers, 1997; 435; Figure 15.5)

Figure 5.18 above shows "...the decomposition of techniques." (Mingers, 1997; 435). The possibility of "...detaching stages...occurs in both methodological enhancement (adding a stage to another methodology that is deficient) and multimethodology (combining various stages to construct a new, *ad hoc*, methodology)." (Mingers, 1997; 435) (Italics in the original). Attempting to detach at the level of methodological stages is much "...more problematic, particularly in the multi-paradigm case since the stages are strongly related to their philosophical paradigm." (Mingers, 1997; 435).

Decomposition, either at the level of technique, or methodological stages is difficult. This is particularly the case for those who might be inexperienced in systems methodologies. Even for those who do have experience in using systems methodologies the task of decomposition is daunting and is likely to adversely influence those wanting to use Multi-methodology. Indeed, Mingers himself (1997; 435) acknowledges this by indicating that "...more consideration needs to be given to this situation...[and that to]...make the framework...practically useful, decomposition diagrams...would need to be constructed for *all possible* methodologies, and the various techniques and stages tabulated and cross-referenced." (Italics added for emphasis).

To construct the plethora of decomposition diagrams necessary to cater for all possible combinations of all known systems based intervention methodologies will make Multi-methodology far too complicated for mere mortals to even think about using. This fact is a major weakness in Multi-methodology and Mingers and his collaborators need to address this if this approach is ever to gain credibility in the systems movement.

A further aspect of methodological decomposition is that of the ontological, epistemological and praxiological philosophical principles. It is to be observed that these are all associated with 'soft' and 'critical' paradigms. On the face of it, Mingers (1997) excludes anything remotely connected with 'hard' or scientific paradigms. This is considered to be a gap in what is argued to be a multi-paradigmatic approach. This would leave Multi-methodology weak in terms of second order organisational change.

5.7 CONCLUDING SUMMARY

In this chapter a critical appraisal of some of the 'contemporary' and 'critical' schools of systems thinking has been carried out. Using the Chapter Four discussion of a theoretical underpinning for systems thinking, utilising recognised social theory, established a sound basis for a critical appraisal of Morgan's (1997) Metaphor Analytical approach to organisational theory and behaviour. This has helped to link theories of organisational change, discussed in Chapter Three, to systems based intervention methodologies.

This chapter has also incorporated a review of recent developments in contemporary systems thinking; included in this review was Metaphor Analysis, Critical Systems Heuristics (CSH), Critical Systems Thinking (CST), Total Systems Intervention (TSI), and Multi-methodology (MM). All of this work was subjected to critique relative to the hypothesis, research questions, and objectives for this research programme. This critique, which is found within the sections relevant to the topic, is an essential precursor for the development of the Systemic Theory of Organisational Change (STOC) which will be the subject of Chapter Six.

CHAPTER SIX

DEVELOPING A SYSTEMIC THEORY OF ORGANISATIONAL CHANGE

6.1 INTRODUCTION

Chapters Three, Four, and Five considered, reviewed, and critiqued organisational change theory, social theory, and systems thinking. Included in these three chapters were some of the more recent developments in Contemporary and Critical Systems Thinking (CST). These three chapters provide a sound basis for the development of the Systemic Theory of Organisational Change (STOC) and the associated Critical Pluralist Intervention Methodology (CPIM). As these are two of the fundamental aims of this thesis, it is worth reminding ourselves of the research hypothesis set out in Chapter One as it will provide a focus for this chapter. The research hypothesis advanced is that:

Effective and sustainable organisational change is predicated upon the need for a Systemic Theory of Organisational Change that is grounded in Critical Systems Thinking (CST). Such a basis is necessary for the development of a Systems Based Intervention Methodology (SBIM) designed to bring about the management of second order change based on organisational learning.

This Chapter Six, using the research questions that were developed from the research hypothesis, will consider and address:

- A theoretical grounding for a Systemic Theory of Organisational Change (STOC) taking into account the epistemological and ontological framework for organisational change (**RQ1**);
- The use of Critical Systems Thinking as the underpinning from which a Systemic Theory of Organisational Change (STOC) can be formulated (**RQ2**);
- The necessary and sufficient conditions for the development of a Systemic Theory of Organisational Change (STOC) (**RQ3**);
- The development of the Systemic Theory of Organisational Change (STOC).

6.2 THE GROUNDING FOR A SYSTEMIC THEORY OF ORGANISATIONAL CHANGE

In entering an organisational change or problem situation, it is argued that a researcher or an interventionist "...puts forward statements, or systems of statements, and then tests them step by step...he constructs hypotheses, or systems of theories, and...[then]...tests them against experience by observation and experiment." (Popper, 1992; 27).

In this research programme a hypothesis has been constructed along with associated research questions and objectives. A theory is being developed that will be tested against specific criteria using 'real-world' interventions in complex organisational change. This

approach was taken because "...[t]heoretical models are essential to our thinking. Indeed, any...thinking about our world requires some...theoretical model, implicit or otherwise, which structures and guides our thinking and renders it meaningful." (Collins, 1998; 1).

Theory should inform practice and, as Flood and Jackson (1991(a)) argue, learning within a problem situation is most unlikely to take place unless it is underpinned by appropriate theory. Furthermore, when an interventionist is faced with a situation that is "...complex or involves many interested parties...the need to examine the underlying assumptions which guide...and influence...judgement becomes essential. For studies of change...theoretical models are indispensable." (Collins, 1998; 1).

The emphasis placed on the value of a sound theoretical basis that should underpin intervention in organisational change situations ought to be self-evident given the forgoing arguments. However, in the real world of organisations it is often found that there is a:

> "...focus on 'the practitioner' and the 'practical'...[that]...relates to the accompanying assumptions...[which]...might represent a practical viewpoint and what should represent practical advice for managers. Unfortunately the...premium placed on supplying 'practical' advice seems to require...[the]...neglect...[of]...theoretical models." (Collins, 1998; 3).

This perspective can be seen as fallacious in that it contains the seeds of high cost and often highly visible failure in organisational change situations. This is compounded by a lack of theoretical knowledge, and the practical neglect, of second order change resulting in the implementation of strategies or change programmes that are neither appropriate nor sustainable. Therefore, it is argued that it "...would be wrong...to attempt to deny or to obscure...theoretical analysis and reflection." (Collins, 1998; 4). Indeed, many:

> "...accounts of change...begin with the...truism that...organizations operate within an increasingly turbulent and competitive environment...shaped and reshaped by technological advance and by the increasingly global nature of competition....So called 'practical' analyses of change, however, do not...go much beyond this." (Collins, 1998; 5).

Practising managers in so-called 'modern' organisations continue to operate within a "...management system...commonly known as Taylorism or scientific management...[that is]...far from being a simple, rational and scientific approach..." (Collins, 1998; 13). This ideological managerial regime employing "...[s]imple-rational models...that operate on the assumption that when managers work to bring about a desired change they are working towards an end-state which is knowable, in an environment which is predictable." (Collins, 1998; 67).

Such a managerial regime is associated with:

"...[an]...*ad hoc* approach to change and its management is...often...a function of complexity...[rather]...than managerial incompetence. Thus managers develop *ad hoc* and responsive approaches to planning and managing change simply because the processes of change are so complex and difficult to model. Emergent approaches to change, which attempt to capture and account for these complex dynamics, therefore, tend to contrast the organization (small and relatively powerless), with the wider environment (large, complex and capricious) to argue that managers, in attempting to plan and manage change, confront a larger and often hostile environment which is complex, uncertain and so, difficult to manage." (Collins, 1998; 60) (Italics in the original).

The views expressed by Collins (1998) reveal an admirable concern with environmental variety and complexity. But he fails to address internal organisational variety and complexity. A systems perspective, such as that exemplified by the VSM for example, would go some way to plugging this rather obvious gap which is a fundamental weakness exemplified by the lack of systemic thinking in the work of Collins (1998). This omission is typical of much of the literature associated with organisational change and it emphasises the need for a STOC.

The experience of the author, has indicated that earlier research into organisational change management lacked a theoretical understanding of the first and second order concepts. It also lacked a total system context and did not take the processual nature of change into account. Instead, simple-rational event oriented models were used that were non-systemic. That is, the models are mechanistic, belong to the 'machine age' (Ackoff, 1981), and assume a rational unitary goal seeking (RUGS) framework of organisational relationships.

The ad hoc non-systemic models discussed above are not unreasonable if, and only if, the change situation is of a first order variety. However, there is a tendency amongst managers, and indeed many management consultants acting as interventionists and change agents, to assume that **ALL** change situations are first order in nature. The reality, all too often, is that the change situation is of a second order nature, and this is ignored because the managers and interventionists simply do not understand this. The need for a sound theory of organisational change that systemically includes both first and second order change is obvious, or should be. This STOC must, in turn, be firmly rooted in the ontology and epistemology of social analysis and organisational change.

6.3 CRITICAL SYSTEMS THINKING (CST) AS A BASIS FOR A SYSTEMIC THEORY OF ORGANISATIONAL CHANGE (STOC)

6.3.1 Critical Systems Thinking (CST) Revisited

Chapter Three contained an exposure of social theory (Burrell and Morgan, 1979) as a basis for a set of ontological and epistemological characteristics of organisational change. A discussion of Critical Systems Thinking (CST) was provided in Chapter Four, and it is not intended to delve deeply into Critical Theory as this is clearly beyond the scope of this thesis. However, it is necessary to provide an outline of Critical Theory and the Modernist - Postmodernist debate before developing the principles of CST for use as an underpinning foundation for the STOC.

6.3.1.1 The Critical Theory of Habermas

Critical Theory is not the sole prerogative of Habermas. However, his work will be used as it has formed a basis for the work of Jackson (1991; 2000) in developing CST and TSI. The discussion of Critical Theory will closely follow Jackson (2000).

The phenomenon of organisational change is so important to the survival of any organisation that it simply must be addressed in a systemic manner. Traditional management theory and practice has been found severely wanting in terms of its ability to plan and manage complex programmes involving both first and second order organisational change. The demands made on organisational managers forces behaviour that is often "...tunnel-visioned and dangerous...[biased toward]...technical (or technocratic) images and ideals...in which a narrow focus on...means/ends relationships is predominant..." (Alvesson and Willmot, 1992; 5). This 'vision' of traditional management is one that is associated with a concentration of power, authority, and knowledge in the hands of senior executives. This is an all too familiar scenario related to the failure of organisational change programmes. The 'population' of an organisation is not restricted to a managerial class. An organisation is made up of a diverse grouping of people all of whom can and must contribute to, and be involved in, the design and implementation of change programmes. Indeed such a "...diversity of groups and interests in the practice of management can be illuminated by contrasting management as a technical function with management as a sociological phenomenon." (Alvesson and Willmott, 1992; 6). The technical functions of management have been well documented and are normally categorised as 'planning, organising, directing, and controlling'. The sociological aspect of management is less well understood and the issues of "...whose purposes, or interests, work (production) is to serve - the owner, the manager, the producer, the consumer..." (Alvesson and Willmott, 1992; 6) are a focus of Critical Theory relative to organisational management.

Critical Theory is often associated with Marx in terms of "...some vision of how society might be much better....[Indeed Marx]...criticized the alienating nature of labor in capitalist society by contrasting it with what free labor would be like in a classless...society." (Jackson, 2000; 30). This critical view of capitalist society was developed at the 'Frankfurt School' during

the 1920's and the work was carried on by Habermas, concentrating on human cognitive interests in asserting that:

> "...human beings possess two fundamental cognitive interests that direct their attempts to acquire knowledge: a *technical* interest and a *practical* interest...[that]...necessarily derive from the sociocultural form of life of the human species, which is dependent on "work" and "interaction"." (Jackson, 2000; 31) (Italics in the original).

Human beings typically carry out work related activities, as part of normative social behaviour, in that work "...enables human beings to achieve goals and to bring about material well-being...[and]...success depends upon achieving technical mastery over the environment of action." (Jackson, 2000; 31). Work is an important aspect of human activity and it "...directs knowledge towards a technical interest in the...control of natural and social systems." (Jackson, 2000; 31). In developing the epistemological and ontological framework for organisational change, knowledge, and its association with power, was included as an important factor in all four characteristic models. Clearly then, the relationship between work and knowledge as a directing imperative, relative to system control, is an important consideration in developing the STOC using CST as a basis.

The execution of work demands interaction between actors engaged in work related activities. Such interaction "...requires human beings to secure and expand the possibilities for intersubjective understanding among those involved in social systems...[that]...leads the human species to have a practical interest in the progress of mutual understanding." (Jackson, 2000; 31).

From this it can be inferred that an important aspect for the STOC is that of human adaptability relative to the subjectivity inherent in all organisational situations. This is particularly relevant for the interventionist and can be recognised in Ulrich's Critical Systems Heuristics (CSH) approach to system design.

In developing the epistemological and ontological framework for organisational change the issue of power in organisations has been raised. The issue of power is linked to the factor of knowledge relative to change and, indeed "...power and the way it is exercised are equally important...if we are to understand...social arrangements...[such as those found in organizational structures]..." (Jackson, 2000; 31). Managers and interventionists involved in complex organisational change can "...exercise power...[in a manner that]...can prevent the open and free discussion necessary for the success of work and interaction...[in terms of effective and sustainable organisational change]..." (Jackson, 2000; 31). In this context, the reference is to the top down use of power that inhibits the free contribution to system design, from all organizational levels, which is so useful in achieving sustainable organisational change. It is this that leads to a "...third cognitive...[human]...interest: an *emancipatory* interest in freeing themselves from constraints imposed by power relations and in learning, through a

process of genuine participatory democracy, to control their own destinies." Jackson, 2000; 31) (Italics in the original).

The three cognitive interests, identified by Habermas, have a correspondence with three different types of knowledge. These are:

- The 'empirical or analytical' knowledge associated with the technical cognitive interest. The aim is to enable technical control of identifiable processes and the derivation of law-like hypotheses in theoretical terms relative to observable events. These 'natural sciences' assist human beings in attempting to predict future events from given starting conditions;
- The 'historical hermeneutic' knowledge associated with the practical cognitive interest. The aim is to gain access to 'meaning' and understanding of the intersubjective world with the intention of improving mutual understanding among the human beings who occupy the world;
- The 'critical' knowledge associated with the emancipatory cognitive interest. The aim is the recognition of the limitations of the empirical analytical and historical hermeneutic knowledge - and the dangers of inappropriate application - in an attempt to go beyond them, thus providing knowledge that can enable human beings to reflect on and liberate themselves from dominant forces that they cannot understand or control. (Source: Jackson, 2000; 31-32).

In terms of social theory, it has been argued that "...in advanced capitalist societies, the technical interest...[dominates]...at the expense of the practical interest...[and]...knowledge produced by the empirical analytical sciences...has come to be regarded as the prototype of all knowledge..." (Jackson, 2000; 32).

The emphasis on technical interest is revealing as it helps to explain why most organisational change programmes concentrate on first order change. This is detrimental in terms of effective and sustainable change as the dominance of technical interest in managerial practice creates an impoverished environment in which attention on first order change dominates at the expense of second order change. Therefore, it is essential that there are "...proper limits to the sphere of applicability of the knowledge produced by the empirical analytical sciences." (Jackson, 2000; 32). These 'proper limits' are difficult to identify and define as they are a function of individual perspectives that are subjective. This is an identifiable weakness that should be taken into account in the development of the STOC.

Historical hermeneutics is claimed by some to be the sole alternative to empirical analytical science for the study of human and social phenomena. Such a claim cannot be supported if an effective STOC is to be developed. This view can be reinforced by recognising that hermeneutics, as an intervention process, can only be truly effective if "...people...[are able to act]...free from the play of unconscious forces, and if actions have only *intended* consequences." (Jackson, 2000; 32) (Italics added for emphasis). The use of a hermeneutic process of inquiry, as a facilitating mechanism for incorporating the variety of perspectives inherent in organisational change situations, is associated with attempting to achieve

consensus amongst the participants. However, the "...existence of power relationships that make mutual understanding based on genuine consensus difficult to achieve, and because of the complexity of modern social arrangements, the results of human actions will often be different from what was intended by human actors." (Jackson, 2000; 32-33). Clearly, it can be argued that a hermeneutic process of inquiry, although useful in terms of overcoming the dominance of technical interest and in creating 'meaning', is not without limitations.

So, in recognising the importance of critical reflection in theoretical development, it becomes essential to understand that both "...the empirical analytic and historical hermeneutic approaches must be complemented by a third type of inquiry, critical theory." (Jackson, 2000; 33). To develop an understanding of the way in which the three types of knowledge are related to each other, Habermas utilises the psychoanalytic encounter as "...psychoanalysis is primarily hermeneutic...[in attempting]...to understand what subjects say and to explicate the hidden meaning of what is said." (Jackson, 2000; 33). To 'get inside' the meaning it is essential that the interventionist does not "...remain at the hermeneutic level...[but gets]...below the explanations offered by...[participants in the change situation to reveal]...causally why...[the explanations]...are distorted and...[can]...conceal...[aspects of the change situation that the participants]...cannot bring to consciousness." (Jackson, 2000; 33).

In attempting to 'get below' explanations an interventionist, as an involved (planner) participant, has to make critical judgements concerning any distortion. Such judgements are necessary as the interventionist is trying to bring about effective change that can be sustained on behalf of the involved, the decision takers, the client, and those affected by the change. It is suggested that an involved interventionist might utilise the three questions posed by Ulrich (1994) associated with 'man's' search for knowledge in complex change situations.

It is clear then, that an interventionist could usefully employ both hermeneutic and empirical analytic processes in attempting to create structure, form, and meaning that may be 'hidden' due to the inherent subjectivity of a change situation. For an interventionist to expose the 'hidden meaning' contained in a change situation it is vital that the "...hermeneutic and empirical analytic elements...mediated by critical theory...[provide a]...stimulus...[for]...the psychoanalytic encounter...[that is]...emancipatory." (Jackson, 2000; 33).

Indeed it is argued that such an approach provides the means through which the participants in a change situation can "...liberate...[themselves]...from...forces that...[are beyond their]...control and increases the area over which they...[can gain]...mastery." (Jackson, 2000; 33). This is all very well and good as there is a clear indication of 'what' needs to be done in order to create a truly participative environment and, in systemic terms, is an admirable intent in attempting to derive an 'ends' statement. However, it fails to indicate the required 'means' through which the ends can be achieved. In other words there is little consideration of the 'how' question. This leads to a need "...to pay attention to the creation of mutual understanding...[within and among participants]...in the institutional sphere." (Jackson, 2000; 33). This, it is argued, can be achieved using "...his theory of "communicative competence."" (Jackson, 2000; 33).

An invariable contributory factor in many organisational problem situations is that of poor communication. A primary responsibility for managers is that of converting high level strategy and policy statements into an operational language, and then communicating that information to those who will implement the policy and strategy. These acts require good communication skills and all too often this skill is either poor or missing altogether. Therefore, "Communication...becomes the focus of attention as it becomes the means by which already socialized individuals can reach intersubjective agreement." (Jackson, 2000; 33). Effective communication then is a focussing 'means' through which the 'end' of emancipation from power and coercive structure might be achieved. This in turn is likely to produce an inclusive approach to organisational change that is effective and sustainable. In other words, this forms an important aspect in the development of a STOC. This means that "...procedures and standards have to be established which, if *properly employed* in dialogue and debate, ensure that the outcome is rational." (Jackson, 2000; 33) (Italics added for emphasis). The key phrase 'properly employed' is crucial. Without communicative skills and competence all the procedures in the world will not ensure debate, let alone a rational outcome from a complex change programme. The STOC is intended to maintain a commitment to rational action through the CPIM. The CPIM, as a critical process of inquiry, is intended to provide a communicative framework within which participants in a change situation can employ debate as the means through which rational action results in effective and sustainable change.

As part of the theory of communicative competence Habermas argues that participants in an organisational change situation will accept four types of claims to validity associated with normal linguistic exchanges:

- That the utterance is intelligible;
- That the propositional content is true;
- That the speaker is justified in what 'he' says;
- That the speaker is 'sincere' in 'his' communication.

(Source: Jackson, 2000; 33-34).

These four bases of communicative 'validity' are not usually understood, or indeed made explicit, during any exchanges between participants involved in an organisational change situation. This, inevitably, constrains the ability of participants in terms of attaining meaningful debate that avoids confrontation and domination by powerful individuals or sub-groups. Confrontation and domination are often associated with organisational power and can be dysfunctional with respect to the creation of meaning and the pursuit of consensus. Indeed, it can be argued that "...it is a normal expectation...that participants are willing to enter into discourse to defend their positions, and that the outcome should reflect the better argument and not any constraints on discussion." (Jackson, 2000; 34). This assumes that participants will enter into rational discourse and that power and dominance are absent; such theoretical assumptions are frequently not borne out in the reality of organisational life.

The willingness of participants to enter into structured rational dialogue assumes that they are, in fact, free to do so. By 'free' it is meant that the participants are not constrained by

power or dominance. An 'ideal speech situation' can be derived that should establish the conditions from which a true agreement can be derived. A summary of the conditions necessary for an ideal speech situation are:

- The structure of communication is free from constraint;
- All participants have equal opportunity to select and perform speech acts;
- There is an equality of chances for assuming dialogue roles;
- That discussion is unlimited;
- That discussion is free from constraints of domination and power;
- That communication is not constrained by barriers of strategic behaviour, ideology or neurosis.

(Source: Jackson, 2000; 34).

Under such "...exacting conditions...an ideal speech situation pertains and any consensus will be rationally motivated and genuine." (Jackson, 2000; 34). Such conditions are, obviously, difficult to achieve. They are possible if, and only if, the necessary systemic theoretical underpinning exists to guide effective intervention.

To achieve an 'ideal speech situation' during all of the phases of an organisational change programme is a challenge for an interventionist. It is argued that this is most unlikely to occur but, the concept of an 'ideal speech situation' is useful in that it can be a condition which an interventionist ought to try to achieve. If this condition can be achieved it "...can...be used to unmask "systematically distorted communication" in situations where unequal chances to participate in dialogue or an unequal distribution of power determine the nature of false consensus reached." (Jackson, 2000; 34). Communicative competence needs appropriate "...social conditions relating to freedom and justice...[to be put in place in order that the issues of]...power and domination...[can]...be subject to...[appropriate]...control..." (Jackson, 2000; 34).

The critical and social theory developed by Habermas:

> "...is at quite a high level of generality...[but it has been]...significant ...for systems thinking...[in term of]...helping to furnish critiques of functionalist and interpretive systems thinking...[and]...was foremost in the development of...critical systems approaches." (Jackson, 2000; 34).

6.3.1.2 The Modernist and Postmodernist Debate

In Chapters Three and Four the work of important organisational, social, and systems theorists was considered. These scholars have contributed "...to the sociological paradigms and metaphors...and to the development of critical theory..." (Jackson, 2000; 34). The contributions made by these scholars "...can be seen as working within the tradition of the Enlightenment...[that]...was a European intellectual movement...committed to reason and science as the means for building a better world..." (Jackson, 2000; 34-35).

Although it is not intended to delve deeply into the modernist - postmodernist debate here, it is necessary to include some of the salient aspects of this debate in this thesis. This is to ensure that the analysis has taken into account all of the major aspects of systems thinking that can contribute to the development of the STOC.

The modernists argue that the Enlightenment provided a panacea for all the ills of society. The value of science to society is seen, by modernists, as providing the means of escape from want and poverty amongst other things.

In that context modernism:

> "...seeks to consolidate and build upon the achievements of the Enlightenment...[in upholding]...reason and believes that rationality is the most important vehicle for helping human beings perfect themselves and their societies. The world is seen as logical and orderly so that it can be probed by science to produce objective truth....Modernism...believes in the order of things and searches for unity, identity and consensus...[offering]...security through rational explanations...centering on the human subject or the increasing complexity of society." (Jackson, 2000; 35).

Modernist philosophy underpins functionalist social theory and the positivist approaches of the natural sciences. It is also the underpinning theoretical basis of the 'hard' or traditional systems approaches. Modernism has had, and continues to have, a powerful effect on modern managerial and organisational theory and practice. It provides the rationale for Tayloristic, scientific management and the work of Fayol, Weber, and also the theorists who developed the 'human relations' approaches to organisational behaviour. Despite the progress in developing 'newer' theories of management and organisational behaviour, modernism is still 'alive and well'. This is witnessed by the continuing output of papers and books that extol the virtues of functionalist approaches such as, for example, the work of Donaldson (1996).
On the other hand, postmodernists seek "...to puncture the certainties of modernism, particularly the belief in rationality, truth and progress." (Jackson, 2000; 36).

In this context postmodernist philosophy:

> "...denies that science has access to objective truth, and rejects the notion of history as the progressive realization and emancipation of the human subject or as an increase in the complexity and steering capacity of societies." (Jackson, 2000; 36).

This rejection by the postmodernists is predicated on the contention that language:

> "...is not transparent, and...does not offer the possibility of universal consensus...[as there]...are many different "language games" obeying different rules, in which speakers take part in order to defeat opponents..." (Jackson, 2000; 36).

Postmodernists go on to argue that it is necessary "...to be tolerant of differences and of multiple interpretations of the world, and we must learn to live with the incommensurable since there is no meta-theory that can reconcile or decide between the different positions." (Jackson, 2000; 36). Clearly then, postmodernism "...offers little security...[indeed]...it thrives on instability, disruption, disorder, contingency, paradox...[and the emphasis is on]...superficiality and play instead of seriousness and depth." (Jackson, 2000; 36).

Postmodernist philosophy is not unequivocally related to the social theory framework developed by Burrell and Morgan (1979). However, it can be argued that postmodernism has:

> "...considerable implications for systems thinking...[if]...there is a decline in belief in rationality and an optimum solution to problems, then the problem solving techniques will lack legitimation...[and deep]...analysis of systems in search of laws and regularities is unlikely to receive much support." (Jackson, 2000; 40).

Postmodernism, on the face of it, does not seem to achieve a good fit with systems thinking. Certainly, it is very much at odds with functionalist theory and, in that sense, there is little common ground between postmodernism and traditional systems thinking. However, there are "...systems thinkers and management scientists who have sought to respond to the challenges thrown down by postmodernism...[in terms of]...putting to use...various systems models, methods and techniques...in the spirit of postmodernism." (Jackson, 2000; 40).

The research programme that forms the basis of this thesis has adopted neither a clear modernist nor a clear postmodernist platform. This is both right and proper, as the development of the STOC recognises the value of both postmodernist and modernist social theory, and this is essential if the claim that the developed STOC is 'systemic' is to be legitimised. From the brief discussion of both modernist and postmodernist philosophies it is argued that neither the modernist nor the postmodernist philosophies alone are capable of providing an unequivocal, unchallengeable theoretical framework for the development of the STOC. The reasoning behind this argument will be exposed when the necessary and sufficient conditions for the development of the STOC are established. Having discussed the critical theory of Habermas and rehearsed the main arguments of the modernist - postmodernist debate, it is necessary to turn our attention to the principles of CST as an underpinning framework for the STOC.

6.3.2 Critical Systems Thinking and the Systemic Theory of Organisational Change

As a precursor to identifying and establishing the principles of CST, as an underpinning theoretical basis for the STOC, it will be useful to discuss contemporary developments in systems thinking relative to the critical and social theory already discussed.

Chapters Three and Four set out the social theory of Burrell and Morgan (1979) was set out in terms of a four-paradigm framework. This framework provided an intellectual basis for the development of the System of Systems Methodologies (SOSM), and TSI (Flood and

Jackson, 1991(a)). Also, in Chapter Three work of Burrell and Morgan (1979) was utilised as a means for developing the ontological and epistemological framework for organisational change.

The characteristics of each of the four paradigms in the Burrell and Morgan (1979) framework have already been outlined. However, it is important to note that it has been argued that both the Radical Structuralist, and the Radical Humanist paradigms facilitate "...the emancipation of people from presently existing social structures." (Jackson, 2000; 24). It is also worth noting that both of the radical paradigms place emphasis on radical change but from differing perspectives in terms of subjectivity and objectivity. Consequently, it is argued that:

- The functionalist paradigm is identified with 'hard' or traditional systems approaches and, therefore, first order change;
- The interpretivist paradigm is identified with 'soft' or pluralist systems approaches and, therefore, second order change;
- The radical paradigms are identified with 'emancipatory' systems approaches, therefore, second, and third order change.

6.3.2.1 The Origins of Critical Systems Thinking

The development of Critical Systems Thinking (CST), relative to Total Systems Intervention (TSI), was outlined in Chapter Five. The use of social theory acted as an 'enabler' in terms of creating critical awareness on the part of interventionists engaging in organisational problem situations.

Jackson and Keys (1984) developed the System of Systems Methodologies (SOSM), the "....purpose of...[which]...was the creation of a classification of systems methodologies..." (Jackson, 2000; 358). The aim of the developmental work "...in building the SOSM was to relate the existing systems based, problem solving methodologies...[to the grid of problem contexts]..." (Jackson, 2000; 358). A problem for Jackson and Keys (1984) was that "...there seemed to be no systems methodologies based on coercive...[and radical]...assumptions." (Jackson, 2000; 359). In other words, there were no systems based methodologies available, which might emancipate system participants from coercive power in bringing about radical second order change.

It was the emergence of Critical Systems Heuristics (CSH) (Ulrich, 1994), which provided Jackson and Keys with the means for engaging with emancipatory systems thinking. This resulted in the SOSM becoming capable of fulfilling its critical intent of being able to "...draw upon the strengths of all...systems approaches whatever the assumptions on which they rest and the paradigms within which they are located." (Jackson, 2000; 360-361).

The outcome of this was the creation of a classification of systems approaches according to the assumptions made relative to problem contexts. This is shown below in **Figure 6.1**

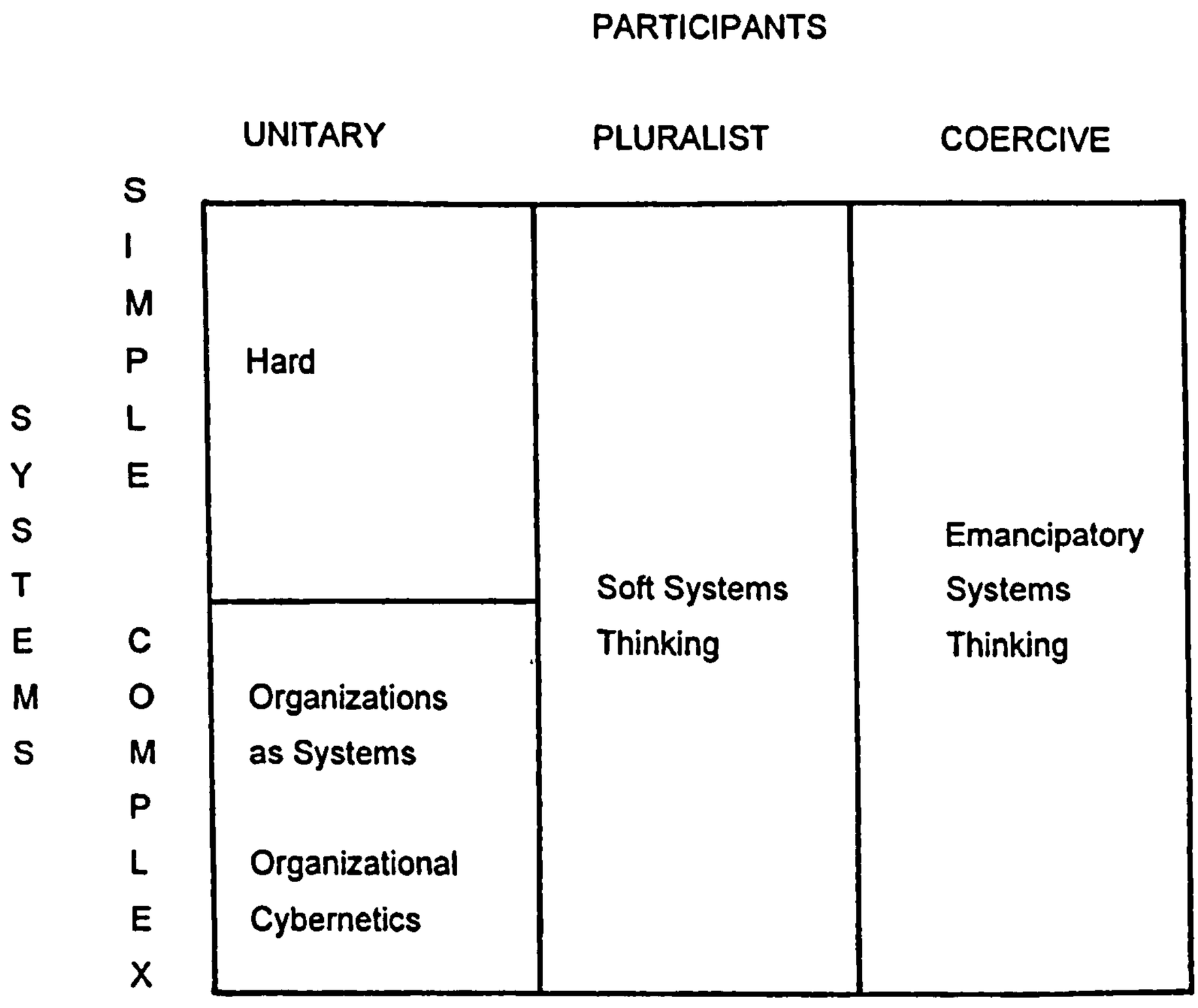


Figure 6.1 Classification of Systems Approaches Relative to Assumptions made about Problem Contexts

(Adapted from Jackson, 2000; 361; Figure 10.2)

It has already been shown that CST emerged from the criticism of both the 'hard' and 'soft' systems approaches. The principles of CST will be discussed in detail later in this Chapter, but it is important to emphasise "...the significance of the social sciences in enabling "critical awareness"..." (Jackson, 2000; 356). CST also incorporated the concept of 'social awareness' in terms of "...the importance of the social context in which...methodologies were used." (Jackson. 2000; 357). Indeed, Jackson (2000) draws upon the work of Ulrich (1994) in asserting that "...the systems rationality of planners should always be exposed to the social rationality of the affected." (Jackson, 2000; 357).

To conclude this section on the origins of CST, it is necessary to discuss the relationship of CST with emancipatory systems thinking. Scholars including Ulrich, Mingers, and Jackson all sought to develop "...emancipatory methodologies to tackle problem situations where coercion appeared to reign." (Jackson, 2000; 362). Within the SOSM, the coercive relationship and the associated problem contexts (See **Figure 6.1**) in which conflict was evident amongst participants, was considered to be an 'arena' for emancipatory approaches. Indeed, "...a concern with "emancipation" and the ethics of intervention *came to be defining characteristics of critical systems thinking*." (Jackson, 2000; 362) (Italics added for emphasis).

Jackson (2000) has asserted that CSH was developed independently of CST and is, arguably, the original methodology of emancipatory systems thinking. It can also be argued that CSH is, still, the only systems methodology explicitly and solely concerned with emancipatory

systems thinking. However, the SOSM has "...benefited critical systems thinking by embracing emancipatory approaches." (Jackson, 2000; 363). It is argued that the relationship between CST and emancipatory systems thinking became "...clearer once critical systems thinking had attached itself to Habermas's theory of three human interests...[and it became]...possible to define...[CST's]..."emancipatory commitment" in terms of a much broader dedication to human improvement." (Jackson, 2000; 363).

Clearly then, emancipatory systems thinking forms an important and integral aspect of Critical Systems Thinking (CST). Indeed, Jackson (2000) has argued that CST has an emancipatory responsibility, which it attempts to discharge through the use of appropriate systems methodologies in pursuit of the three human interests of Habermas. Nevertheless, emancipatory systems thinking is seen to be 'narrower' than CST with the "...[d]omain of effective application of emancipatory methodolo[gy]...[being]..."organizations as coercive systems" or coercive problem contexts." (Jackson, 2000; 363-364). CST, on the other hand, attempts to put "...*all* the different systems approaches to work...in the service of a more general...improvement." (Jackson, 2000; 364) (Italics in the original).

6.3.2.2 Contemporary Critical Systems Thinking

The more recent work in systems thinking has sought to "...identify...the most relevant social theory for those wishing to use systems approaches." (Jackson, 2000; 41). The four paradigms of Burrell and Morgan (1979) have been 're-labelled' as:

"...four key types of social theory...[that]...can be enhanced by systems ideas. These four types are:

- Functionalist approaches
- Interpretive approaches
- Emancipatory approaches
- Postmodern approaches"

(Jackson, 2000; 41).

Much of systems thinking and the associated methodological approaches are contained within the functionalist paradigm. This is a fact that cannot be ignored as the modernist philosophy can also be strongly identified with positivist epistemology. There is help here in that there is a clear "...distinction between "positivism" and "structuralism" in epistemology and the "metaphors" identified by Morgan as a means by which we can make finer distinctions within this large category." (Jackson, 2000; 41).

The interpretive paradigm "...provides the theoretical home for soft systems thinking." (Jackson, 2000; 41). This has been 'identified' as pluralist systems thinking for the reasons set out earlier in this thesis. It is also worth noting that Mingers (1997) develops the case for pluralism in systems based interventions using a Multi-methodological approach. Mingers' work

has already been discussed in Chapter Five of this thesis; it is, however, important to note that Mingers' approach includes functionalism within his pluralistic framework.

The emancipatory paradigm has been identified with the two radical paradigms of Burrell and Morgan (1979); there is also a supporting linkage to "...Morgan's "psychic prison" and "instruments of domination" metaphors, and to...Habermas's work on the development of emancipatory and critical systems methodology." (Jackson, 2000; 41).

Postmodernist thinking does not fit neatly into the four paradigm framework of Burrell and Morgan (1979) and it has been argued that "...postmodernism...is the challenge posed to systems thinking,...[with]...perhaps more...impact than it has already had..." (Jackson, 2000; 41). Nevertheless, it would appear that postmodernism does have an empathetic linkage to the interpretive paradigm and the pluralist systems approaches.

Although the paradigms have been 'labelled', within this thesis, differently to Jackson (2000), the ontological and epistemological foundations bear a strong similarity. The four paradigms developed by Jackson (2000) can be considered in terms of the research features as shown in **Figure 6.2** below.

Features	Functionalist	Interpretive	Emancipatory	Postmodern
Basic goal	Demonstrate law like relationships	Display unified culture	Unmask domination	Control conflict
Method	Nomothetic science	Hermeneutics	Cultural and ideological critique	Deconstruction genealogy
Metaphor	Machine, organism, brain, flux	Culture, political	Psychic prison	Carnival
Problems addressed	Inefficiency, disorder	Meaning-lessness	Domination consent	Marginal-lsation, conflict suppression
Narrative style	Scientific, technical, strategic	Romantic, embracing	Therapeutic, directive	Ironic, ambivalent
Timeframe	Modern	Premodern	Late modern	Postmodern
Organis-ational benefits	Control, expertise	Commitment, quality of work life	Participation, expanded knowledge	Diversity, creativity

Figure 6.2 Research Features for four Social System Paradigms

(Adapted from Jackson, 2000; 42; Table 3.1)

6.3.2.3 Critical Systems Thinking Principles and Commitments

The 'foundational' principles of Critical Systems Thinking (CST) were originally referred to as five commitments. These were set out as:

- Seeking to demonstrate critical awareness;
- Showing social awareness;
- Being dedicated to human emancipation;
- Being committed to complementary development of all strands of systems thinking at the theoretical level;
- Being committed to the complementary and informed use of systems methodologies.

(Adapted from Jackson, 1991; 184-185).

The developments in systems thinking over the last ten years have led to a re-formulation of these commitments. The original five commitments have been reduced to three and the discussion that follows is drawn from Jackson (2000; 375-377).

Critical awareness is associated with providing a critique of the theoretical underpinning, strengths and weaknesses and usefulness of systems models, methodologies, techniques and tools that make up systems thinking as a discipline. It now also incorporates the social awareness that is related to organisational 'climate' and involves considering the effects of power on the development and use of knowledge. The incorporation of social awareness, within the commitment to critical awareness, comes from postmodernism.

The dedication to human emancipation, as a fundamental commitment of CST, is articulated in the concept of 'emancipatory systems thinking'. However, emancipation is only one of the three human interests identified by Habermas, and this led to confusion between emancipatory and critical systems thinking which seeks to support all three of Habermas' cognitive human interests. Indeed, the commitment to human emancipation has been the most neglected of all of the original five commitments of CST. It has, however, been accepted that the postmodernist argument that 'improvement' in the human condition during organisational intervention is the best that can be achieved. For an interventionist to realise improvement in the human condition during an organisational change programme, then ethical alertness is a pre-condition of an intervention that will, inevitably, make recommendations for change to managers. Hence, in terms of human emancipation in the 'new style' critical systems thinking, postmodernism has a role to play in terms of achieving improvement that takes into account ethical alertness within a pluralist context.

The commitment to complementarism, at both the theoretical and practical levels, has been subsumed by what has become known as 'pluralism'. This needs an in-depth treatment that will be taken up in the next section.

The development of what Jackson (2000) terms the 'new style' critical systems thinking has been heavily influenced by postmodernist theory and philosophy. The commitments of 'new style' critical systems thinking are summarised as:

- Critical awareness incorporating social awareness;
- Critical improvement of the human condition that is dependent upon ethical alertness;
- Coherent pluralism, incorporating the complementary development and use of systems theories and methodologies.

6.3.2.4 Coherent Pluralism

Pluralism has already been discussed as multi-methodological pluralism in Chapter Five. This discussion is also related to the work of Mingers (1997) who argued that systems based intervention methodologies must be used in pluralistic, multi-paradigmatic modes.

Mingers (1997) also argued that methodological pluralism could best be understood, in terms of ideal types, as:

- Loose pluralism;
- Complementary pluralism;
- Strong pluralism.

A problem with Mingers' (1997) approach is that the sub-division of pluralism into the three ideal types weakens the systemicity of systems based methodologies as multi-paradigmatic intervention processes. This leads to a further criticism of Mingers' (1997) 'multi-pluralism' in that it is weak in its approach to dealing with the problems of second order change. In fact, it has already been argued that only strong pluralism is remotely capable of dealing with second order change in anything like a systemic manner.

With respect to TSI, as an example of complementary pluralism, a major weakness is to be found in the Choice phase. The System of Systems Methodologies (SOSM) has a weakness in the "...privileging of "methodology selection"...over the use of different methodologies in the *same* intervention." (Jackson, 2000; 380) (Italics in the original).

The concept of pluralism can be "...interpreted in the broadest sense as the use of different methodologies, models and techniques in combination..." (Jackson, 2000; 377). The development of pluralistic approaches in systems thinking has taken many years and it is argued that "...pluralism...[must]...be applied at all stages of an intervention; the analysis stages as well as the action stages...[indeed]...TSI...[seeks]...to operationalize pluralism in each of its three phases..." (Jackson, 2000; 380).

TSI, the operationalising of CST, has provided a means for interventionists to adopt a pluralistic and reflective posture when engaging in complex organisational change situations. As a meta-methodology it has proved to be more useful for interventionists than CSH, for

example, as it enabled the use of "...methodologies adhering to different paradigms in the same intervention in the same problem situation." (Jackson, 2000; 380).

TSI has been found wanting in several aspects some of which have already been addressed in Chapter Five. There are, however, further weaknesses to be found within TSI including:

- An uncritical acceptance of Habermasian theory of human interests;
- The emphasis on the use of whole methodologies during an intervention;
- A lack of attention to the vested interests of stakeholders and the process of the intervention itself;
- Inflexibility and a lack of responsiveness in addressing second order phenomena in complex dynamic change situations.

(Source: Jackson, 2000; 380).

Multi-methodological approaches that can provide added flexibility "...by extracting methods, models, tools and techniques from the different methodologies, and using them in combination...should be seen as a...landmark on the way to the establishment of coherent pluralism in systems thinking." (Jackson, 2000; 380). The development of coherent pluralism, in the form of multi-methodological processes of systems based intervention, is an important aspect in the STOC. This is an almost self-evident truth as there is "...an increasing willingness to combine various methods, tools and techniques in one intervention." (Jackson, 2000; 380-381).

All of this is related to the operational aspects of intervention. It is also necessary to take into account the socio-theoretical underpinning relevant to coherent pluralism and multi-methodological intervention processes. Earlier in this chapter it was argued that postmodernism appeared to be empathetically related to the interpretivist paradigm. This view is supported by the fact that the "...theoretical development that has most encouraged multi-method use has been the *alignment of pluralism and postmodernism.*" (Jackson, 2000; 381) (Italics added for emphasis).

This alignment of pluralism with postmodernism has been described as 'pragmatic pluralism' as part of a pluralist strategy that has been:

> "...justified as an appropriate response to recognising...[intervention]...as a social process...which typically involves a variety of groups and individuals who may have conflicting theoretical beliefs...unlikely to be reconciled within the span of an...[intervention]..." (Taket and White, 1995; 519).

A pragmatic pluralist strategy, theoretically underpinned by postmodernist philosophy, can facilitate the use of a mixture of appropriate complete, or parts of, systems based intervention methodologies that are matched to the problem or change situation facing an interventionist. Such an approach is only justified if the outcome is appropriate for the

expectations of the stakeholders in the situation. The pragmatic pluralist strategy can provide for "...[interventionists]...the flexibility to cleave closely to what is appropriate in the problem situation and to the twists and turns taken by the intervention." (Jackson, 2000; 381).

However, the strategy is not without its weaknesses; there is a very real danger of an interventionist adopting an isolationist pragmatic stance associated with the:

> "...use of methods, tools and techniques, without reference to the methodology and paradigm supporting their use...[and]...this means that...[the interventionist]...cannot learn about the effectiveness of these in supporting interventions..." (Jackson, 2000; 381).

The multi-methodological approaches associated with pragmatic pluralism that has created:

> "...single paradigm multi-methodologies...can...provide great flexibility in an intervention...[but lacking]...theoretical and methodological guidance...[a]...relapse into unreflective imperialism in which one paradigm...is employed...by default...[is almost inevitable]...thus losing the benefits to be gained by exploring what outcomes might be achieved using alternative rationales." (Jackson, 2000; 381-382).

The obvious danger of taking a pragmatic pluralist approach is that an interventionist might take the easy route and limit the intervention to working within a first order change context. The benefits of fully exploring the situation, using a multi-paradigmatic approach that takes into account any second order change phenomena, will not be realised. Critical reflection and awareness, organisational learning, ethical alertness, and improvement in the human condition are most unlikely to be outcomes of such an approach.

Pragmatic pluralism can help to bring postmodernist philosophy into play in terms of systems based intervention in organisational change situations. However, as mentioned above, the danger of relapse into what can be termed 'managerial pragmatism' is all too real. It is important to understand what pluralism is, and furthermore, what the systems movement wants and can expect to gain from such an approach. The STOC is intended to be part of this development but before the STOC is set out it is vital to reinforce the point that the:

> "...point of pluralist thinking, as part of the critical systems approach, is to make the best use of the methodologies, methods, models and techniques by employing them in a way that increases our capacity to tackle diverse and difficult problem situations while, at the same time, ensuring their continual improvement through research." (Jackson, 2000; 382)

From this, it can be seen that the CST commitments to critical and social awareness are clearly identified. The commitment to complementarism is also clear and unequivocal. What is missing here is the commitment to human emancipation, and ethical alertness with respect to

bringing about improvement in the human condition as a fundamental requirement of any systems based intervention incorporating first and second order change. This will be re-visited in terms of the necessary and sufficient conditions for the development of the STOC.

The commitments to complementarism have been identified as pluralistic in nature and the commitment is really that of:

> "...*methodological pluralism* - using a variety of research methods in a theoretically coherent manner, becoming aware of their strengths and weaknesses, to address a corresponding variety of issues." (Midgley, 1995; 61) (Italics in the original).

The weakness of Midgely's (1995) definition of pluralism is that it is couched in theoretically methodological terms only. Methodologies are not research methods; they are a means of operationalising underpinning theory in a manner that will create a process of inquiry dedicated to effective intervention in first and second order change situations that are complex and dynamic. Therefore, Midgely's (1995) complementarism, as methodological pluralism, is also likely to relapse into pluralistic pragmatism. It is also argued that methodological pluralism has similarities with the complementary pluralism of Mingers (1997).

6.3.2.5 Three Requirements for Coherent Pluralism

The term coherent pluralism seems to be an attempt by Jackson (2000) to encompass the three 'ideal types' of pluralism identified by Mingers (1997) and the methodological pluralism of Midgley (1995). However, it is argued that coherent pluralism can be better conceptualised as 'critical pluralism' and will form an integral component of the STOC. Therefore, the argument is advanced that coherent pluralism is a critical systems concept which can be seen as bringing together:

- Loose pluralism;
- Complementary pluralism or methodological pluralism;
- Strong pluralism.

Nevertheless coherent, or critical, pluralism, as opposed to pragmatic or managerial pluralism, can be thought of as more strategically robust, if three basic requirements are met.

Firstly there is an over-riding requirement for pluralism to:

> "...encourage flexibility in the use of the widest variety of methods, models, tools and techniques in any intervention. Systems...[interventionists]...must be allowed the greatest freedom possible, within pluralism, to tailor their use of methods and tools to the complexities of the problem ...[or change]...situation they ...[seek]...to intervene in..." (Jackson, 2000; 382).

The requirement for 'flexible pluralism' is most important in terms of recognising "...that methodologies can be decomposed and that the link between the...host methodology and the

methods, tools and techniques...associated with it, need not...be a close one." (Jackson, 2000; 382).

The flexible pluralistic approach cannot however, be allowed to de-generate into "...theoretically uncontrolled employment of diverse methods, tools, models and techniques that appears to occur in management consultancy and...recommended in "pragmatic pluralism."" (Jackson, 2000; 382-383).

Should such uncontrolled use occur then there is a danger that interventionists will fail to "...learn the value and usefulness of the tools and techniques...[employed and will not carry out]...research...[to]...improve them." (Jackson, 2000; 383). Such danger can only be averted: "...by using the methods and tools under the control of a methodology which clearly serves one paradigm...[thus testing]...them...[to]...discover how to improve their effectiveness in supporting an intervention conducted according to that rationality." (Jackson, 2000; 383).

Although flexible pluralism is, on the face of it, a necessary requirement, it must be emphasised that it must also relate to the sufficiency of:

> "...clarity about what "generic methodology", and therefore which theoretical rationale, method mixes are being used...at any time, that can save...multi-paradigm multi-methodology from relapse into...[managerial]...pragmatism..." (Jackson, 2000; 383).

A second beneficial requirement for pluralism is that of 'paradigm diversity' which will facilitate understanding, by interventionists, in that it is the:

> "...complexity, heterogeneity and turbulence of problem situations...[which]...suggests...[that]...systems practitioners need a pluralism that encourages the use, together, of different methodologies based upon alternative paradigms...[by seeking]...to benefit from what each paradigm has to offer." (Jackson, 2000; 383).

Paradigm diversity does not preclude the use of single paradigmatic or methodological approaches. Neither does it prescriptively advocate multi-paradigmatic or multi-methodological interventions. However, paradigm diversity is not without its pitfalls and the use of either single or multi-paradigms must:

> "...be followed self-consciously...and to...[make]...changes of paradigmatic orientation...[carefully, otherwise]...it degenerates into imperialism and pluralism is deprived of the vitality it gains from being able to deploy a variety of methodologies, based upon different paradigmatic assumptions, to their true potential." (Jackson, 2000; 383).

If theoretical understanding is neglected, then "...proper paradigm diversity cannot be guaranteed...[and]...methodologies...[theoretically underpinned by]...the same paradigm could

be employed together in the mistaken belief that "genuine" pluralism was being observed." (Jackson, 2000; 383).

The social and political content inherent in any organisational change situation can impose constraints on an interventionist in terms of the temptation:

> "...to employ methodologies that support the status quo...[and paradigm]...diversity demands that pluralism be buttressed against this...[temptation]...by...[giving]...proper attention to the development and employment of alternative paradigms based on radical paradigms." (Jackson, 2000; 383).

A 'status quo' posture must be avoided, by interventionists, to prevent incremental 'methodology creep' occurring during the design and implementation of organisational change programmes. There can be a tendency for interventionists to utilise methodologies that they, or their clients, feel comfortable and familiar with. This can lead to overwhelming complacency by interventionists adopting the 'false truism' that 'if the only tool available is a hammer, then every problem will be treated as if it were a nail'! It is a fundamental requirement of any Systemic Theory of Organisational Change (STOC) that sound knowledge of the theoretical underpinning of the available paradigms, and their contained methodologies, is made an integral component of that theory. Only in this way can the theory support critically pluralistic intervention processes in that theoretically "...informed methodologies are essential for ensuring a healthy link between theory and practice in systems thinking...[and to]...ensure paradigm diversity, different methodologies should be given consideration at all stages of an intervention." (Jackson, 2000; 384).

Informed paradigm diversity, as a requirement of critical pluralism leads to the <u>third requirement</u> for pluralism, and that is the concern with managing 'paradigm incommensurability'. It is an incontrovertible fact that social paradigms are incommensurate with each other. TSI did not, and cannot, deal with the issue of paradigm incommensurability and this cannot be "...resolved by reference to some meta-theory such as Habermas's account of different...human interests." (Jackson, 2000; 384). During the course of a complex organisational change situation it is likely that an interventionist will need to employ methodologies from one or more social theory paradigms. This has most certainly been the experience of this researcher in many of the interventions that will be referred to later in this thesis. Therefore, it is argued that interventionists "...must learn to live with and manage a degree of paradigm incompatibility." (Jackson, 2000; 384).

Any learning organisation has to find ways of dealing with conflict born of power politics that managers engage in as normative behaviour. If these phenomena are not incorporated into the STOC then the theoretical basis is incomplete and an intervention can never produce effective and sustainable change. The concept of a learning organisation is theoretically associated with pluralism. The issues of conflict, power and organisational politics are related to postmodernism and the radical paradigms.

An example of unrecognised paradigm incommensurability, in terms of methodology utilisation that is not theoretically related to its underpinning paradigm, is the work of Senge (1990). Senge's (1990) work using systems dynamics, related to organisational learning, is rooted in the functionalist paradigm. The use of systems dynamics by Senge (1990) has "...a kind of implicit pluralism running through...[in that it can be thought of as "unreflective pluralism"]..." (Jackson, 2000; 384). This 'unreflective pluralism' is not theoretically supported by Senge (1990) as he "...does not situate his work in its theoretical background...[if]...he did he would realize that the discipline of systems dynamics fits most readily with functionalism..." (Jackson, 2000; 385). Systems dynamics takes little notice of improvement in the human condition and cannot, in any way, be thought of as emancipatory. It is clear therefore, that 'unreflective pluralism' cannot deal effectively with paradigm incommensurability.

The pragmatic, or managerial, pluralism discussed by Taket and White (1995) has been described as 'pluralism as postmodernism'. A weakness with the Taket and White (1995) form of pluralism is that all "...methods and models employed may be used according to one implicit paradigm." (Jackson, 2000; 385). This can have serious consequences for an interventionist involved in the design and implementation of an organisational change programme. There would be a temptation to simply use any methodology on a 'pick and mix' basis with little consideration for either the theoretical underpinning or the practical consequences of the outcome of the intervention. Using methodologies in such a paradigmatically incommensurable manner is most unlikely to achieve real paradigm diversity. However, if paradigm diversity is to be protected:

> "...then paradigm incommensurability cannot simply be ignored in the way...[proposed by]...pragmatic pluralism...[as]...the eclectic use of different methods, without reference to methodology or paradigm, means we cannot ensure paradigm diversity." (Jackson, 2000; 385).

Given this, it is argued that 'pluralism as postmodernism' does little to protect paradigm diversity and also that it does not help in dealing with paradigm incommensurability.

More recently it has been proposed that pluralism can be thought of as a 'new paradigm' in CST. The basis for this argument is contained in Midgley's (1995) paper that sought to establish, amongst other things, a case for methodological pluralism. The Flood and Jackson (1991(a)) view that TSI is meta-paradigmatic is rejected by Midgley (1995) on the grounds that the assumptions made by Flood and Jackson (1991(a)) concerning Habermasian "...theory of human knowledge constitutive interests...are alien to, and incommensurable with, assumptions made by proponents of other systems paradigms." (Midgley, 1995; 64). Using this as a basis, it is contended that CST is not meta-paradigmatic but "...embodies its own unique assumptions, meaning that it is trying to establish the foundations for a *new* paradigm." (Midgley, 1995; 64) (Italics in the original).

Midgley's (1995) argument can be seen to be flawed in that it fails to consider the important issue of paradigm diversity. Indeed, the argument is little more than "...an advanced

form of "imperialism"...thereby limiting the possibilities of critical systems thinking." (Jackson, 2000; 386).

The concept of 'pluralism as a new paradigm' has an obvious advantage in that "...it resolves the difficulty of having to combine methodologies based upon divergent philosophical and sociological assumptions." (Jackson, 2000; 386). On the other hand an equally "...obvious weakness is that, unless we accept the new paradigm is capable of containing divergent methodologies, then the power of paradigm diversity is constrained." (Jackson, 2000; 386).

The argument for 'pluralism as a new paradigm' seems to assume that the new pluralist paradigm will subsume all existing social and systems paradigms. The question then arises 'what are the ontological and epistemological characteristics for the new pluralist paradigm?' By taking such an approach, the obvious strength of CST - paradigm diversity - is lost and this will be a detrimental and regressive step for systems thinkers to take. It can be likened to adopting the lowest common denominator as opposed to the highest common factor approach. To reiterate, in order to preserve paradigm diversity then systems thinkers must be able to manage paradigm incommensurability.

To close this discussion of paradigm incommensurability, a further view of theoretical pluralism, known as 'discordant pluralism', will be considered. That there are differences between paradigms is recognised; what is at issue is the manner in which systems interventionists deal with these differences. It is important that the differences are managed; this means taking into account the ontological and epistemological characteristics that should guide and govern the intervention, in order that effective and sustainable change results from the intervention.

The concept of 'discordant pluralism' "...suggests that the differences between paradigms should be emphasized rather than "rationalized away"..." (Jackson, 2000; 386). 'Discordant pluralism' can be regarded "...as a clarification and development of, rather than away, from TSI...[and as]...the kind of pluralism that can deliver the greatest benefit to systems theorists and practitioners as part of critical systems thinking." (Jackson, 2000; 387).

It is clear that, within CST, "...a meta-methodology...is required which protects paradigm diversity...and accepts that paradigms are based upon incompatible philosophical assumptions and that they cannot...be integrated without something being lost." (Jackson, 2000; 387).

Trying to develop a meta-paradigmatic structure that can endanger paradigm diversity, thus eliminating the richness inherent in any multi-perspective change situation, should be rejected. Instead, it is preferable to "...manage the paradigms...by mediating between the paradigms...[by allowing confrontation]...on the basis of "reflective conversation"...and critique...managed *between* the paradigms and not controlled from above." (Jackson, 2000; 387) (Italics in the original). Reflective conversation encourages critical but constructive

questioning and no "...paradigm is allowed to escape unquestioned because it is continually confronted by the alternative rationales offered by other paradigms." (Jackson, 2000; 387).

6.3.3 Critical Pluralism as the Basis for a Systemic Theory of Organisational Change

The discussion of coherent pluralism in the preceding two sections has embraced the issues of:

- Complementary pluralism;
- Multi-methodological approaches;
- The alignment of pluralism with postmodernism;
- Multi-paradigmatic intervention;
- Pragmatic or managerial pluralism;
- Methodological pluralism;
- Flexible pluralism;
- Paradigm diversity;
- Paradigm incommensurability;
- Learning organisations;
- Unreflective pluralism;
- Pluralism as postmodernism;
- New paradigm pluralism;
- Discordant pluralism.

The exploration of coherent, or critical, pluralism has been conducted "...at the levels of methods, methodologies and theoretical positions...[and has revealed]...that recent research in critical systems thinking has demonstrated...[what future]...systems thinking and practice requires." (Jackson, 2000; 387).

The emphasis for the future of systems based intervention, associated with the development of a Systemic Theory of Organisational Change (STOC), is that it should be theoretically underpinned by coherent or critical pluralism. Therefore, in making this assertion, it is contended that the sociological and systems based theoretical principles for the STOC are rooted in coherent or critical pluralism. Indeed, it is categorically stated that first and second order organisational change situations must be managed using the theoretical underpinning of:

"...[critical pluralism that will]...*employ a meta-methodology to take maximum advantage of the benefits to be gained from using methodologies premised upon alternative paradigms together, and also encourages the diverse use of methods, tools and techniques, in a theoretically and methodologically informed way, to ensure maximum flexibility in an intervention*...[associated with the design and implementation of a complex organizational change programme]..." (Jackson, 2000; 387) (Italics in the original).

The 'definition' above provides a Critical Systems Thinking (CST) basis for the development of the Systemic Theory of Organisational Change (STOC).

6.4 NECESSARY AND SUFFICIENT CONDITIONS FOR A SYSTEMIC THEORY OF ORGANISATIONAL CHANGE

Thus far the investigation and analysis has established:

- The theoretical understanding of first and second order organisational change;
- The ontological and epistemological framework for the STOC;
- The CST basis for the development of the STOC.

Having set out the theoretical and critical systems bases, it is now possible to express these in terms of a set of conditions that are necessary and sufficient relative to the development of the STOC. The conditions have all been discussed in detail, either earlier in this chapter or in Chapters Three, Four, and Five. Therefore, these are expressed in the form of a list as follows:

- It is necessary to have a sound understanding of both first and second order change;
- It is sufficient to recognise the relationship between stability and change in terms of organisational identity;
- It is fundamentally necessary to have a sound ontological and epistemological theoretical basis;
- It is sufficient to have created the characteristics and environmental relationships pertinent to the sound ontological and epistemological framework for organisational change;
- It is necessary to have established theoretical paradigms for organisational change;
- It is necessary that both critical and social theory are utilised relative to organisational change management;
- It is necessary that communicative competence in terms of human emancipation is incorporated;
- It is sufficient that ideal speech conditions are included in change intervention processes relative to bringing about improvement in the human condition;
- It is sufficient that technical, practical, and emancipatory cognitive human interests are seen to inform the treatment of knowledge and power issues relative to organisational learning in organisational change situations;
- It is vitally necessary that both 'old' and 'new' style critical systems thinking are used to support the theoretical development;
- It is sufficient that both modernist and postmodernist philosophies are incorporated in terms of the theoretical underpinning and practical management of organisational change;
- It is necessary that a critically pluralist posture is adopted in producing a relationship between the theoretical basis and the derived intervention process;
- It is necessary that the derived intervention process incorporates a commitment to managing paradigm incommensurability and to preserving paradigm diversity;

- It is sufficient that critical reflection is recognised as part of any critical intervention that is associated with the design and implementation of an organisational change programme.

6.5 THE DEVELOPED SYSTEMIC THEORY OF ORGANISATIONAL CHANGE

6.5.1 Preamble

It is not the intention to attempt to further critique TSI; this process has already been taken in hand as witnessed by the critiques of TSI made by various scholars during the 1990's. Such critiques have been made by Ellis (1995(b)); Green (1993); Tsoukas (1993); Midgley (1995) and Mingers (1997, 2000) amongst others. To date, the major responses to such critiques have been made by Flood (1995) and Flood and Romm (1996). The more recent work of Jackson (2000) also contains suggestions for improvements in critical systems practice.

There are four important points to be made before 'producing' the developed STOC. The first of these points is that at:

> "...the level of methods, models and techniques...a wide variety of such tools should be made available...to be employed in combination, as appropriate,...[allowing systems]...practitioners...the greatest freedom possible to tailor their use of tools to the complexities of the problem situation....[However, they must be linked to]...a particular methodology and paradigm." (Jackson, 2000; 389).

The second point to be made is that at:

> "...the level of the methodologies which provide principles for the use of different methods, models and techniques...[these]...must closely reflect different paradigms and are expected to deliver, in the service of pluralism, the benefits inherent in a variety of paradigmatic standpoints. If this theoretical link back to paradigms can be made explicit it will be possible to protect paradigm diversity." (Jackson, 2000; 390).

A third point is that at:

> "...the meta-methodological level, critical systems practice needs the kind of meta-methodology which encourages and protects paradigm diversity and handles the relationships between the methodologies, based on alternative paradigms, in order to address the complexity and heterogeneity of problem...[and organisational change]...situations at all stages in an intervention." (Jackson, 2000; 390).

A fourth and final point to be made in this preamble to the statement of STOC is related to the question of postmodernist systems thinking. The question arises "...whether a process of 'postmodern systems thought' could ever exist?" (Gaskell, 1995; 128). Gaskell (1995) argues that the answer to this question is 'no' as "Postmodernism is merely a way of looking at things,

of explaining the contemporary and highlighting instabilities - it is not a totalizing school of thought." (Gaskell, 1995; 128). This seems to ring a death knell for postmodernist systems thinking! However, this is not the end of the argument as Gaskell (1995) invites consideration of the possibility of moving:

> "...*towards* a process of postmodern systems thought...[provided]...it can be accepted that systems methodologies may only bring about *temporary* and *contested* improvements, and that constant questioning and the exposure of instabilities is a necessary feature of any managerial method, then postmodernism can play a part in systems thinking." (Gaskell, 1995; 128) (Italics in the original).

From this eloquent and erudite argument it is eminently sensible to argue that a:

> "...systems methodology which is tempered with postmodern thinking can do nothing but good within organisations...[and that postmodern]...theory can be liberating as opposed to apocalyptic - instead of and end to order, it is an end to totalitarianism, to dogma and to regime." (Gaskell, 1995; 129).

6.5.2 The Developed Systemic Theory of Organisational Change (STOC)

The developed STOC is, obviously, based on the work carried out in Chapters Three, Four, Five and, of course this current chapter. No attempt will be made to re-rehearse, so to speak, all of the discussion already undertaken. Rather, the developed STOC will be stated and then, to conclude this chapter, a brief Concluding Summary will be provided which will demonstrate how the development of the STOC has addressed several of the Research Questions and Objectives.

Using the exploration of the current understanding of organisational change, the evaluation of developments in systems thinking; the discussion of critical and social theory in combination with critical systems thinking, it is advocated that to achieve effective and sustainable organisational change, then intervention in such situations must be undertaken:

Within an ontological and epistemological framework for change which incorporates appropriate sociologically supported characteristics relative to the environmental and organisational response dimensional characteristics of change. Furthermore, the ontological and epistemological framework for organisational change must be related to critical pluralist theory such that both first and second order change phenomena can be addressed. The design and implementation of organisational change programmes must be undertaken within a critical pluralist context, which will ensure that paradigm incommensurability can be managed, thus preserving paradigm diversity in the use of methods, tools, techniques, and systems based methodologies. A commitment to improvement in the human condition shall be an integral aspect of any organisational change intervention designed to bring about organisational learning taking into account the issues of power, conflict and knowledge.

The Systemic Theory of Organisational Change (STOC), outlined above, encompasses and incorporates all of the necessary and sufficient conditions given above in Paragraph 6.4.

6.6 CONCLUDING SUMMARY

In terms of the progress towards developing new knowledge in both the research programme and this thesis, it is clear that this thesis has:

- Gone part of the way to addressing the Research Hypothesis;
- Answered Research Question Number One (**RQ1**);
- Answered Research Question Number Two (**RQ2**);
- Answered Research Question Number Three (**RQ3**);
- Created an epistemological and ontological grounding for organisational change (**O3**);
- Developed a Systemic Theory of Organisational Change (STOC).

Clearly, the journey has not been completed in terms of the goals and objectives established in Chapter One. Nor has the totality of the Research Hypothesis and Research Questions yet been addressed. These issues will form the material for the final chapters of this thesis.

Any systems based intervention process can be expressed as a conceptual model. This is true of Systems Engineering, Systems Dynamics, Soft Systems Methodology, Multi-methodology, and Total Systems Intervention.

The process of intervention, 'Critical Pluralist Intervention Methodology' (CPIM), will be developed in the next chapter. The Phased Methodological Approach (PMA), referred to earlier, will be used as a starting point for the development of CPIM.

CHAPTER SEVEN

A SYSTEMIC METHODOLOGY FOR SUSTAINABLE ORGANISATIONAL CHANGE

7.1 INTRODUCTION

Change is a process. Change is not a single event; it is an ongoing process without end. This is precisely why the current approaches to organisational change that treat change in first order mode, as something with clear start and end points, will fail to create the conditions for effective and sustainable change. Therefore, it is essential that a systemic approach is developed. This approach must incorporate, as a minimum, both first and second order phenomena and characteristics, if managers are to be induced to treat change in a processual mode. It is also important that a critical pluralist theoretical framework, incorporating and preserving paradigm diversity and complementarism, should underpin this approach.

The concept of critical pluralism was developed from the discussion associated with coherent pluralism in Chapter Six as a contribution to the derivation of a Systemic Theory of Organisational Change (STOC). This, along with the treatment of CST, emancipatory systems thinking, and a brief examination of the modernist - post-modernist debate, will form a theoretical underpinning for the development of a critical pluralist intervention process.

In this Chapter Seven a Critical Pluralist Intervention Methodology (CPIM) will be developed and the chapter will:

- Describe and critique a conceptual process model in terms of a Phased Methodological Approach (PMA) that will provide an introduction to the CPIM;
- Create a Critical Pluralist Intervention Methodology (CPIM) in three active dimensions using Total Systems Intervention (Mode 1) as a basis;
- Show how the CPIM incorporates:
  Critical Systems Thinking (CST)
  The protection of paradigm diversity
  Critical pluralism
  First, second, and third order change characteristics.

7.2 DEVELOPING THE PHASED METHODOLOGICAL APPROACH (PMA)

7.2.1 Outline of the Model

At the end of Chapter Six it was indicated that the PMA would provide a starting point for the work to be undertaken in this chapter related to the development of a CPIM. The work on PMA was first referred to by Ellis and Flood (1987) in a paper on managing technological change that was a catalyst for the development of the CPIM.

The Phased Methodological Approach (PMA) will be illustrated by a conceptual model based on vector analysis. Firstly, an explanatory key for the model is as follows:

- An organisational system state, at time zero, can be represented by a vector [S_{to}];
- A problem situation, or environmental disturbance, that can affect the organisation is represented a second vector [P_d];
- This vector [P_d] acting on the organisation [S_{to}] will transform the original organisation to a new system state, at time zero plus one, which can be represented by a third vector [S_{t1}];
- The issues and concerns faced by the system can then be addressed using problem solving activities represented by the vector [P_{sa}];
- The effects of [P_{sa}] on the organisational system [S_{t1}] will transform the system to a new system state, at time zero plus two, represented by the vector [S_{t2}].

Additional disturbances [P_d] and/or further problem solving activities [P_{sa}], undertaken within the system, will continue to bring about further changes to the system state over time.

This continuous process is generically represented in the form:

[S_{to}][P_d] [S_{t1}][P_{sa}] [S_{t2}]

7.2.2 Development of the PMA

To develop the conceptual model further it is necessary to put some 'flesh on the bones'. This is achieved by identifying variables as vector elements.

System variables representing [S_{to}] (and [S_{t1}] through to [S_{tn}]) can include:

- S_{to1} = Organisational Plans;
- S_{to2} = Financial Control;
- S_{to3} = Organisational Structure;
- S_{to4} = Transformation Technology;
- S_{to5} = Human Resources;
- S_{to6} = Marketing;
- S_{ton} = xxxxx.

Problem or disturbance variables associated with [P_d] can include:

- P_{d1} = Economic changes;
- P_{d2} = Technological changes;
- P_{d3} = Social changes;
- P_{d4} = Competitor activity;
- P_{d5} = Supplier activity;
- P_{d6} = New entrants to sector;
- P_{dn} = xxxxx.

Problem solving variables for [P_{sa}] can include:

- P_{sa1} = Task force activities;
- P_{sa2} = Managerial/technical/financial investigation;
- P_{sa3} = Emergency action;
- P_{sa4} = Supplier/customer liaison;
- P_{san} = xxxxx.

These variables can now be combined in the form of a conceptual model. This model, which is not intended to be mathematically rigorous, is representative of organisational change as a process, and not as a series of single events.

$$
\begin{array}{lll}
[S_{to}][P_d] & [S_{t1}][P_{sa}] & [S_{t2}] \\
\\
[S_{to1}][P_{d1}] & [S_{t11}][P_{sa1}] & [S_{t21}] \\
[\ .\quad\quad .] & [\ .\quad\quad .] & [\ .\ ] \\
[\ .\quad\quad .] & [\ .\quad\quad .] & [\ .\ ] \\
[\ .\quad\quad .] & [\ .\quad\quad .] & [\ .\ ] \\
[S_{ton}][P_{dn}] & [S_{t1n}][P_{san}] & [S_{t2n}]
\end{array}
$$

Figure 7.1 Process Conceptual Model for a Phased Methodological Approach

However, the model, shown in **Figure 7.1** above, fails to explicitly incorporate the dynamic of time and this is clearly a weakness. This weakness can, to some extent, be dealt with in the form of a hypothetical trajectory for the organisational (as system) behaviour [S_{tn}], under the effects of [P_d] and [P_{sa}], over time in **Figure 7.2** below.

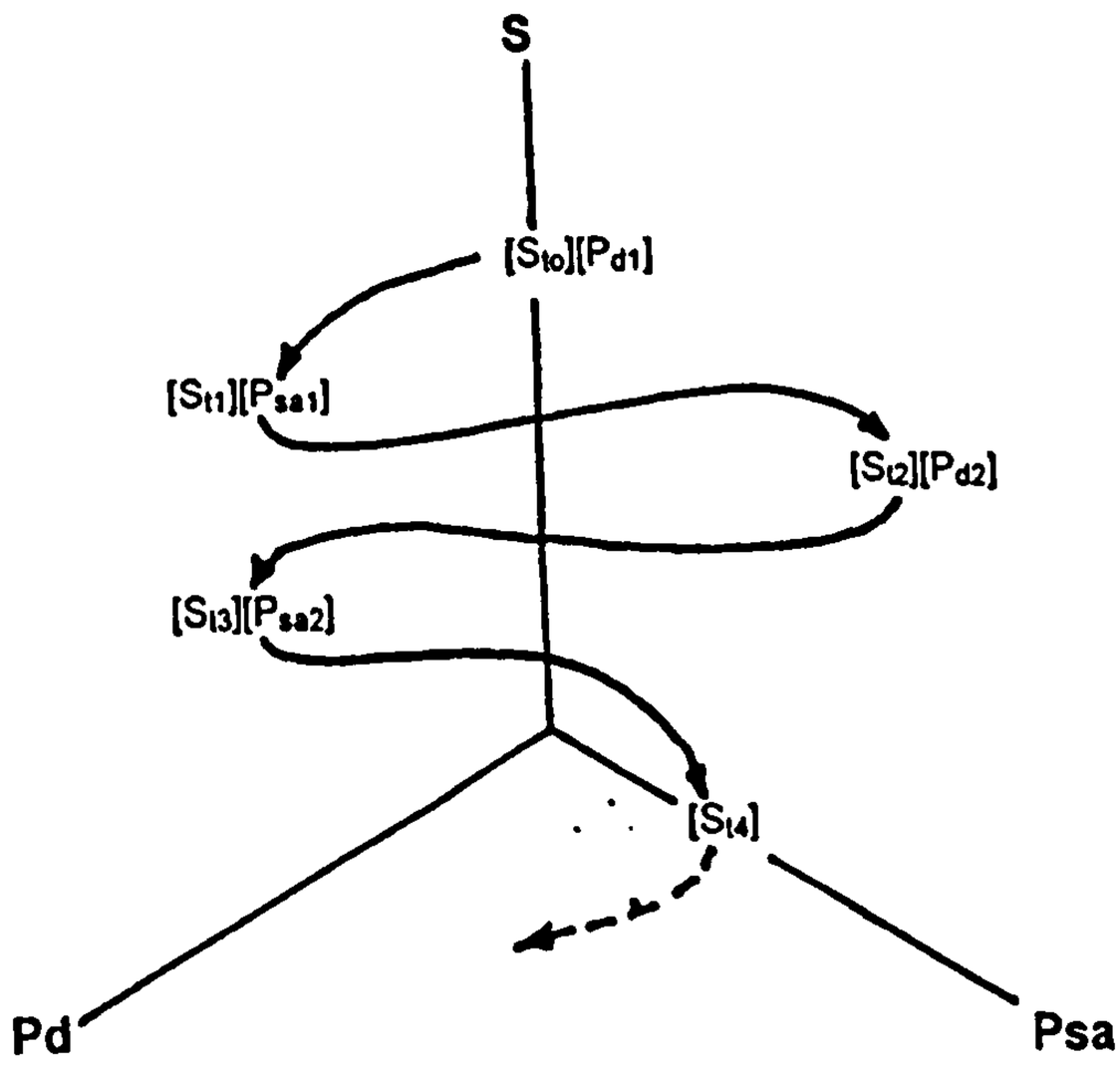


Figure 7.2 Trajectory for Organisational Behaviour over Time

7.2.3 Critique of the Phased Methodological Approach (PMA)

The dynamic of time is frequently ignored in managerial responses, in the form of problem solving activities, to environmental disturbances that can affect the system. Such a response is often typical of managers who insist on treating organisational change as single unconnected events. This is a systemic failure which does not recognise the system state changes that occur; this is dangerous as the response(s), in the form of problem solving activities or apparent end points, can be inappropriate or non-sustainable.

The conceptual process and trajectory models, shown in **Figures 7.1 and 7.2** above, can assist in developing an understanding of the behaviour of an organisational system over time under the influence of environmental disturbances, shocks, and problem solving activities undertaken in a phased approach. These shocks are manifested as elements in a problem situation, or 'mess', which act on an organisational system changing its behaviour over time as indicated by its position in the process model shown in **Figure 7.1**. The problem situation is represented by the vector $[P_d]$. The organisational system is represented by the vector $[S_{to}]$. The environmental shock $[P_d]$ acts on $[S_o]$ at time (t_o) to shift the strategic direction of the organisation, and in so doing 'moves' $[S_{to}]$ to a new position in its environment represented by $[S_{t1}]$ in **Figure 7.2.** There is an organisational response in the form of managerial activities which are embarked upon within the system to 'solve the problem'. The change is treated in first order mode as a single event and the reactive (cybernetic) response is to 'steer' the system back to its original position, also as a single event. This is represented by the vector $[P_{sa1}]$ that acts on $[S_{t1}]$; in so doing, the organisation is moved to another new position in the environment shown as $[S_{t2}]$. Organisational management might realise that the action was inappropriate because further new, or unanticipated, problem variables appear and $[S_{t2}]$ is subject to $[P_{d2}]$ which shifts the organisational position to that of $[S_{t3}]$. This process is continuous, and the system trajectory is relatively random under the influence of environmental shocks and problem solving activities.

Several critical observations must be made regarding the model shown in **Figure 7.2.** These are pertinent with respect to current approaches to managing organisational change, and also to the Critical Pluralist Intervention Methodology (CPIM) that is to be developed.

Firstly, these models reveal the pragmatic nature of current managerial responses to changes demanded from an organisation by environmental shocks. Each 'shock' is treated, in first order mode, as a series of single events rather than as a process.

Secondly, although the models reveal that change is processual in nature, and contains both first and second order change phenomena, this is often ignored. The changes, which are treated as single events, ought to be managed using a processual approach that recognises both first and second order characteristics.

Thirdly, the phased, single event, problem 'solving' activities undertaken in attempts to bring the system back on to its chosen strategic path are utilised in a 'pick and mix' manner with little or no regard for organisational learning underpinned by appropriate theory.

Fourthly, and as a direct consequence of point three above, the lack of attention to the theoretical bases of the 'problem solving' activities is non-systemic and ignores paradigm diversity. This is a first order approach that inhibits organisational learning and failure is almost guaranteed.

Fifth, time is only implicitly considered in PMA and this is a major weakness in this approach.

And last, PMA ignores the potential for change that is so dysfunctional that the system can enter terminal decline which can result in the destruction of the system.

Jackson (1994) argues that approaches similar to the PMA can be thought of as comparable to a drunk searching for his keys under a street-light instead of where they were actually lost!

Although the weaknesses are obvious, the PMA did alert the author to the need for a systemic methodological intervention process that would take into account such weaknesses. It is emphasised that the PMA was developed during the very early part of this research programme with the focus, at that time, being on technological change and not organisational change per se. However, because of the weaknesses identified above, it became evident that the PMA would not provide a basis for the development of a truly systemic approach to organisational change. It became clear that the PMA had to be abandoned. A change of focus, which embraced the totality of organisational change, led into the research programme which is described in this thesis.

7.3 DEVELOPING THE CRITICAL PLURALIST INTERVENTION METHODOLOGY (CPIM)

To continue to make progress in the field of systems thinking it is necessary to:

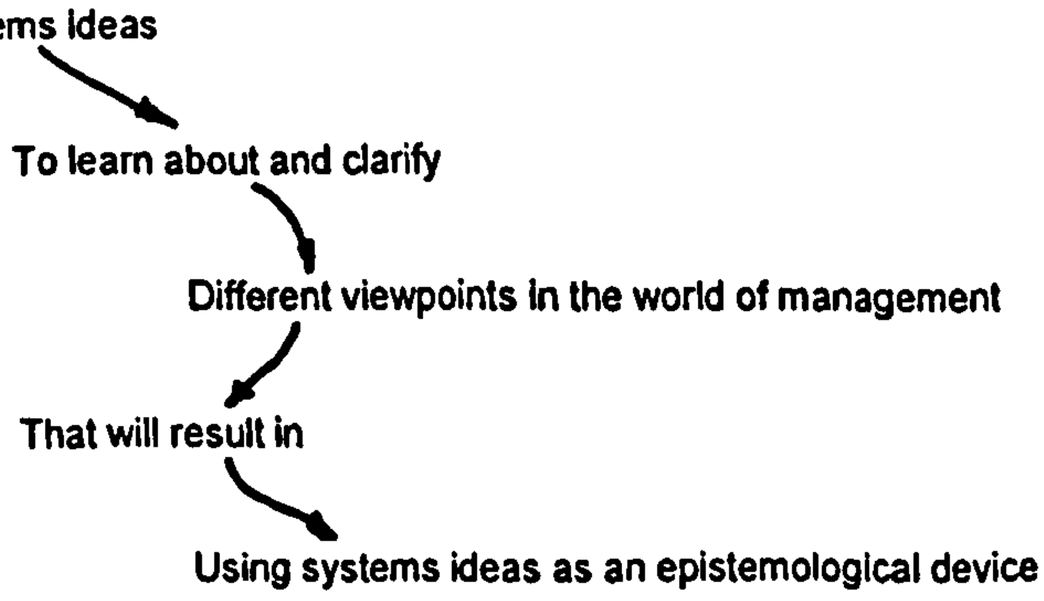


Figure 7.3 The Manner of Progression in Systems Thinking

(Source: Jackson, 1994; 28)

Jackson has argued that systems thinking makes progress over time, and this is revealed in **Figure 7.3** above. A contribution to progress in systems thinking is evident in this thesis. The progress of systems thinking was outlined by Jackson in two papers; 'Beyond the Fads: Systems Thinking for Managers' (1995) and also in 'Critical systems thinking: beyond the fragments' (1994). He demonstrated that progress by using a simple grid that has been reproduced, in adapted form, in this thesis as **Figure 4.2.** This grid is important, not only in terms of the past progress in systems thinking, but as a starting point for the further progress claimed by this research programme.

7.3.1 Initial Starting Point for the CPIM

The starting point for the CPIM will be Jackson's grid of progress shown in **Figure 4.2**. The grid has been extended to form a two dimensional model shown in **Figure 7.4** below.

7.3.1.1 Human Dimension

The horizontal axis of **Figure 7.4** can be thought of as a 'human dimension' which has been labeled as 'Participant Values, Beliefs, and Interests'. It is differentiated as:

- Common unitary relationships;
- Divergent pluralist relationships;
- Conflictual hostile relationships in which negotiation can occur;
- Conflictual domination relationships in which negotiation is unlikely to occur.

Such relationships are often observed in human activity systems. Indeed a unitary relationship involving common values, beliefs and interests can be disturbed becoming divergent and pluralistic in terms of values, beliefs and interests. A pluralist relationship can, over time, deteriorate, through disagreement among participants, into conflict involving hostility. Negotiation can bring about a return to a pluralist relationship or, should the negotiation fail, the relationship can deteriorate further into one of a struggle for supremacy, and eventual domination by the victorious faction. One has to look no further than the UK industrial relations scene of the late 1970's and 1980's for indicative examples of such shifts in organisational relationships in the human dimension. Such changes are examples of the process of change shifting from first order, to second and then to third order change over time.

7.3.1.2 System Complexity Dimension

The vertical axis of **Figure 7.4** is that of organisational system complexity, and can be thought of as the problem containing system in terms of its complexity. It is differentiated as:

- Simple - Stable systems;
- Complex - Transforming systems;
- Chaotic - Dislocational systems.

Such system forms are commonly observed in contemporary organisations. A Simple - Stable organisational system is one that changes little, and only in first order mode, over time. It can be visualised as an identity preserving system in which organisational persistency is important. A Simple - Stable system can, either through internal push, or external pull demands for change, transmute into a more complex form of system. This, Complex - Transformational system, is one that can respond to change in a manner that is likely to transform organisational structure and processes in second order mode. Should a Complex - Transformational system fail to respond to the demands of change, it can suffer a descent into chaos changing into a Chaotic - Dysfunctional system that self-destructs in third order mode. The reality of the commercial and industrial world provides many examples of such systems such as Swissair, Marconi, and possibly, the UK Conservative Political Party.

7.3.1.3 The Contextual Relationship Model

This (extended) grid can be thought of as a two dimensional model, or a contextual relationship metaphor map. The two dimensions, differentiated in terms of human relationships (horizontal) and system complexity (vertical), 'locate' a series of metaphors which will assist an interventionist in gaining understanding of the associated relationships, in an organisational change situation, in terms of:

- Human interests, values, and beliefs on the horizontal axis with most in common on the left, shifting to least in common on the extreme right;
- Complexity of the problem containing system on the vertical axis with most stable at the top, extending to the most unstable at the bottom;
- Incorporation of the dynamic of time by recognising that neither system complexity nor the human relationships are static.

The Contextual Relationship Model is shown in **Figure 7.4** below.

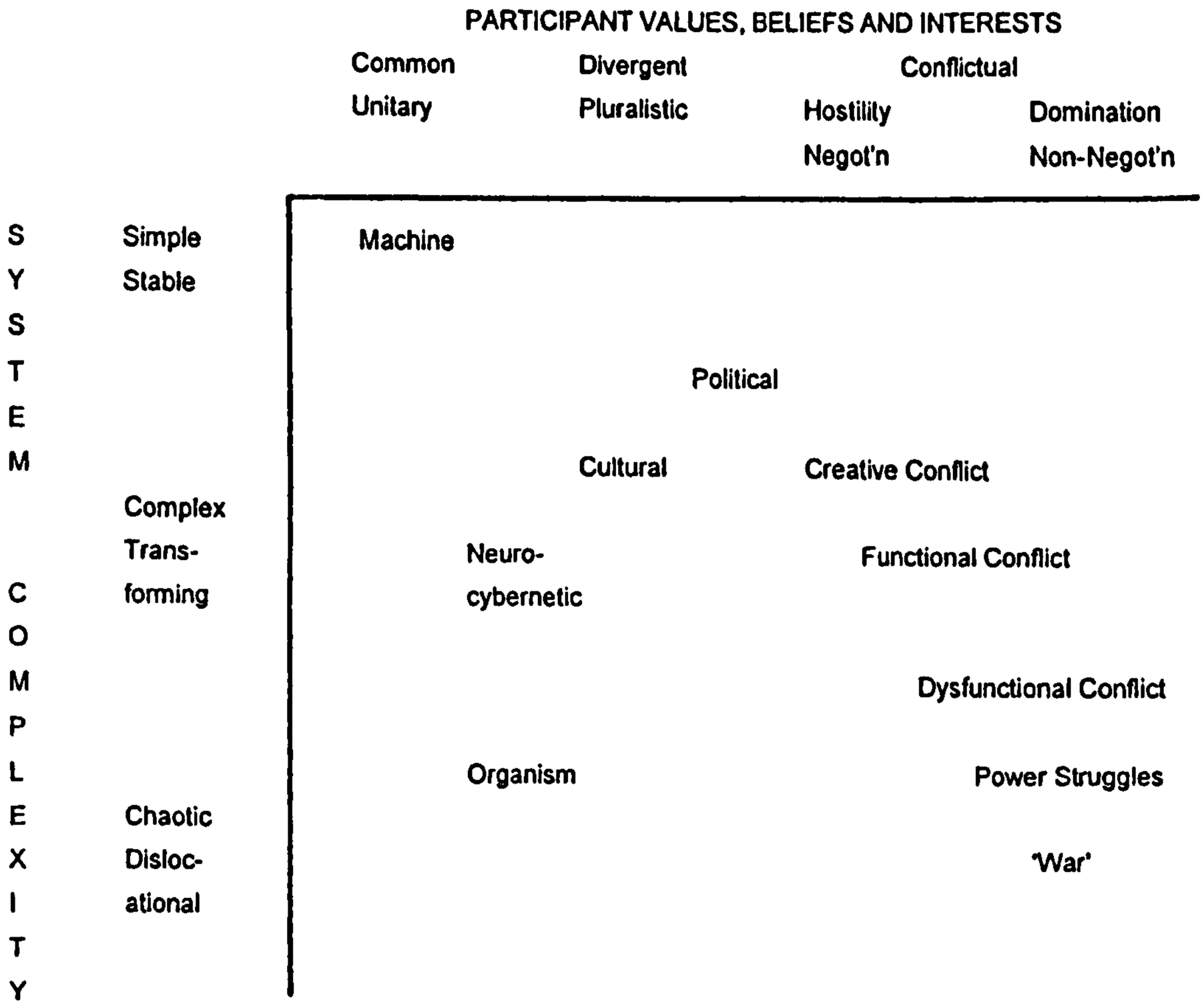


Figure 7.4 Contextual Relationship Model Involving Human Interests and System Complexity

The two dimensional model, shown above in Figure 7.4, helps to provide an understanding of the contextual nature of change situations. It is comparable to the Creativity Phase of the Mode 1 version of Total Systems Intervention (TSI) of Flood and Jackson (1991(a)). However, this is extended by bringing in to play not only metaphor analysis but other factors and issues associated with organisational change.

For example 'war' can be a metaphor for totally dysfunctional conflict that occurs in a chaotic dislocational context involving a non-negotiable domination relationship among participants. However, it can also be thought of as a condition, or factor, that exists when groups or individuals cannot agree, and where all meaningful negotiation has ceased.

In marked contrast to the Creativity Phase of TSI, the contextual relationships shown in Figure 7.4 above are not 'ideal types' and no marked delineation involving 'putting things in boxes' is postulated. This attempts to show that both axes are continua involving a process from a stable system context, with common values, through to a chaotic system context with non-convergent values. Therefore, it is argued that the time dynamic is implied through the concept of movement across and down the model. This approach is in keeping with the intent of this research to treat change as processual in nature and comprising both first, second and, as will be shortly shown, third order change phenomena.

7.3.2 Characteristics of the Human Interests and System Complexity Dimensions

It is very important that the characteristics of both dimensions are identified in the contextual relationship model. Without these the richness associated with the initiation of a change situation cannot be revealed, and any intervention is likely to founder producing ineffective and non-sustainable change. The characteristics of the human dimension will be established by utilising human values, beliefs, and interests; the characteristics of system complexity will be defined by using system based concepts and some of the characteristics identified in the epistemological and ontological framework for organisational change developed in Chapter Three.

7.3.2.1 Common Unitary Relationships

The dominant values, underpinning beliefs, and binding interests will define the unitary relationship amongst participants. As a starting point the dominant values include:

- Common purpose and objectives;
- Group cohesion, stability and identity;
- Stable and persistent processes;
- Rational behaviour;
- Status quo;
- Powerful leadership by example;
- Harmony.

The beliefs that underpin the dominant values include:

- The group leader is the best person to set group objectives;
- Predictability 'is best';
- Group solidarity 'is important';
- Change is a waste of time - the 'old ways' are better;
- Conflict is abnormal.

The binding common interests include:

- The group needs are dominant over the individual;
- Group survival is a primary concern.

7.3.2.2 Divergent Pluralist Relationships

Again, the pluralist characteristics will be defined by utilising values, beliefs and interests. The dominant values include:

- Democratic group processes;
- Learning through debate;
- Creativity and variety;
- Constructive disagreement and creative conflict;
- Emancipation.

The beliefs that underpin the dominant values include:

- Knowledge is dispersed throughout the group;
- Power is the ability to influence others and not a positional resource;
- Creativity is stifled by stability and predictability;
- Constructive change is useful and normal;
- Conflict is recognised as potentially useful.

The binding common interests include:

- Objectives developed by group members in conjunction with the leader;
- Creative and constructive change;
- Consensus seeking behaviour;
- Compatibility through group and individual learning.

7.3.2.3 Conflictual Hostile - Negotiation Relationships

The hostile-negotiation relationships are also defined by using values, beliefs and interests as a basis. The values that dominate such a relationship include:

- Knowledge as power;
- Dispute as a means of learning;
- Variety in perspectives related to group processes;
- Negotiation as a means of conflict management;
- Conflict amongst group members creates beneficial knowledge;
- Powerful autocratic leadership;

The beliefs that underpin the values inherent in such a relationship include:

- Knowledge is a powerful resource;
- Power has to be challenged;
- Disagreement is healthy and promotes learning;
- Change can only be brought about through dispute and disagreement;
- Dispute reveals options for objectives;
- Conflict is normal and must be encouraged.

Binding interests include:

- A learning framework;
- Creative conflict management processes;
- Individual interests pursued through coalition building.

7.3.2.4 Conflictual Dominant - Non negotiable Relationships

Under such a 'regime' it is obviously more difficult to identify 'commonality'. Values, beliefs and interests will again be used as a basis for characterisation of this relationship. The likely dominant values include:

- Power as a positional resource;

- Individualism;
- Domination;
- Control.

The underpinning beliefs include:

- Control must be centralised and concentrated;
- Power must be executed by a dominant body;
- Victory by the powerful must be achieved;
- Objectives must be imposed by the powerful;
- Democracy does not work;
- Those lacking power are an economic resource.

The prevailing interests include:

- Preservation of status by the elite;
- Domination by the powerful;
- Change that is compatible with the needs and expectations of the powerful.

Having established human dimension characteristics it is now possible to define those for system complexity.

7.3.2.5 Simple Stable Systems

The system based concepts that characterise a simple - stable system include:

- Stable relationships between sub-systems and system elements;
- Closed system;
- Focus on preservation of system survival and identity;
- Passive first order system response to change;
- Low entropy - highly ordered;
- Ontologically realist;
- Epistemologically positivist;
- System information flow is limited to that needed for functional efficiency;
- Control is through negative feedback;
- Creativity and innovation are low;
- System tends toward 'ossification' and can die of 'old age'.

7.3.2.6 Complex Transformational Systems

Here, the systems based concepts used to characterise complex - transformational systems include:

- Flexible relationships between sub-systems and system elements;
- Open system;
- System identity, although important, can change over time;
- Adaptive second order system response to change;

- Low to medium entropy, disorder is tolerated in a search for new order;
- Nominalist ontological perspective dominates;
- Anti-positivist epistemology dominates;
- System information flows according to sub-system needs;
- Self-organising control is normal;
- System adapts, re-orders, and re-invents itself.

7.3.2.7 Chaotic Dislocational Systems

The systems based concepts that characterise chaotic - dislocational systems include:

- Inflexible rigid relationships between sub-systems and system elements;
- Relatively closed system;
- System identity is strongly related to a dominant sub-system;
- Reactive (destructive) third order system response to change;
- Entropy and is high and disorder becomes an emergent property as conflict develops;
- Ontologically mixed dependent upon dominant sub-system;
- Epistemologically mixed dependent upon dominant sub-system;
- System information is seen as a source of power and not disseminated;
- Control is exercised through dominance;
- System tends towards self-destruction.

7.3.3 Clarification of the Contextual Relationship Model

The characteristics for the Contextual Relationship Model, shown in **Figure 7.4** above, were developed in terms of both participant relationships and system complexity. These characteristics are meant to be indicative and not exhaustive. However, it is important that the model is clarified in terms of its characteristics with respect to its usefulness during the initiation phase of a change situation.

This clarification can be achieved, in terms of the usefulness of the contextual relationship model, by considering types of change relative to metaphors, characteristics, and systems based concepts.

Using both the participant and system complexity dimensions as 'locators', consider the following:

- Within a simple - stable system, maintenance of the 'status quo' is the imperative; any change will be slow, predictable, and first order in nature. The system could be so resistant to change that ossification can occur which can be thought of as 'death by stealth';
- The initial type of change encountered within a complex - transforming system can be first order; it is likely to be incrementally oriented with an emphasis on self preservation and identity maintenance;

- The second type of change associated with the complex - transforming system will be second order; continuity will still be an important consideration. However, political activity and creative conflict can produce the conditions for second order change to emerge. Radical structural and functional change, within a self-organising adaptive (organistic) framework, in which system identity can be modified, will be the result;
- The chaotic - dislocational system can be associated with both second order or destructive, which will be identified as third order, change. The second order change will be radical and is of the type that can emerge from creative conflict that becomes functional conflict if, and only if, positive feedback loops that are associated with such conflict are broken. If these positive feedback loops are not broken then the conflict degenerates into power struggles and 'war' with destructive, or third order, change being the result. This type of third order change can be thought of as 'death by violence'.

From this clarification, 'forms of change' can be now derived and these are shown in diagrammatic form in **Figure 7.5** below.

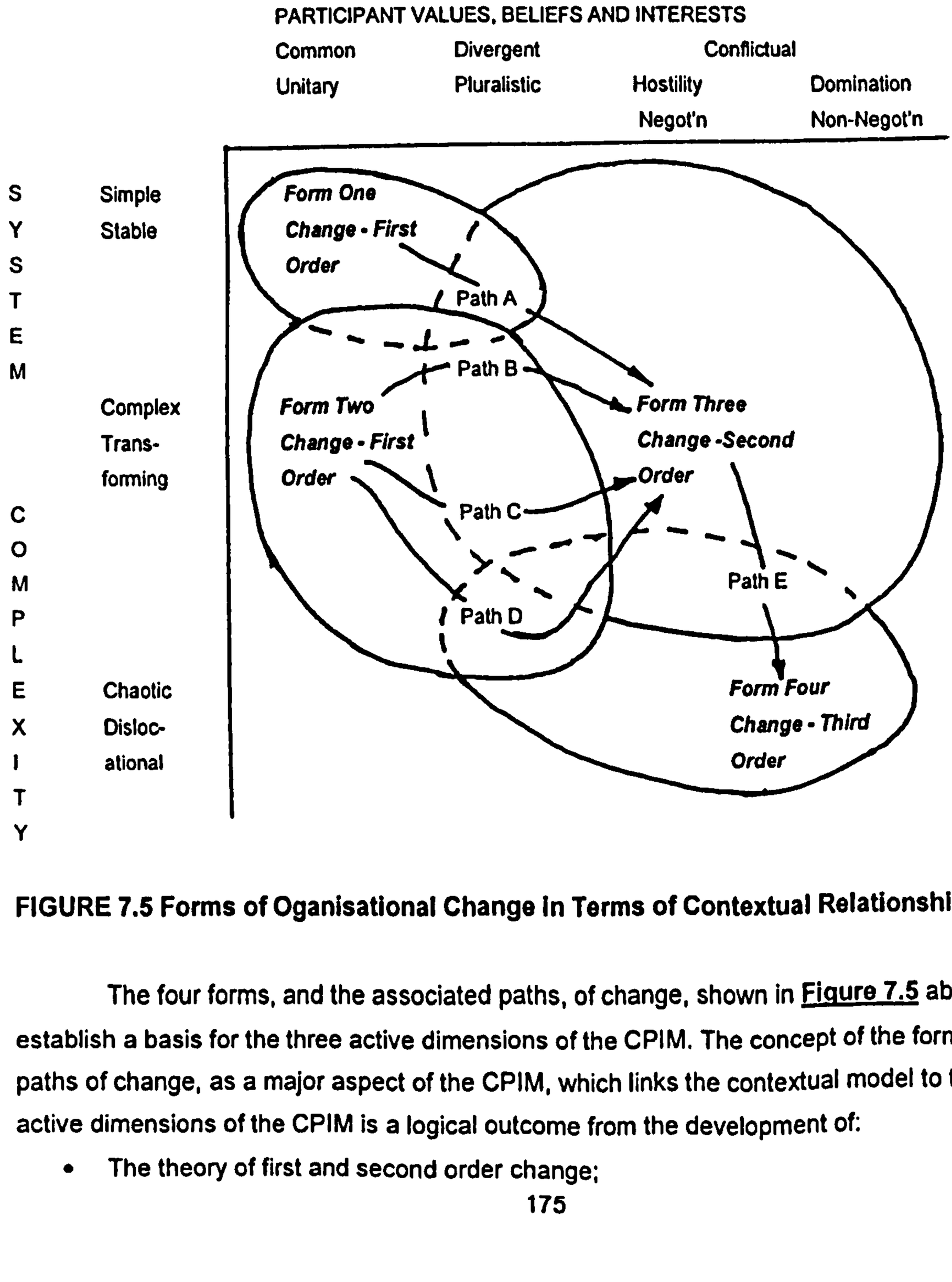


FIGURE 7.5 Forms of Oganisational Change In Terms of Contextual Relationships

The four forms, and the associated paths, of change, shown in **Figure 7.5** above, establish a basis for the three active dimensions of the CPIM. The concept of the forms and paths of change, as a major aspect of the CPIM, which links the contextual model to the three active dimensions of the CPIM is a logical outcome from the development of:

- The theory of first and second order change;

- The epistemological and ontological framework for organisational change;
- The characteristics of the human and system complexity dimensions;
- The manner in which first, second, and third order change emerges in complex organisational system.

A detailed discussion which will amplify and emphasise the forms, paths, and types of change that can be brought about in organisational change situations, will now follow.

7.3.4 Forms of Change Relative to the CPIM

Prior to developing the CPIM it is necessary to give a little more thought to the important four forms of change to show how the dynamic of time is incorporated. Thus far, this thesis has formally identified first and second order change. It will be observed that **Figure 7.5** above includes third order change, and this will be dealt with in more detail in Chapter Nine. It is also important to mention here that actual examples of the forms and types of change, outlined below, will be provided in the Case Studies discussed in Chapters Eight and Nine.

Form One Change is change that is always experienced within a simple - stable organisational system where the machine metaphor is appropriate. If any change occurs it is always first order in nature. The managerial emphasis is on control and any change is treated as a single event. The status quo prevails and all change is undertaken within the functionalist paradigm. A common unitary relationship exists amongst system participants. Identity is seen as vital and is preserved at almost any cost. Managerial power and existing structures are not open to challenge; power is concentrated in the hands of a single powerful leader, or a dominant coalition.

Form Two Change is change that occurs within a complex - transformational organisational system where the culture, political, organism, and brain metaphors are appropriate. Change that does occur is usually first order in nature with such changes often regarded as single events. The status quo is regarded as important but change programmes are undertaken within both functionalist and interpretive paradigms depending upon the nature of the change itself. Common unitary and divergent pluralist relationships are found amongst system participants. Identity, although important, can be revised during the change programme, with a new identity developing through the use of consensus seeking methodologies which search for accommodation amongst participants. Change is unlikely to be radical. Managerial control is regarded as important and power relationships are unlikely to be radically changed.

Form Three Change is change that also occurs within a complex - transformational organisational system and can emerge in several ways. This form of change is always second order in nature. Probably the best way to show what enables second order change to occur, and to describe and develop an understanding of this form of change is to consider the following indicative scenarios:-

Scenario One:

Divergence develops as a result of disagreement in a previously stable system and leads to divergent pluralistic political activity. The relationship(s) shift over time and can, in turn, produce negotiation regarding the issues that led to divergence. Should the negotiation prove to be fruitful then the conflict is creative, and second order change is the outcome as the cultural change causes the organisational system to radically change into complex - transforming. This is shown in **Figure 7.5** as **Path A.**

Scenario Two:

A complex - transforming system uses, for example, a neuro-cybernetic methodology in addressing a change requirement. As a result, the organisation shifts from a unitary set of relationships, through a pluralistic relationship, into hostility and conflict between participants. Negotiation occurs and domination is overcome through coalition building. Second order change emerges through functional conflict as the radical system change becomes established. This is shown in **Figure 7.5** as **Path B.**

Scenario Three:

A complex - transforming system acts as an organism in attempting to preserve identity during a hostile environmental disturbance. The unitary relationship breaks down as the organism fights for survival; the need for cultural change is recognised by factions within the organism, but conflictual relationships develop between factions that disagree over the strategic response necessary to preserve the system. Political activity, hostile negotiation, and conflict result as emergent properties of the transforming system. However, in assuming that the negotiation succeeds, the creative properties of conflict become dominant and functionality, through radical second order change, is achieved as the system transforms. This is shown in **Figure 7.5** as **Path C.**

Scenario Four:

Relationships between participants are normally divergent pluralist; the interpretivist paradigm governs normative behaviour. Change is usually addressed through consensus seeking methodologies. There is an emphasis on preservation of system identity with any change being incremental and first order in nature. The organism or culture metaphors are applicable and dominant. A specific change initiative causes high levels of disagreement between system participants. This cannot be resolved by consensus seeking methodologies and the well tried and tested approaches break down. Relationships deteriorate with a particular faction achieving dominance, causing dysfunctional conflict. The dangers associated with power struggles and 'war', which can lead to third order destructive change, are recognised and rejected by the protagonists. However, the need for second order radical change prevails over the destructive capability of third order change and de-escalation is achieved by breaking the positive feedback loop. The conflict reverts to functional, and radical second order system change is brought about through system transformation. This is shown in **Figure 7.5** as **Path D.**

Form Four Change is third order change that is associated with a chaotic - dislocational organisational system. Although this form and type of change was not previously defined, it was identified during the development of the CPIM and will be discussed in Case Study Number Four in Chapter Nine. This form and type of change will always be third order and potentially destructive change. This form of change needs to be examined in more detail and, again, this will be illustrated through an indicative scenario as follows:-

Scenario Five:

Here change is being considered that is always third order, dysfunctional, and potentially destructive. This form of change can occur as a result of failures in Forms One, Two and Three change. The outcome of such failures will be a violent shift from functional to dysfunctional conflict causing power struggles and eventually 'war' between the protagonists. Form four change can also be more direct in that powerful players can attempt to impose a change programme. Opposition to the change programme will produce political activity and then conflict that rapidly degenerates into dysfunctionality and 'war'. This is shown in **Figure 7.5** as **Path E.**

Figures 7.4 and 7.5 above are models of contextual relationships with respect to organisational change. These two models, which are important components of the CPIM, can be thought of as a 'typology' of change incorporating:

- A contextual relationship between human interests and system complexity;
- First, second, and third order types of change;
- Indicative forms of change labeled one, two, three, and four;
- Five indicative paths of change labeled A, B, C, D, and E
- Five indicative scenarios of change, relative to human interests, system complexity, types and forms of change;
- The dynamic of time, inherent in any organisational change situation, shown by the five paths of change trajectories.

All of these types, forms, paths, and scenarios of change are inter-related and inter-dependent with and to each other. Importantly, the phenomenon of third order change is identified within the typology. Although third order change is important in terms of recognising that change initiatives can destroy organisational systems, this will not be explored in detail. This is because the research programme is explicitly concerned with the management of effective and sustainable change. Clearly, third order change will produce outcomes that are sometimes undesirable and almost always will not produce positive and sustainable results for an organisation if organisational survival is an imperative. Further research into the causes and effects of third order change is necessary and, as this is beyond the scope of this thesis, it will not be pursued further here.

7.4 PHASES OF THE CRITICAL PLURALIST INTERVENTION METHODOLOGY

Using the models shown in **Figures 7.4 and 7.5**, TSI Mode 1, and all the earlier work in Chapters Four, Five, and Six the CPIM itself can be addressed. This will involve the use of diagrammatic models accompanied by explanatory narrative for clarification.

TSI Mode 1 (Flood and Jackson, 1991(a)) incorporates three phases:

- Creativity;
- Choice;
- Implementation.

Each phase of TSI, in turn, incorporates:

- Task(s) to be achieved;
- Tools through which to accomplish the tasks;
- Expected outcomes.

TSI has already been discussed in depth in Chapter Five, and no further discussion will be undertaken. The Mode 1 version of TSI will be used as a 'template' for the development of the CPIM incorporating the models derived in this Chapter.

The CPIM will include three phases that will be labeled as:

- Initiation of Understanding;
- Design of Intervention Process;
- Implementation Process.

The three phases are interdependent and interactive. As such, iteration within and between the phases is a requirement. As each phase is uniquely intended to achieve specific tasks it is important that no attempt is made to impose a 'standard pattern' on the phases. This is a weakness of TSI Mode 1 as it is prescriptive and constraining. Such a constraint fails to recognise the types and forms of change; furthermore, it also excludes the dynamic of time and tends to treat change, in first order terms, as single event in nature. Clearly this is inhibitory and is unlikely to produce effective and sustainable change.

7.4.1 CPIM - Initiation of Understanding Phase

This phase of the CPIM is comparable to the creativity phase of TSI and an indication of what this phase is intended to achieve will be provided.

The task(s) for this phase can include:

- To develop an understanding of the dominant characteristics of participant relationship;
- To develop visibility of the characteristics of the system containing both the change situation and the participants in the situation;

- To make transparent the richness contained within the change situation with the intent of identifying the most probable type(s), form(s) and path(s) of change needed to bring about effective and sustainable change.

The tools available to the interventionist are:

- Contextual Relationship Model (**Figure 7.4**);
- Characteristics of human and system complexity dimensions;
- Forms of Organisational Change Model (**Figure 7.5**);
- Initiation of Change Context Model (**Figure 7.6**).

The outcomes expected from this phase include:

- Knowledge of the participant and system complexity characteristics;
- Visibility of the richness of the change situation;
- Establishment of the conditions that will form the basis for effective and sustainable change.

The initiation of a change programme, which is underpinned by CST, must recognise the complexity and dynamics of the situation faced by the organisation. This will be achieved by using the contextual models developed as **Figures 7.4 and 7.5** above. This can be illustrated by developing a model of Initiation of Change Contexts as shown in **Figure 7.6** below.

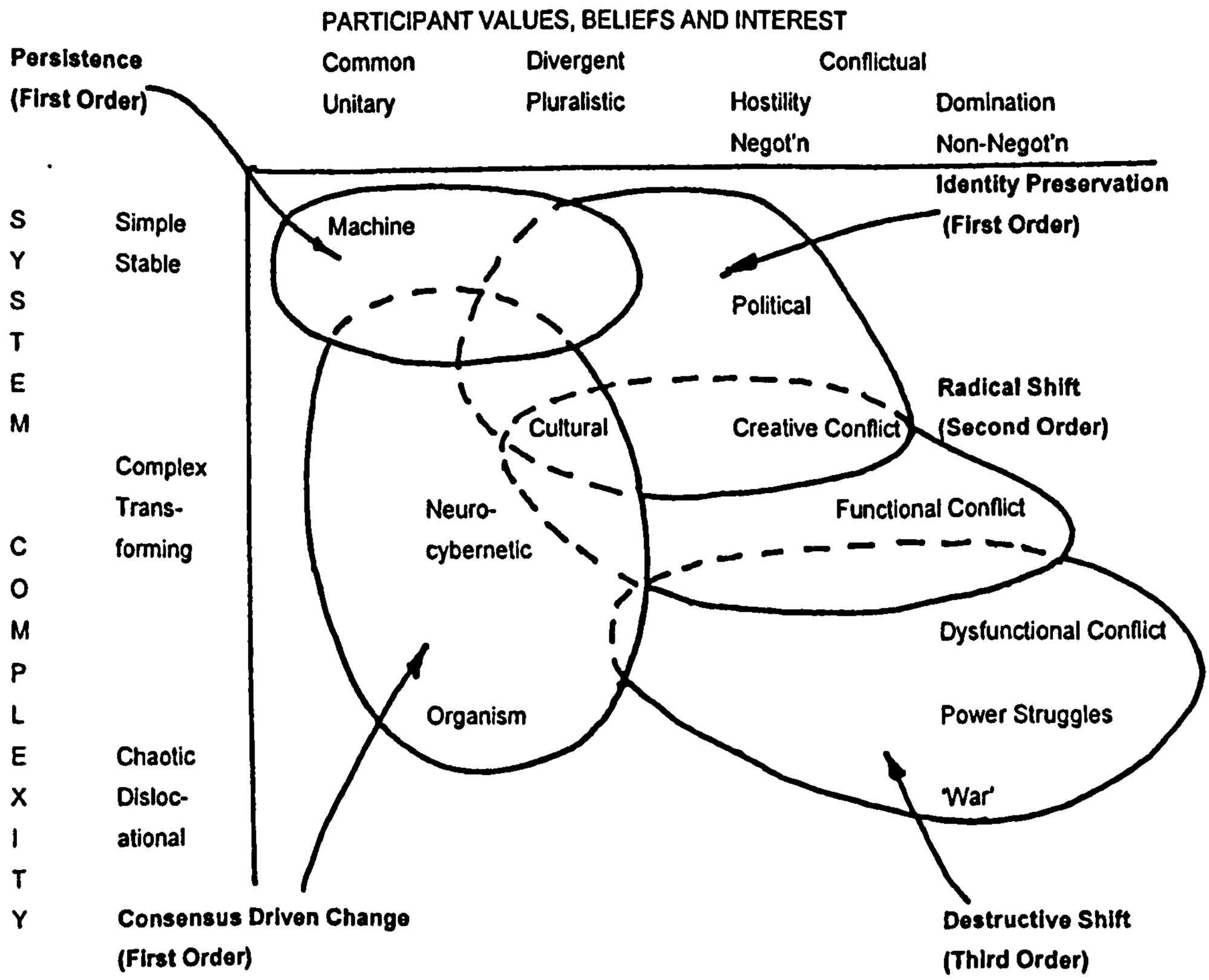


Figure 7.6 Initiation of Change Contexts

Figure 7.6 above provides a basis from which an initial understanding of the organisational situation, relative to the change programme envisaged by the interventionist and the participants when appropriate, can be gained. This is an important aspect of the Initiation of Understanding Phase as it is necessary to establish the initial conditions of the change programme. Without this understanding the change programme can easily take the wrong direction for the process, or journey, of change. It is very likely that this Initiation of Understanding Phase will take some time. This will be time well spent helping to gain the fullest possible understanding of the situation, and providing the knowledge needed by all participants for an appropriate programme of change to be designed. Iteration and the courage to re-visit and challenge mindsets are likely features of this phase.

This Initiation of Understanding Framework, incorporating all of the characteristics developed in paragraph 7.3.2 above, provides a 'map' for the journey. It can be developed by using the metaphors and change scenarios together as follows:

- Persistence is a condition that is associated with little or no organisational change. The machine metaphor that underpins unitary participant relationships and a simple - stable organisational system is appropriate here. Within such a context, there will be little point in initiating any change programme as the mindsets and containing system are not conducive to change;
- Consensus driven approaches are associated with first order change that involves internal organisational system changes. The organism, culture and neuro-cybernetic metaphors apply and the simple stable and complex - transforming systems are appropriate. Participant relationships are likely to be pluralist in nature. Within such contexts any change programme undertaken will be of a limited nature that is unlikely to involve any complex negotiations nor any shifts in existing power relationships;
- Identity preservation approaches can be thought of as involving first order internal changes only. The political and conflict metaphors apply, and a simple - stable system is likely to exist. Participant relationships are likely to move from pluralist through politically motivated hostile negotiation. The conflict has the potential for creative use depending upon the mindsets of the participants and a willingness to engage in constructive negotiation governed by the felt need to preserve the system identity, thus avoiding second order change;
- Radical shift will involve both first and second order change. Metaphor analysis is many-faceted in that culture, organism, neuro-cybernetic, political and conflict can be present in varying degrees in the context. A complex - transforming system is likely and participant relationships will change from pluralist through hostile to domination. System identity and even power relationships will be challenged involving radical dislocational system change in the interests of system survival. There are likely to be casualties and maybe even 'collateral damage' as a result;
- Destructive shifts are associated with third order change. The appropriate metaphor is that of war and the system will be of a chaotic dislocational nature. Participant relationships will be associated with domination, and dysfunctional non-creative conflict will prevail that will bring about total system failure.

7.4.2 CPIM - Design of Intervention Process Phase

The knowledge and understanding that emerges from the Initiation phase will provide a firm base, as a logical input to the design phase, from which an appropriate intervention process can be identified and designed. This approach will create the conditions for appropriate change programme design. It is essential, if the change programme is to produce effective and sustainable change, for a robust and systemic intervention process to be developed.

The tasks for the Design phase include:

- Clarification of the initiation framework of understanding;
- Acceptance, by participants, of the knowledge derived during the initiation phase;
- Development of a participant commitment to the need for a robust and appropriate intervention process design;
- Development of participant understanding of the fundamentals of critical pluralism, paradigm diversity, and forms and types of organisational change;
- Thorough and informed evaluation of the available systems based techniques, methods, and methodologies that will form the basis for the intervention process design;
- Identification of the available systems based techniques, methods, and methodologies that will be used in the intervention process;
- Design of the intervention process by all those involved in the implementation of the process.

The tools available to an interventionist include:

- The facilitation skills of the interventionist;
- A learning environment that depends on the teaching skills of the interventionist;
- Critically reflective practice that will facilitate enquiry and critique;
- Knowledge of the available systems based techniques, methods, and methodologies;
- An extended System of Systems Methodologies (Flood and Jackson, 1991(a)) from which appropriate systems based techniques, methods, and methodologies can be identified as a basis for the intervention process design.

The extended System of Systems Methodologies will be discussed, along with its associated diagrammatic representations in **Figures 7.7 and 7.8** below.

The expected outcome from the Design phase is an Intervention Process Design that will provide a basis for effective and sustainable organisational change.

The System of Systems Methodologies (SOSM) (Flood and Jackson, 1991(a)) has already been discussed in Chapter Five. The SOSM, whilst it proved to be an effective 'toolbox' approach for TSI Mode 1, is limited. It cannot, for example, deal effectively with chaotic - dislocational systems; nor can it provide a basis for an intervention process design capable of dealing with the types, forms, and orders of change situations identified during this research

7.4.2 CPIM - Design of Intervention Process Phase

The knowledge and understanding that emerges from the Initiation phase will provide a firm base, as a logical input to the design phase, from which an appropriate intervention process can be identified and designed. This approach will create the conditions for appropriate change programme design. It is essential, if the change programme is to produce effective and sustainable change, for a robust and systemic intervention process to be developed.

The tasks for the Design phase include:

- Clarification of the initiation framework of understanding;
- Acceptance, by participants, of the knowledge derived during the initiation phase;
- Development of a participant commitment to the need for a robust and appropriate intervention process design;
- Development of participant understanding of the fundamentals of critical pluralism, paradigm diversity, and forms and types of organisational change;
- Thorough and informed evaluation of the available systems based techniques, methods, and methodologies that will form the basis for the intervention process design;
- Identification of the available systems based techniques, methods, and methodologies that will be used in the intervention process;
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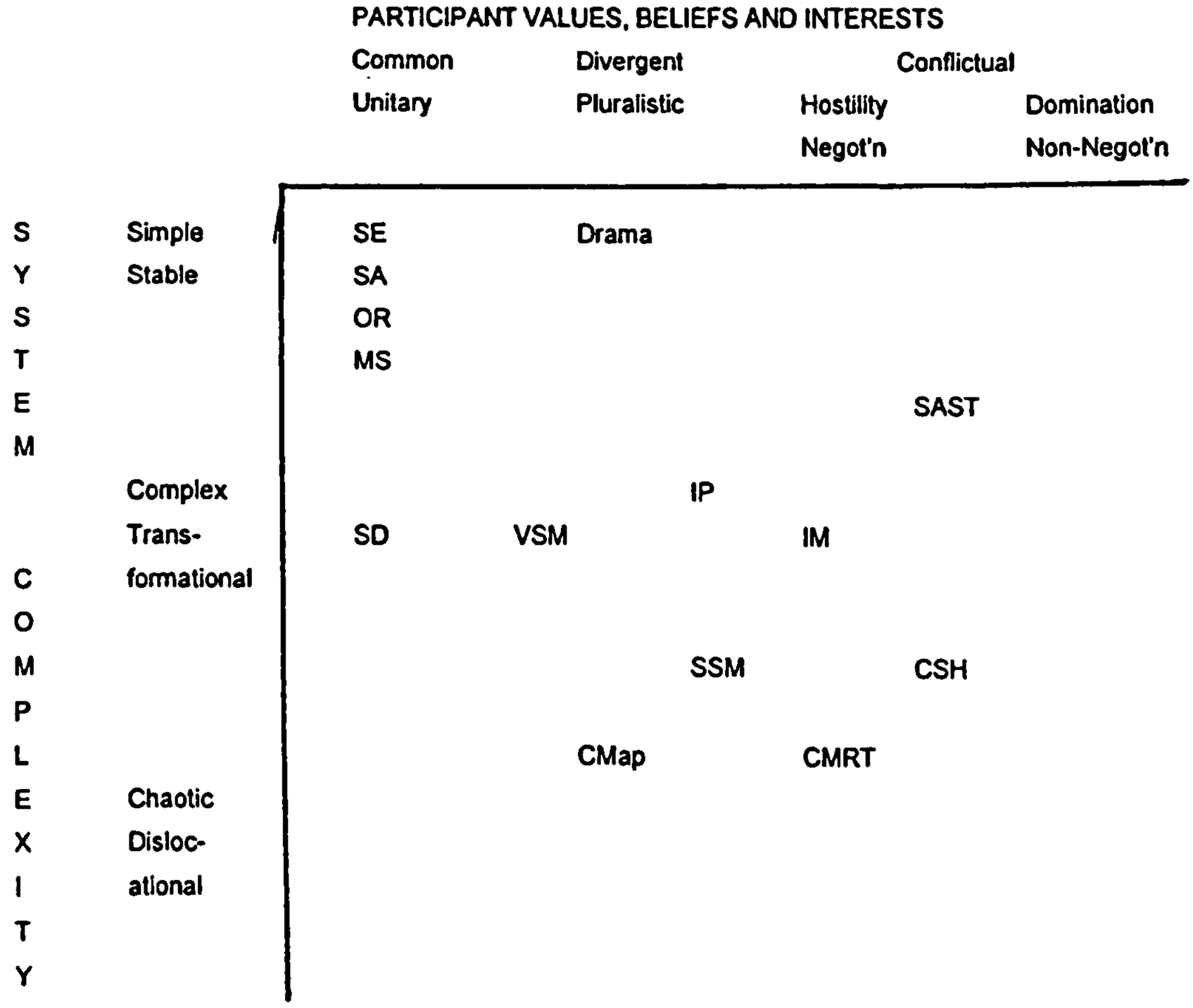
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programme. To deal with such change situations the SOSM needs to be extended and this will be achieved by adding a third dimension associated with the type and order of change along with a 'relativity ordering' of techniques, methods, and methodologies.

Firstly, the 'relativity ordering' of techniques, methods, and methodologies is set out as shown in **Figure 7.7**



A Key is as follows:

SE:	Systems Engineering;
SA:	Systems Analysis;
SD:	Systems Dynamics;
OR:	Operational Research;
MS:	Management Sciences;
IP:	Interactive Planning;
IM:	Interactive Management;
Drama:	Role Play Techniques;
SAST:	Strategic Assumption Surface Testing;
CMRT:	Conflict Management and Resolution Techniques;
VSM:	Viable System Modeling;
SSM:	Soft Systems Methodology;
CMap:	Cognitive Mapping;
CSH:	Critical Systems Heuristics.

Figure 7.7 Methodology Relativity Ordering

Adding the third dimension of 'type of change', as shown in **Figure 7.8a** below, will extend the System of Systems Methodologies and also provide a basis which demonstrates how systems based intervention methodologies relate to the types of change, participant relationships, and system complexity. This relativity will be presented in diagrams associated with **Figure 7.8a** and labeled as **Figures 7.8b, c, and d** below.

To show exactly how the three dimensions of **Figure 7.8a** form such a basis, the relevance of systems methodologies to specific problem contexts, as shown in **Figure 7.7** above, provides a starting point. Using this information it is possible to build up **Figures 7.8b, c, and d** showing how the systems methodologies relate to participant relationships and system complexity in terms of the type of change. **Figure 7.8b** will provide details for first order change in terms of appropriate systems methodologies, whilst **Figures 7.8c and d** will provide details for second and third order change relative to appropriate systems methodologies. In other words, each of the diagrams represents a separate order of change which is derived from the 'type of change' dimension of **Figure 7.8a**. This approach is adopted in the interests of simplicity and ease of understanding.

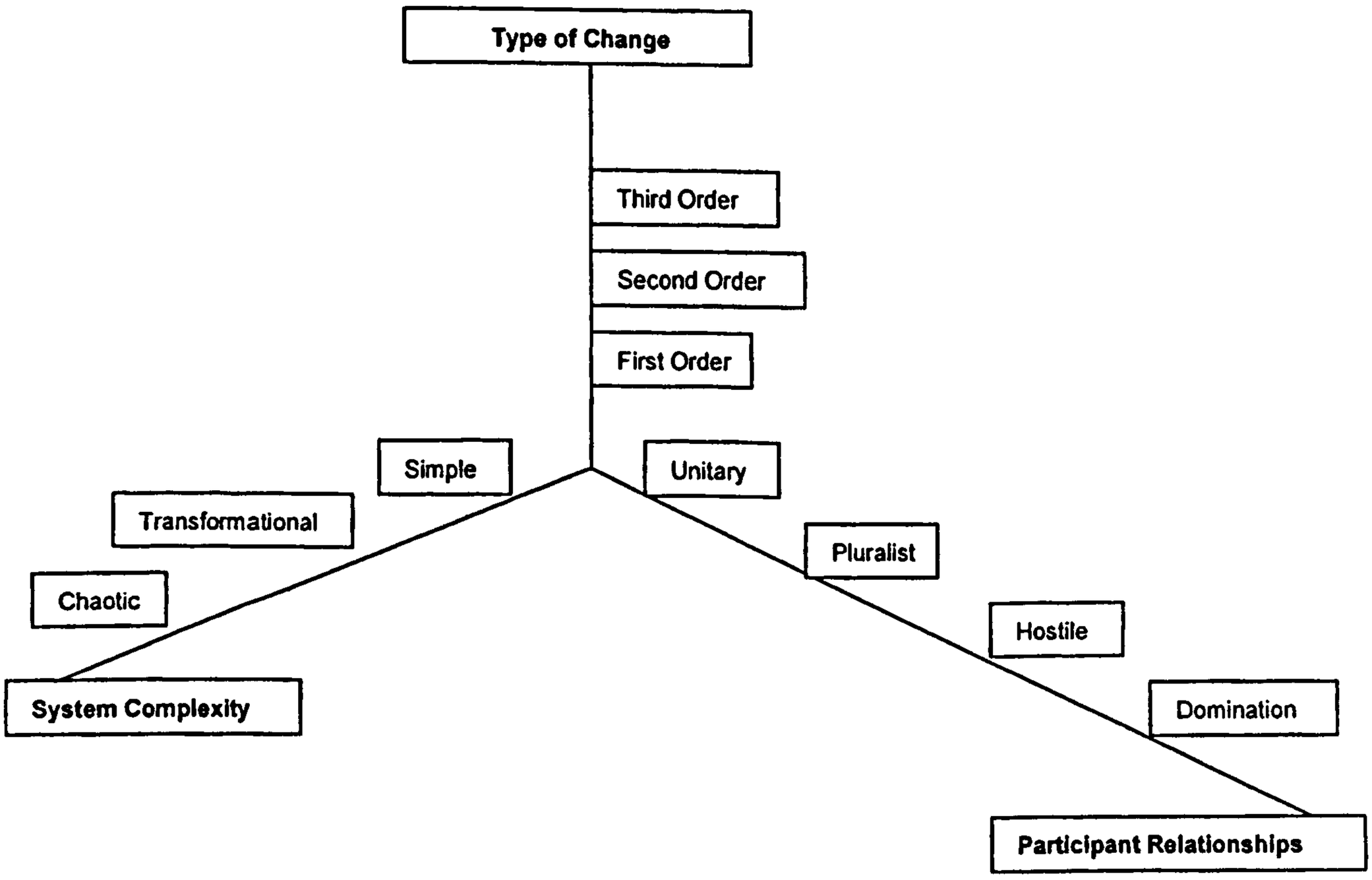


Figure 7.8a Dimensions for an Extended System of Systems Methodologies

Just how first order change and systems methodologies are related in terms of participant relationships and system complexity will be shown in **Figure 7.8b** below. That will be followed by **Figures 7.8c and d** which deal with second and third order change respectively.

SYSTEM COMPLEXITY	PARTICIPANT VALUES, BELIEFS AND INTERESTS: Common Unitary	Divergent Pluralistic	Conflictual: Hostility Negot'n	Conflictual: Domination Non-Negot'n
Simple Stable	SE SA OR MS	Drama		SAST
Complex Trans-formational	SD	VSM		
Chaotic Dislocational				

Figure 7.8b First Order Change Type and Methodologies

SYSTEM COMPLEXITY	PARTICIPANT VALUES, BELIEFS AND INTERESTS: Common Unitary	Divergent Pluralistic	Conflictual: Hostility Negot'n	Conflictual: Domination Non-Negot'n
Simple Stable				SAST
Complex Trans-formational		IP	VSM	IM
		SSM		CSH
		CMap		CMRT
Chaotic Dislocational				

Figure 7.8c Second Order Change Type and Methodologies

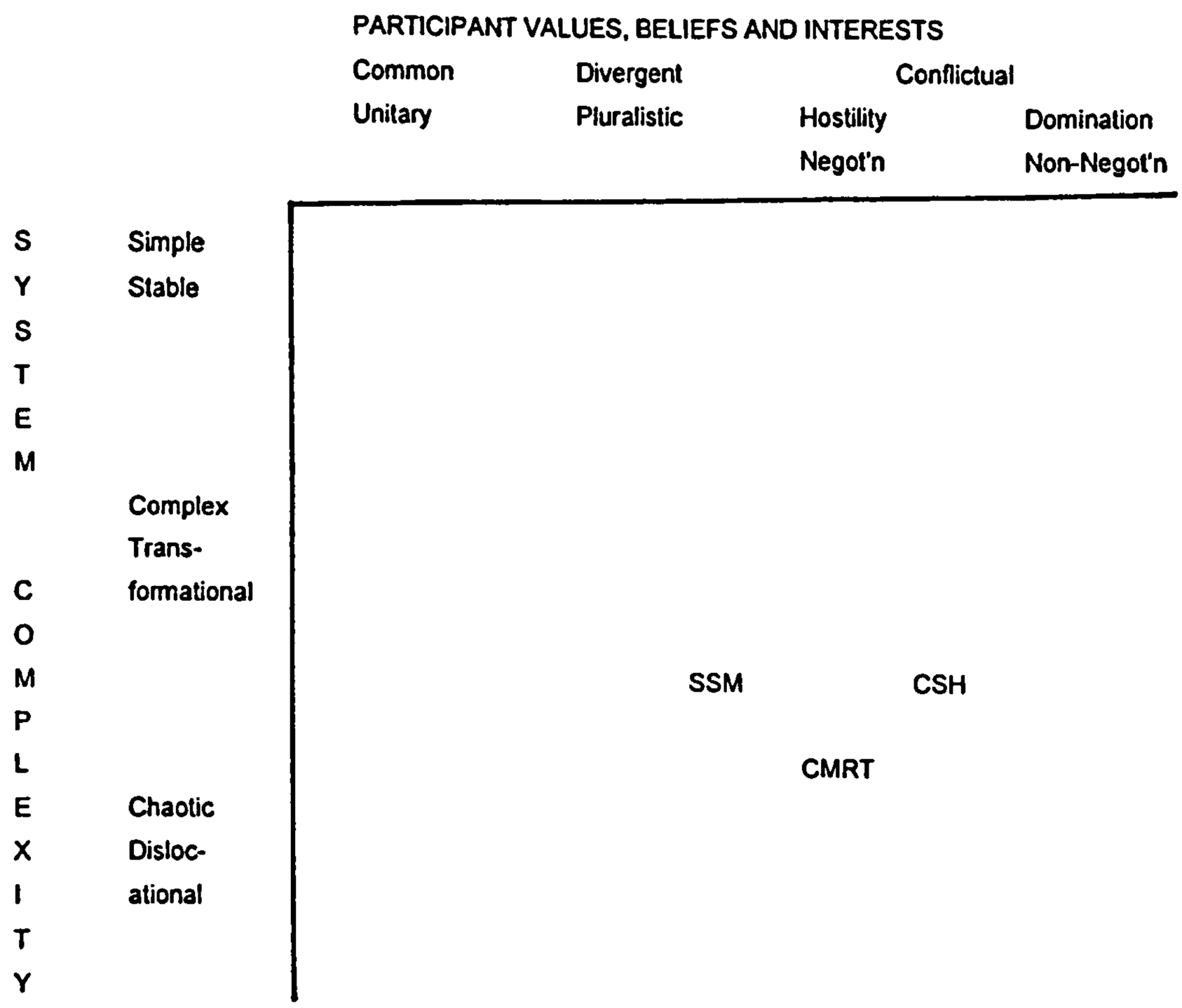


Figure 7.8d Third Order Change Type and Methodologies

7.4.3 CPIM - Implementation Process Phase

Having gained understanding of the complexity inherent in the change situation and, then developed a design for an intervention process, the task is now to utilise the intervention process in a manner that is likely to bring about effective and sustainable organisational change.

The tools available to the interventionist are the techniques, methods, and methodologies outlined in **Figures 7.7 and 7.8a, b, c, and d** above.

How the CPIM was developed and used will be discussed in Chapters Eight and Nine.

7.5 THE CPIM AS A PROCESS

That the CPIM is a process is almost self-evident. However, to round off the development of the CPIM, the process associated with the CPIM will be discussed.

Consideration of the CPIM as a systemic intervention process is assisted by providing a diagrammatic representation of that process. This will aid the descriptive narrative that will follow. The process of CPIM is outlined in **Figure 7.9** below.

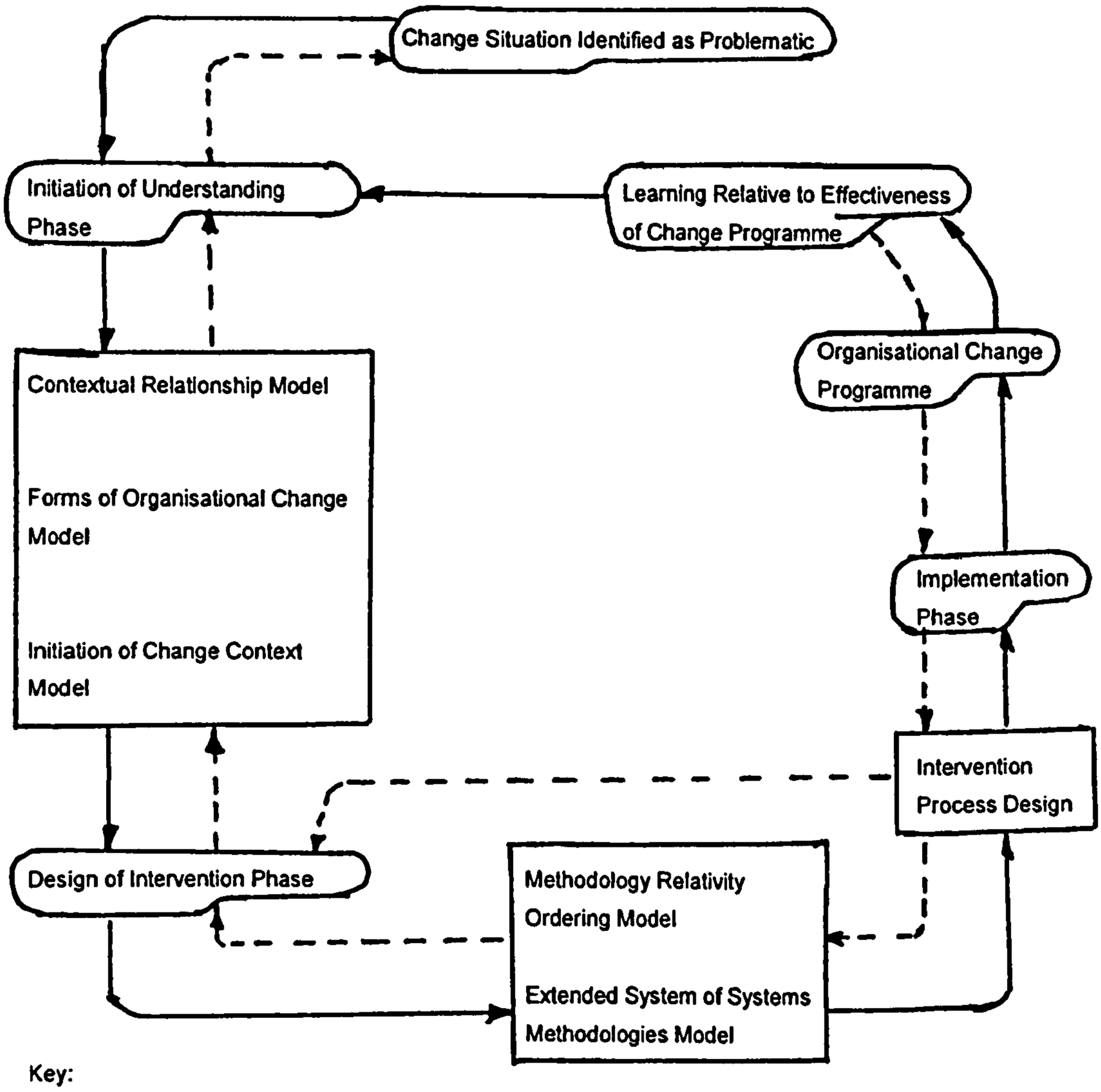


Figure 7.9 The Process of Critical Pluralist Intervention Methodology

A change situation is identified and this initiates the Understanding of the situation phase. This phase utilises the contextual relationship, forms of organisational change and initiation of change context models. The initial form and type of change is understood and recognised in terms of persistence, consensus, identity, radical or destructive shift phenomena. This understanding sets the scene, so to speak, for the intervention design phase that will use the methodological relativity and extended SOSM. As a result of this work a systems based intervention process emerges and the change programme commences. At the end of the process a reflective period is established and the organisation 'learns' from the process in preparation for the next period of change.

7.6 CONCLUDING COMMMENTARY

In this chapter a systemic meta-methodology has been established using the theoretical concepts that were developed in Chapters Three, Five, and Six. This is the Critical Pluralist Intervention Methodology (CPIM) which is underpinned by critical pluralism, and the philosophy and principles of Critical Systems Thinking. The CPIM draws together and practically operationalises the theoretical constructs of the STOC. It is through the CPIM that theory and practice merge.

The following conclusions can be drawn with respect to the work undertaken in this chapter:

- Because CPIM is a process, within a Critical Systems Thinking underpinning framework, it protects paradigm diversity;
- The epistemological and ontological framework for organisational change has been incorporated into the CPIM in the form of the human and system complexity dimensions of the contextual relationship model;
- First, second and, indeed, third order types of change are incorporated in the CPIM;
- Identification of forms and paths of change encapsulate the theoretical developments in a practical format designed to provide interventionists with a means of mapping potential change strategies;
- Critical Systems Thinking (CST) principles and philosophy underpins the CPIM;
- Critical Pluralism is evident and this also supports the conclusion that modernist and postmodernist thinking is incorporated in CPIM in the form of human and system complexity characteristics;
- The processual nature of CPIM supports the conclusion that change is a process and not a single event;
- The CPIM reflects the tenets and principles of the Systemic Theory of Organisational Change (STOC);
- The operationalisation of the STOC is embodied in the CPIM;
- The CPIM is a learning cycle.

In terms of the objectives set out in Chapter One of this thesis, Objective **O4** has been addressed. Research question **RQ4** has been answered by the development of the CPIM as a systemic approach through which to bring about effective and sustainable organisational change. These achievements further enhance the new knowledge generated by this research programme.

Both the Systemic Theory of Organisational Change (STOC) and the Critical Pluralist Intervention Methodology (CPIM) were developed by involvement in organisational change situations. This work, which formed the empirical action research aspect of this programme, will form the basis of Chapters Eight and Nine.

CHAPTER EIGHT

TESTING AND DEVELOPMENT OF THE SYSTEMIC THEORY OF ORGANISATIONAL CHANGE AND THE CRITICAL PLURALIST INTERVENTION METHODOLOGY - FIRST ITERATION

8.1 INTRODUCTION

Chapters Six and Seven were concerned with developing the Systemic Theory of Organisational Change (STOC), and with the development of a Critical Pluralist Intervention Methodology (CPIM) respectively.

At the end of Chapter Six, it was concluded that:

- Research questions **RQ1**, **RQ2** and **RQ3** had been addressed;
- Objective **O3** had also been addressed in terms of the epistemological and ontological framework for organisational change relative to the derivation of the STOC;
- The STOC had been developed.

The conclusions drawn at the end of Chapter Seven were:

- That the CPIM incorporated all the important facets of critical pluralism and Critical Systems Thinking (CST);
- That objective **O4** had been addressed;
- That research question **RQ4** had been answered.

This Chapter Eight, and Chapter Nine, will show that both the STOC and the CPIM were subjected to empirical development and testing, using action research, in a longitudinal study. Therefore, these two chapters will deal with the theoretical underpinning and intervention methodological processes that were developed during the Case Studies. The STOC and the CPIM were developed during real world interventions, associated with complex organisational changes, undertaken by the author of this thesis. Chapter Eight will deal with the first three of five interventions, in Case Study format, which were the 'vehicle' for the developmental activities associated with the STOC and the CPIM as a first iteration in the development of STOC and CPIM. Chapter Nine will then go on to deal with two further interventions as the second and final iteration.

Prior to discussing the interventions, it will be helpful to revisit relevant earlier work in this thesis. This will provide linkage to, and a basis for, discussion and critique of the interventions in terms of:

- Knowledge generation;
- Learning;
- Providing a theoretical basis for critical reflection.

8.2 CONSIDERATION OF METHODOLOGY DEVELOPMENT AND TESTING

8.2.1 Methodology Development

The development of a process of inquiry, or methodology, needs an underpinning theoretical basis. This theoretical underpinning may, or may not, be fully developed at the outset of methodological development. In the case of this research, neither the theoretical underpinning nor the methodological processes were fully developed at the outset of the research programme. This is not unusual, and a precedent for this is exemplified in the development of SSM, which has been the subject of a research programme that has continued for over 30 years.

This research programme has followed the process outlined in **Figure 2.1.** Indeed, it can be seen that we have, thus far, carried out the work shown in **Figure 8.1** below.

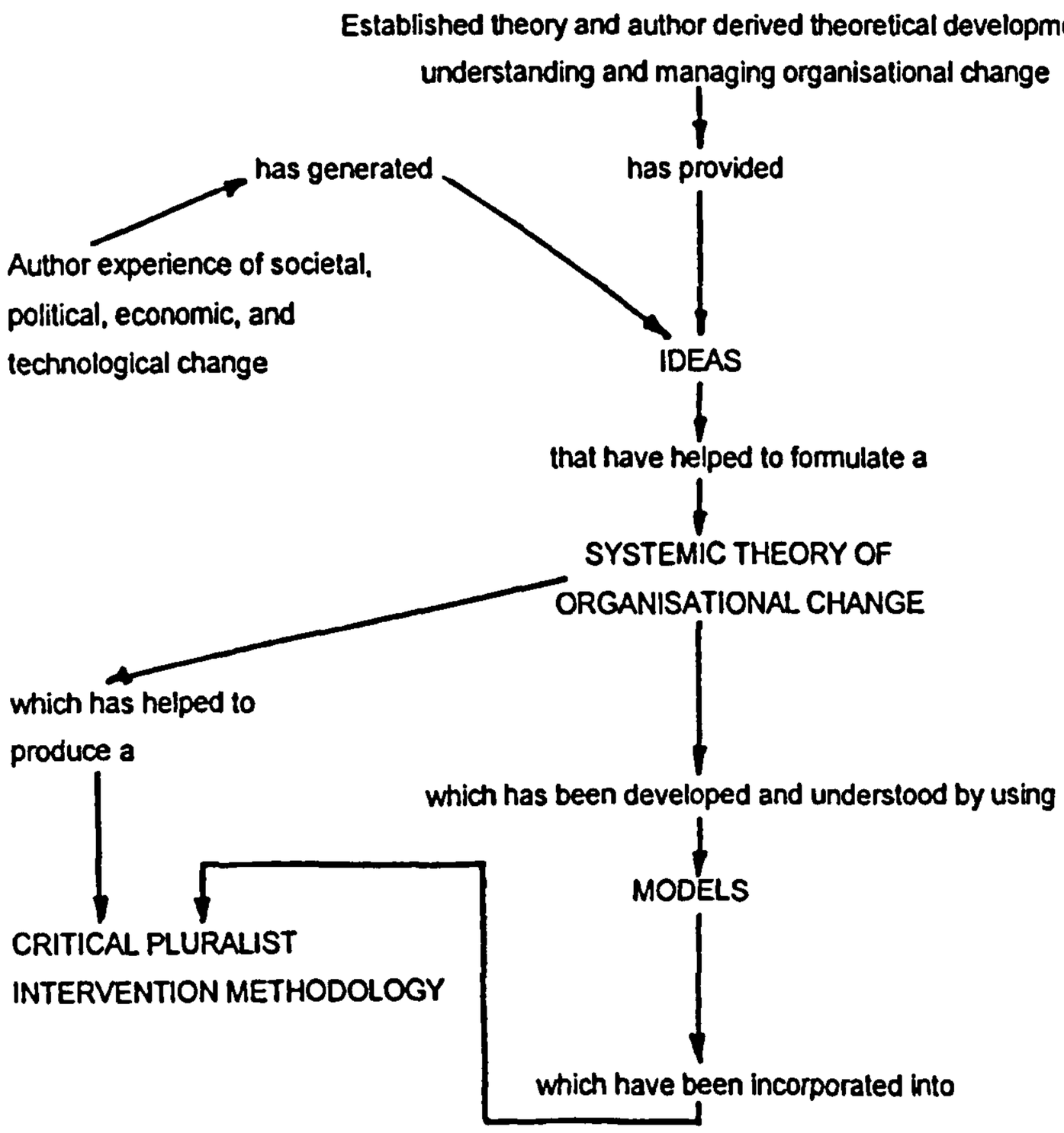


Figure 8.1 The Systemic Process of Inquiry Used in Developing the STOC and CPIM

8.2.2 Cycles of Methodology Development and Testing

Figure 8.1 above indicates that the systemic process of inquiry, set out in Chapter Two, has been used to develop the Critical Pluralist Intervention Methodology (CPIM). Established theory, and the theoretical development carried out in this research programme have contributed to the development of the STOC and the CPIM. Additionally, the authors' experience of the social, political, economic, and technological aspects of change has provided

important inputs to the programme. The research is at a point, in the defined process of inquiry, where the CPIM must be tested and further developed by real world use.

At a more fundamental level, this research was driven by the imperative of unease with TSI in use. The initial use of TSI, when engaging in organisational change situations, led the author to the recognition of his shortcomings and weaknesses in terms of the theoretical knowledge of TSI, the process of TSI in terms of its use, and indeed the skills necessary for effective practice. This recognition can be modelled as shown in **Figure 8.2** below.

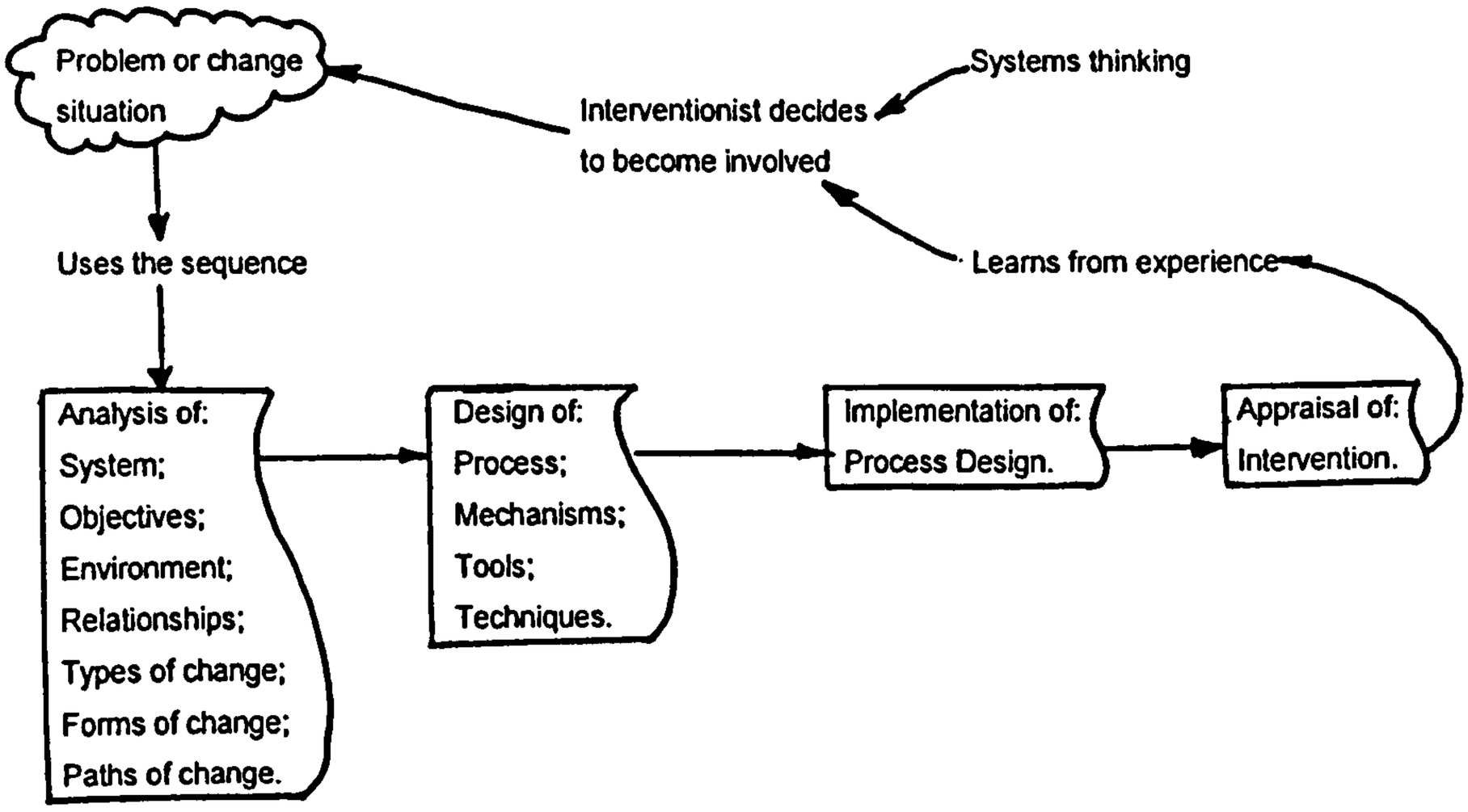


Figure 8.2 Methodological Development Cycle One

(Adapted from Checkland 1999; 147, Figure 5.)

Recognition by the author, of his weaknesses in terms of TSI as an intervention process, led to learning by the author, through appraisal of TSI. This learning led to subsequent modification of TSI and the derivation of the CPIM. This learning process is shown in **Figure 8.3** below.

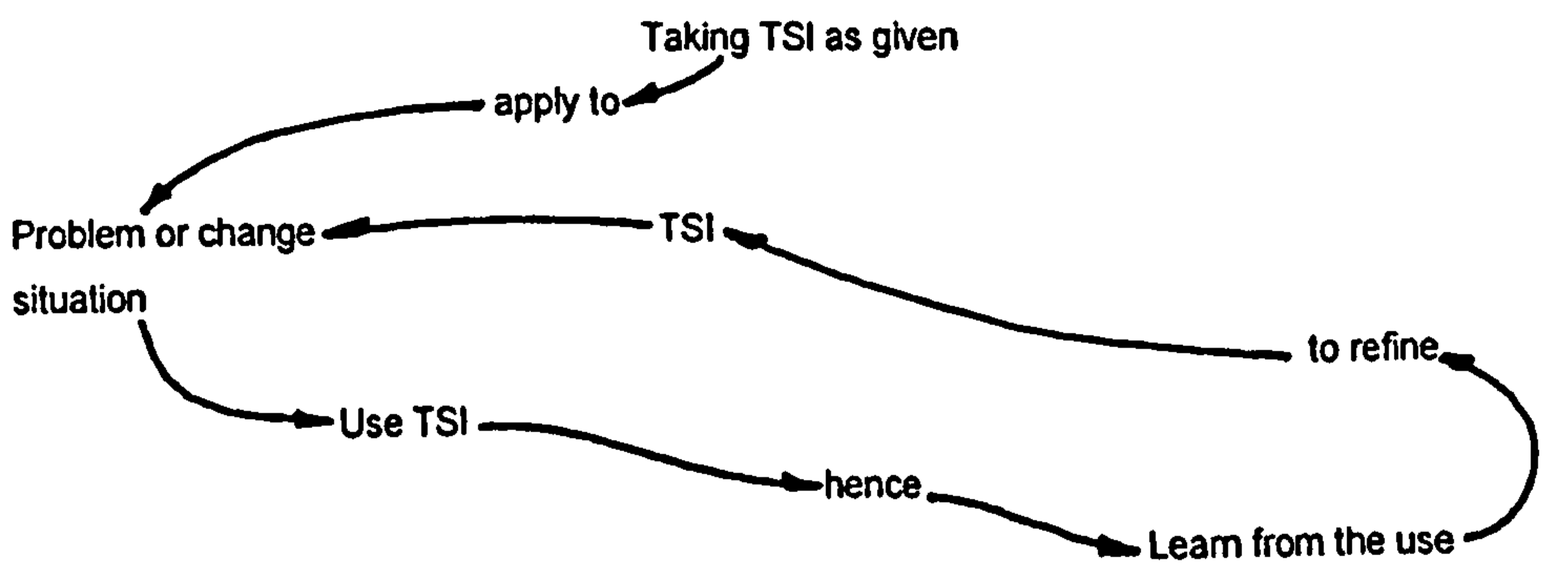


Figure 8.3 Methodological Development Cycle Two

As both of the methodological development cycles shown above in **Figures 8.2 and 8.3** are somewhat simplistic, then it is argued that as a "...methodology is at a meta level with respect to method...[then]...no generalizations about methodology-in-use can ever be taken seriously." (Checkland, 1999; A32). Clearly then, it is necessary for an interventionist who is

"...knowledgeable about a methodology perceives a problem...[or change]...situation, and uses the methodology to try to improve it...[then]...three elements...are intimately linked..." (Checkland, 1990; A32). These three elements, and the relationships between them, are shown in **Figure 8.4** below.

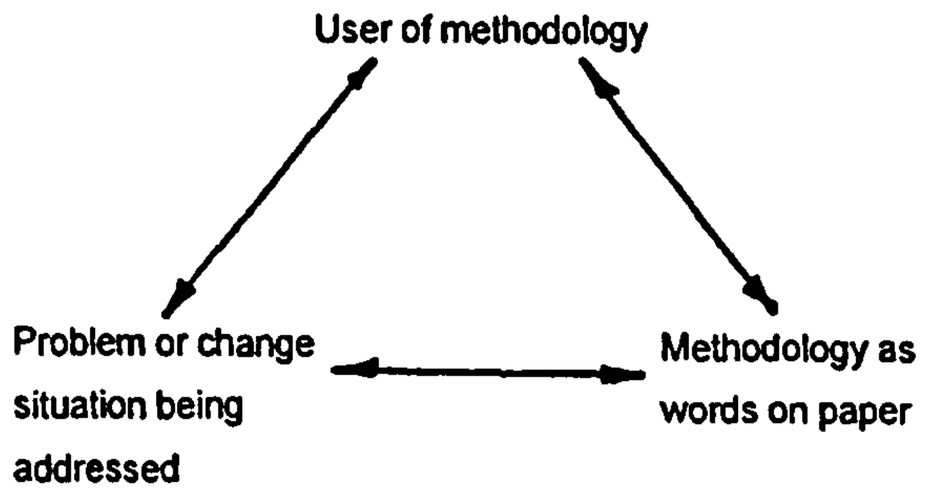


Figure 8.4 Interacting Elements Present in Methodology Use
(Adapted from Checkland, 1999; A33; Figure A9)

For an interventionist who is not only engaged in using a methodology to bring about change, but also evaluating that methodology, then the problem becomes multi-dimensional. "[A]nalysis of what happens...would have to embrace all three elements and the interactions between them." (Checkland, 1999; A32). Under such conditions an interventionist must be critically reflective and consider refining or modifying the methodology, which is "...felt...[to be]...appropriate for *this* particular situation at a particular moment in its history." (Checkland, 1999; A32) (Italics in the original). Development(s) made to a methodology during a specific intervention must also be commensurate with underpinning theory. Furthermore, such developments must be contained within the existing methodological principles. Failing this, the methodological principles must be evaluated and, if necessary, modified.

In other words, it is necessary for an interventionist to actively engage in a learning, 'methodology informed' approach to a problem situation. The argument is advanced that such an approach is essential if any systems based methodology is to be developed in a manner that will contribute to knowledge in the field of systems thinking. Indeed, this approach is modelled as shown in **Figure 8.5** below.

The elements, or factors, contained within this model are:

- A User of the Methodology;
- A real-world Change Situation;
- A formal Methodology;
- The process of Learning relative to the use of the methodology;
- A user specific Approach actually adopted.

The actual process, shown in **Figure 8.5** below, can be thought of as a user who, in appreciating a systems based methodology as a set of recognisable principles, perceives a change situation and asks the rhetorical question 'in this situation, what can I do?' The user can then extract, from the recognisable methodology, a specific approach that is appropriate for the

situation. The user will then apply this specific approach to bring about sustainable change. This activity creates learning, which can change both the user and the methodology.

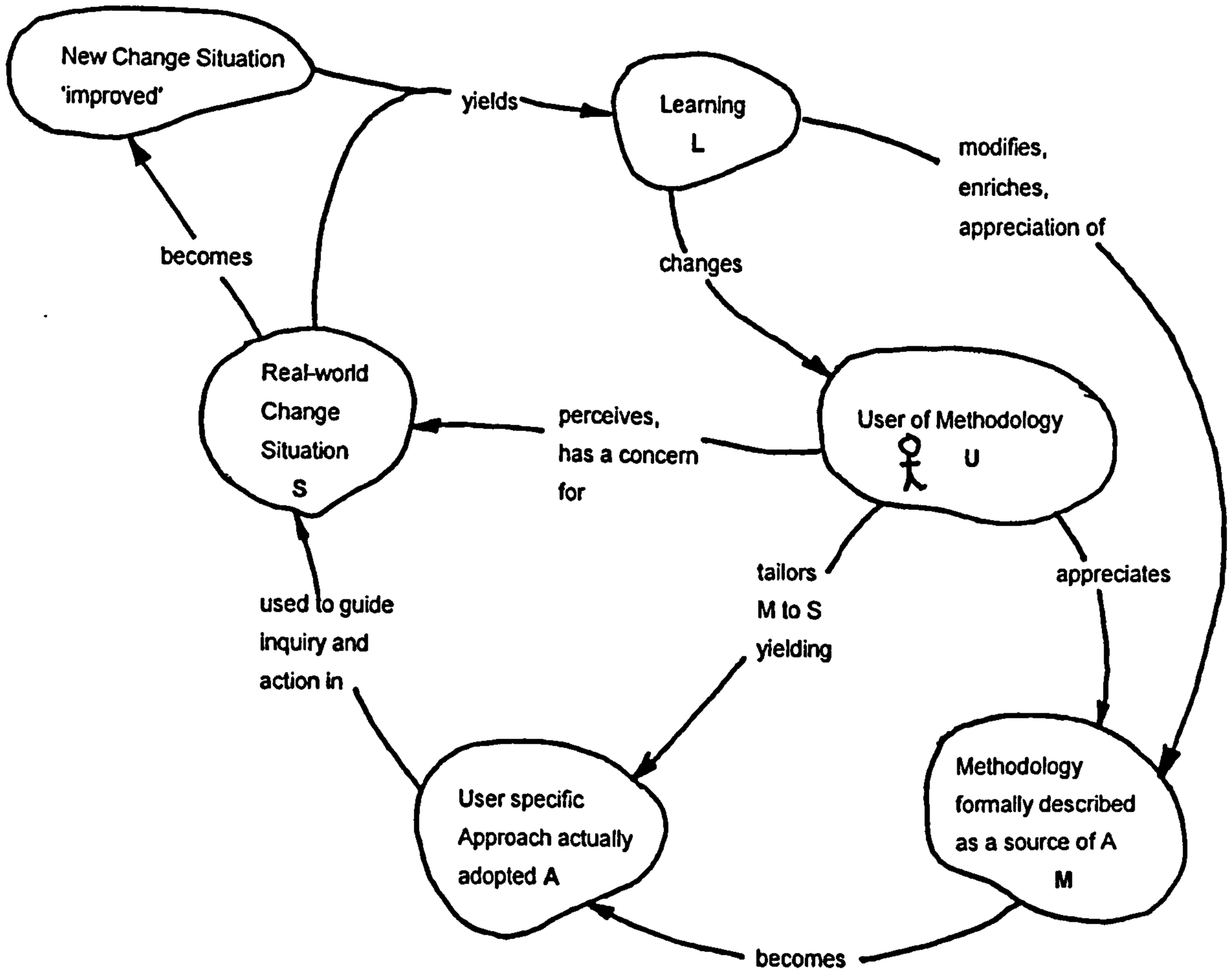


Figure 8.5 Methodological Development Cycle 3. The LUMAS Model - Learning for a User by a Methodology-Informed Approach to a Change Situation
(Adapted from Checkland, 1999; A33; Figure A10)

The process, outlined in Figure 8.5 above, reveals to us that, "...what the user can do depends upon...[the users']...perceptions of M, and...[of]...S." (Checkland, 1999; A33). It can also be argued "...any methodology...[cannot]...itself lead to 'improvement'." (Checkland, 1999; A33). On the other hand, using a systems based intervention methodology can assist in bringing "...about better improvement than...[a user]...would without its guidelines." (Checkland, 1999; A34). This argument suggests that using a systems based intervention methodology, to intervene in a complex organisational change situation, is more likely to produce sustainable and effective change than using more traditional change methods such as Organisation Development (OD). It also suggests that the user's perception, of both the situation and the methodology, is likely to significantly affect the process and indeed the outcome of the intervention. This is a very important aspect of systems based, or any other form of, intervention methodologies and must be considered by anyone that might have cause to intervene in complex organisational change programmes.

Mingers (1997) also suggests that the perception of the interventionist is a significant factor in the use of systems based intervention methodologies. Indeed, his multi-dimensional

framework, shown in **Figure 5.14** above, suggests that an interventionist has a relationship with the material, social and personal worlds in the process of an intervention. Clearly, these relationships, which can be seen as interactions, must have a significant bearing upon the perceptions of the interventionist with respect to both the methodology being employed and the situation itself.

It is necessary to assert that systems based intervention methodologies must be developed over time as a learning activity. The TSI methodology, developed by Jackson and his colleagues, and theoretically underpinned by CST, provided a significant epistemological development in systems thinking. However, despite the indisputable achievements of TSI, (it became much easier for interventionists to ensure that the methodology to be used would be appropriate), it contained many weaknesses and anomalies. These weaknesses need to be addressed in terms of refining and re-defining TSI. Indeed, "Critical systems thinking is about constantly reflecting on the limitations and partiality of our understanding." (Jackson, 2000; 424).

Clearly, anyone intervening in an organisational change situation needs to ensure, as far as is possible, that the outcome of the intervention will produce change that is not only effective and sustainable, but also appropriate for that particular organisation. Taking up Mingers' point regarding the relationships between an interventionist and the 'three worlds', and also Checkland's views concerning user perceptions of methodology and situation, it is evident that "...different systems methodologies...[used by different interventionists can produce]...different outcomes...[therefore]...how do we choose what to do?" (Jackson, 2000; 424).

A question such as this is vital if the systems movement is to continue to develop and, furthermore, gain wider acceptance by the managerial world. There are many who ask whether "...critical systems thinking is...[not]...just an elaborate way of delaying choice?" (Jackson, 2000; 424). This is also an important question and this was referred to, in somewhat oblique terms, in Chapter Two when discussing managerial semi-consciousness. Managers, and sometimes interventionists, for a variety of reasons, simply do not take the time to ensure that their approach is appropriate. However, it is essential that this question is addressed, and the justification for this lies in the need for critical systems thinking being used as a means for "...informing choice...[whilst recognising that]...in the end it cannot make the choice". (Jackson, 2000; 424). The choice of methodological approach must rest with the interventionist and this involves "..."ethical awareness"...[indeed]...Checkland (1999, p. A44) puts it well when he says that we should never entertain the notion, even for a moment, that a mere "systems approach" or a "systems methodology" can ensure that we act in a way that is "fully human."" (Jackson, 2000; 424).

It is views such as these, which provide the justification for the argument that the CPIM, developed in this research programme, needed to be developed by using TSI over successive interventions. This was action research employing a critically reflective ethical stance.

The examples of real-world interventions that now follow will adopt the following format:

- Organisational details;
- Outline of the change programme;
- Systems based approaches utilised;
- Output(s) achieved;
- Reflection.

8.3 CASE STUDY NUMBER ONE: MOBILE HOME MANUFACTURER

8.3.1 Organisational Details

This intervention took place, during early 1993, in a medium sized manufacturing organisation, employing around 250 people, based in the northeast of the UK. The company had developed over many years and was engaged in manufacturing and assembling mobile homes. The majority of the workforce was semi-skilled, and most of the middle managers had been promoted from the shop floor.

The organisational structure was traditional and consisted of:

- Managing Director;
- Works Manager who controlled all manufacturing operations and facilities;
- Purchasing and Buying Manager;
- Sales and Marketing Manager;
- Technical and Product Development Manager;
- Finance and Administration Manager.

The company identity cannot be disclosed for reasons of commercial confidentiality.

8.3.2 Outline of the Change Programme

The company had introduced a Quality Improvement Programme in 1991. This had been successful initially, but shop floor enthusiasm had waned largely due to production pressures. Customers had started to complain about delivery delays. This intervention was directed at reducing manufacturing lead times in an effort to overcome customer dissatisfaction.

The author was retained by the company to investigate, and propose a solution. The author carried out an informal interview and observation survey of the organisation, and the following salient features emerged:

- Supervisory management was totally involved in addressing immediate and pressing manufacturing problems with little time for any forward thinking;
- The customer order - initiated by the sales function - was frequently misinterpreted by the technical function, resulting in product that failed to meet customer requirements at the end of the production process.

It was agreed with the managing director that, rather than the author investigating and proposing a solution, a group of middle managers and supervisors should be assembled as a project team for the investigation. The author, as the interventionist, would act as a facilitator for the group activities associated with the investigation. The objective set for the project team was that of manufacturing lead-time reduction.

8.3.3 Systems Based Approaches Utilised

As the CPIM did not exist then TSI was utilised in an abridged form to establish the initial conditions and to select an intervention methodology. The TSI analysis was limited to the creativity phase and this established:

- The need to use a project oriented cross-functional team comprising representatives from Sales, Finance, Technical, Production and Manufacturing personnel;
- That this cross-functional team was a simple system in that there were relatively few elements with correspondingly few interactions;
- That this system was 'closed' to its environment because the process of the investigation was conducted within self-contained workshops;
- That the problem context was pluralist; although the participants had different objectives there was sufficient commonality of purpose to permit agreement to be reached through debate.

The methodology chosen was Interactive Management (IM); the techniques of IM used in the intervention were Nominal Group Technique (NGT) and Interpretive Structural Modelling (ISM).

8.3.4 Outputs Achieved

The intervention took place in workshop format with three workshops of three to four hours duration each. All three workshops were held on company premises, and all five of the participants attended all three of the workshops.

NGT occupied the first workshop using the trigger question "What do we need to do in order to reduce manufacturing lead-time given resource limitations, time constraints, and limited human resources?" The NGT process was conducted, with the author in the role of facilitator, in accordance with Warfield's outline (Warfield, 1990). The NGT process generated 43 ideas in response to the trigger question. After the ranking and voting steps this list was reduced to 21 items as an element set. This element set was built into a computer database as preparation for the ISM phase.

The final element set produced is shown in **Figure 8.6** below.

Idea Number	Clarified Idea Details
2	Agree batch and model mix to give constant and even work content.
3	Improve technical content of specifications from Sales and Technical.
4	Condense information package.
5	Automation increase for material movement.
6	Supplier programme for long-term contracts.
10	Reduce work in progress.
11	Issue customer requirements as soon as confirmed.
12	Elimination of bottlenecks = continuous improvement.
16	Create system with limited amount of specials with prepared prices.
20	Programme stability/forecasting.
23	Train people to become more versatile.
24	Improve material flow.
26	Pay suppliers on time.
27	Involvement of Technical; Design; Sales in planning new season's models.
29	Replace old machinery with modern machinery for better speed and efficiency.
30	Teamwork.
33	Customer feedback in inter-departmental services.
34	Construction improvements.
36	Cut down amount of computer downtime.
38	Improve production methods.
43	Improved computer training.

Figure 8.6 NGT Element Set for ISM Use

The element set, shown in **Figure 8.6** above, formed the basis for the ISM that was built during the second and third workshops. The process involved critical and informed debate that was facilitated by the author.

An Intent Structure, in accordance with Warfield (1990), was built using the contextual relationship 'Would clearly help to achieve'. The intent structure developed provided a graphical output, derived from group debate, which revealed potential for action.The ISM intent structure developed by the group is shown in **Figure 8.7** below.

The ISM intent structure was used to identify five project areas through which the issue of manufacturing lead-time could be addressed, as follows:

- **A.** Improvement of Customer - Production Interface;
- **B.** Bring about Production - Technical Improvements;
- **C.** Develop a Supplier Programme;
- **D.** Investigate Inter-Group Communication Processes;
- **E.** Investigate Computing Facilities Utilisation.

Group members were allocated responsibility for managing the five projects through to a co-ordinated conclusion. The basis for each project was the NGT Elements falling within the spheres is shown in **Figure 8.7** below.

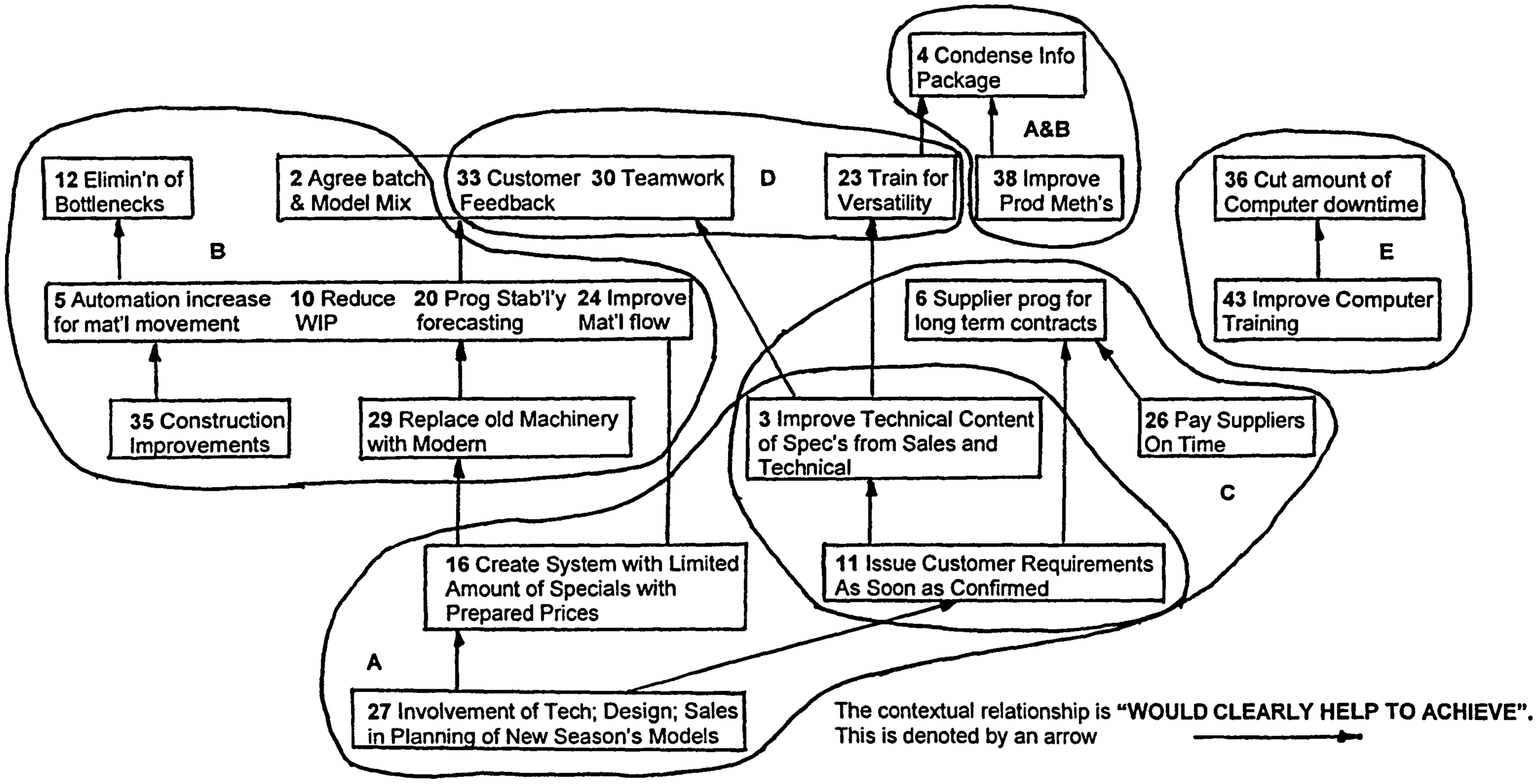


Figure 8.7 Interpretive Structural Model in Intent Form

8.3.5 Reflection

Group members accepted responsibility for the five areas identified from the Interpretive Structural Model (ISM) and developed specific means through which to bring about the necessary changes. The reflections on the intervention will be discussed in the following paragraphs.

This intervention was undertaken by the author who, although familiar with the theory of TSI, had no experience of putting it into practice. This was a severe disadvantage in terms of the effectiveness of the intervention. The senior management of the organisation were supportive but uninvolved in the intervention, and that was detrimental to the organisation.

The TSI analysis was very superficial and must be regarded as, at best, only partially useful. The choice of Interactive Management (IM) as the intervention methodology, based on the superficial TSI analysis, must also be regarded with suspicion, as critical reflection regarding the choice was not undertaken.

Nevertheless, the author learned from the intervention! Some weeks after the assignment had been completed time was taken to follow up with the project team in review mode. It was found that two of the five identified remedial activities had not made any progress whatsoever and were, in effect, 'dead'. No one had accepted responsibility for progressing the activities, which had been neglected due to other more pressing events taking priority. This was a salutary lesson in terms, of effective and sustainable change, in that it was realised that an intervention is incomplete until all the activities associated with the change programme have been followed through to completion.

There was little attempt, by the author, to question the appropriateness of IM as an intervention methodology. Although the workshops did produce agreement and consensus amongst the project group and the outputs provided a basis for action based on the apparent consensus, no attempt was made by the author to ascertain whether or not this consensus was real and sustainable. It is also important to note that the problem identified did not, on the face of it, seem to be particularly complex; it most certainly was treated as a technical problem rather than one involving inter-group conflict.

In other words, the Creativity Phase of TSI was neither sufficiently rigorous nor detailed in terms of 'finding out' with respect to underlying issues that might be contributing to the perceived problem of product lead-time. The intervention was not, at the outset, seen as one of organisational change but as a technical problem associated with factory production schedules as an organisational resource.

On reflection, it is concluded that this was first order change. This conclusion is justified by the following commentary, involving **Figures 7.4, 7.5, and 7.6,** as a basis:

- At the outset, it appears that the organisation was driven by the need to preserve identity, with an inbuilt resistance to radical change, and that the machine metaphor best described the organisation as shown by **Figure 7.4**;
- Also from **Figure 7.4** it is concluded that the initial relationships between the participants were common unitary, and that the organisational system was initially simple - stable;
- Using **Figures 7.5 and 7.6** it can be asserted that Form One Change took place with persistence being the outcome of the intervention;
- Although the relationships showed evidence of change during the intervention from common unitary to divergent pluralistic, the system remained simple - stable. Although customers did receive benefit from the changes, there was no apparent change to the system when viewed from a customer perspective. The change was identity preserving, form one, and first order as shown in **Figures 7.5 and 7.6**.

Clearly, the author needed to remove himself from his technical background and learn more about intervention in organisational change situations as a process and not single events. This intervention provided excellent learning and helped the author to recognise the need to develop a research programme based in CST. These were the first tentative steps in this endeavour. Looking back at **Figures 8.2, 8.3, 8.4, and 8.5** the following conclusions can be drawn:

- From **Figure 8.2** it is apparent that the sequence was used, but that there was little real analysis of the system;
- Also from **Figure 8.2** it is recognised that implementation was very poor and ineffective;
- Again, using **Figure 8.2** it can be argued that learning by the interventionist did occur;
- From **Figure 8.3** it is recognised that TSI was only partially and ineptly applied, and that no refinement of TSI took place;
- **Figure 8.4** reveals that the relationships were in place but that they were not recognised by the interventionist;
- Finally, **Figure 8.5** was not part of the thinking of the interventionist.

None of the figures referred to above were in existence at the time of the intervention., However, subsequent critical reflection, using these figures, has made an important contribution to the development both the STOC and the CPIM. It is also important to point out that neither the STOC nor the CPIM existed at the time of this intervention and thus played no role in it.

8.4 CASE STUDY NUMBER TWO: NORTH YORKSHIRE POLICE - QUALITY OF SERVICE STRATEGY

8.4.1 Organisational Details

This intervention took place within a large public sector organisation in mid 1993. The organisation in question was North Yorkshire Police Force (NYP).

NYP is geographically the largest, and arguably the most diverse police force in the United Kingdom. The operational area of NYP is a mix of high population density areas such as the City of York, and very low population density areas such as the North Yorkshire Moors. NYP has an operational area of over 3200 square miles and a population of over 750, 000. The operational policing is achieved through seven divisions with an officer of Superintendent rank commanding each division. NYP Force Headquarters (NYPHQ) provides support and back up services to the operational divisions; additionally Traffic Division is also based at NYPHQ. The NYP operational area also contains two major trunk roads, the A1 and A19, and two National Parks.

NYP is commanded by a Chief Constable assisted by two Assistant Chief Constables. These form the senior executive of the organisation with a 'civilian' Finance Director responsible for all finance and administrative activities. The organisation employs over 2750 people made up of serving police officers and 'civilian' support staff. The annual budget for the organisation in 1993 was over £70,000,000.

8.4.2 Outline of the Change Programme

In 1990, an Operational Policing Review had been carried out at National Level producing an Association of Chief Police Officers (ACPO) Strategic Policy. This Strategic Policy introduced a Statement of Common Purpose and Values to be adopted by all police forces throughout England and Wales.

In 1991, the ACPO Quality of Service sub-committee advocated that all English and Welsh police forces should develop a 'Quality of Service Strategy'. Such a strategy would encapsulate best practice under five key performance areas:

- Handling of calls from the public;
- Crime management;
- Traffic management;
- Public reassurance and order maintenance;
- Community relations.

NYP decided to implement these requirements as a strategy that embraced internal and external service provision, within a Total Quality Management (TQM) framework, by engaging all members of the organisation. A Quality of Service Co-ordinating Group (QSCG) was established, headed by an experienced Chief Superintendent, charged with the responsibility for developing the NYP Quality of Service Strategy. The University of Hull had provided assistance in this work by investigating the issues associated with implementing a quality improvement programme within NYP.

A comprehensive Quality of Service Strategy Document (QSSD) was written, in February 1993, by the QSCG and published in draft form for use by the seven operational divisions. Divisional Commanders did not receive this, somewhat voluminous, document kindly; they complained that they had not been consulted during the preparation of the document and that it was 'unworkable' at operational divisional level. This 'attitude' upset the QSCG who felt that all their hard work had been for nothing. Entrenched positions ensued with neither side wishing to lose face by backing down. This situation existed when the author of this thesis was invited to become involved as a neutral interventionist. The requirement for the intervention was to establish a workable Quality of Service Strategy for use by operational and headquarters divisions and departments.

8.4.3 Systems Based Approaches Utilised

The brief provided was to assist in producing a way forward given the existing impasse. A senior police officer, of Superintendent rank, who was well versed in systems thinking, wanted to subject the Quality of Service Strategy to critical review within NYP. Recognising that widely differing perspectives with respect to service quality existed within NYP, and that a problem existed in attempting to promote widespread ownership of the strategy, the requirement for such a critical review appeared sensible.

The 'problem' had become urgent with the Chief Constable, together with the Assistant Chief Constable (Operations), pressing for a resolution. The conflict that existed between the operational divisions and the QSCG appeared to be a significant barrier to progress.

Discussion with the senior officer, and one of the authors of the QSSD, resulted in identifying the need for a forum to facilitate such a review. It was agreed that a review taking the form of a challenge, and embracing the variety of perspectives, would be appropriate. It was for this reason that Strategic Assumption Surface Testing (SAST) (Mitroff and Mason, 1981) was chosen as the intervention methodology. No attempt was made to carry out a TSI analysis.

On this basis, a two-day workshop was designed which took place at the end of April 1993 at NYP Force Headquarters. The format of the workshop is outlined in the following paragraphs:

Workshop Objectives

1. To conduct a critical review of the draft Quality of Service Strategy of NYP by:
    - Challenging the draft strategy through assumptions counter to those currently accepted;
    - Examining different perspectives with respect to stakeholders associated with the draft strategy.
2. To consider, through critical debate, alternatives for the draft strategy.
3. To utilise the creative tension, emerging from conflicting views to synthesise a way forward for the NYP Quality of Service Strategy.

Group Requirements

1. Three groups of between 5 and 8 people to be drawn from all areas of NYP, including a mix of ranks, roles, and sexes.
2. Each group to adopt a particular perspective with respect to the draft strategy. Appropriate perspectives are:
    - Group 1 - a 'rural' perspective;
    - Group 2 - an urban perspective;
    - Group 3 - a 'headquarters' perspective.
3. The three groups need to challenge the other perspectives by:
    - Closing ranks around the adopted group perspective;
    - Agreeing on internal group assumptions relative to the draft strategy.

Workshop Facilitation

Workshop facilitation by the author using the following role requirements:

- To ensure that views could be expressed without interruption or exercise of position power;
- To act as a summariser at appropriate times;
- To ensure that conflict could be managed for creativity;
- To assist in clarification of issues and positions;
- To encourage participation;
- To revive discussion by intervention as and when necessary;
- To conduct reviews at appropriate times.

8.4.4 Outputs Achieved

The workshop commenced with an introduction to the draft Quality of Service Strategy by a member of the QSCG. The three groups, which had been drawn from HQ staff (including the QSCG), 'rural' divisional police officers, and 'urban' divisional police officers, were then introduced to SAST. This took the form of a short presentation, which outlined the SAST process as consisting of four major phases:

- Group formation;
- Assumption surfacing;
- Dialectic debate;
- Synthesis.

The three groups were provided with a 'logistics' plan for the workshop in terms of time and deliverables. Each group was assigned to a 'break-out' room and provided with flip charts, pads, crayons, and pencils. The outputs produced from the assumption-surfacing phase of SAST are summarised by group.

Group 1 - Rural perspective

This group experienced severe problems with SAST. The group had great difficulty in even understanding the concept of 'stakeholder'. The group contained one very dominant and obstructive middle ranking officer who took the view that 'everyone was a stakeholder so why bother to distinguish between differing social groups?'. Eventually, after a great deal of explanation by the facilitator, the group expressed their perspective on Quality of Service as:

> **'The highest level of service provided to all customers (internal and external) within constraints (financial, legislative, and logistic), and which satisfies their expectations (exceeds expectations, customer delight).'**

The stakeholders were identified as:

Voluntary	Passive	Involuntary
Victims	Residents	Suspects
Losers (property)	Visitors	Criminals
Agencies		Traffic Violators
Victim Supporters		Prisoners
Media		Missing Persons
Professionals		

Stakeholder assumptions, with respect to Quality of Service, were not derived in explicit form with respect to specific stakeholders. This was the result of problems similar to those encountered when attempting to identify stakeholders. This group simply recorded the output of their debate as follows:

Shared Values Approach

Definitions of quality

Motivation

Terminology

Commercial model of quality

Organisational support

Similarities

Private

Public (Police)

Public Assumption

Presence (Of police)

Confidence

Crime prevention

Constraints

Financial

Legislation

Different customer needs (e.g. Victims versus prisoners)

What is quality?

Assume everyone knows what it is - if not strategy needs amending

Buzzwords

'Internal quality delivery'

Conflict of focus

Who/what, comes first - internal or external?

Service level agreements

Police - public

Driven by performance indicators (PI's), HM Inspectorate, Audit Commission.

Taken for granted

Murders

Major crimes (good at)

Minor issues (e.g. telephone answering) (bad at)

A stakeholder analysis was not achieved by this group.

Group 2 - Urban perspective

The group perspective, with respect to Quality of Service, was defined as:

'Provision of the best possible service to the highest standards involving:

- **Total commitment to Q of S;**
- **Consultation internally and externally;**
- **Setting and reviewing standards;**
- **A professional attitude;**
- **Communicating results and standards;**
- **Marketing;**
- **Training and advice;**
- **Equipment and buildings;**
- **Manpower;**
- **Environmental scanning.'**

The stakeholders were identified as:

Internal	External
Administrative bodies	Offenders
Staff - police officers and support	Justice system
Police Authority	Victims
	Public
	Media
	Social agencies
	Minority groups
	Visitors
	Business interests
	Community leaders
	Other law enforcement agencies

The stakeholder assumptions surfaced were:

Administrative bodies (internal)

1. Necessary
2. Important
3. Relevant
4. Vital
5. Delay unnecessary in regard to consultation

Police (internal)

6. Waste of time and money
7. HQ's 'fad'
8. Flavour of the month
9. We already do it
10. Believe it when we see it
11. Good idea - when?
12. What's in it for me?
13. How will it affect me?
14. We want it

Support (internal)

15. Enhanced status
16. Team building

Police Authority (internal)

17. Enthusiastic
18. Marketable result
19. Cost effective
20. Political

Offenders (external)

21. Apathy
22. Indifference
23. Hostility
24. Disbelief

Victims (external)

25. Should have better things to do
26. Valued
27. Welcome

Media (external)

28. PR exercise
29. Scathing
30. Welcome
31. Costly
32. Destructive
33. Whitewash
34. Newsworthy

Justice system (external)

35. Welcoming
36. Sceptical
37. Disinterested

General public (external)

38. Apathetic
39. Welcoming
40. The 'norm'
41. Doubtful
42. Suspicious

Social agencies (external)

43. Supportive
44. Suspicious
45. Want input

Minority groups (external)

46. Suspicious
47. Doubt
48. Feel more valued

Visitors (external)

49. Unaware
50. Indifferent

Business interests (external)

51. Encouraging
52. Critical
53. Disbelief

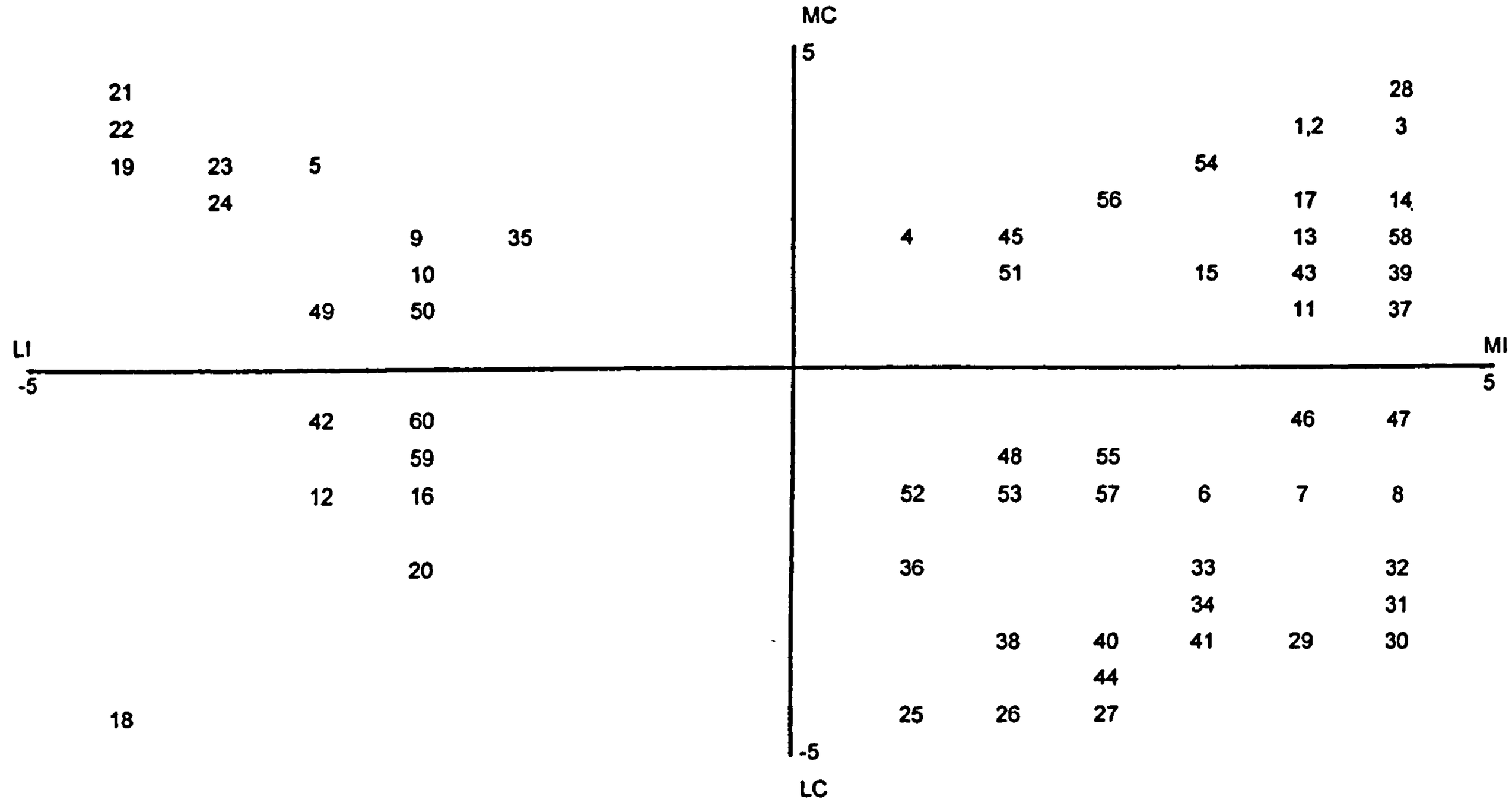
Community leaders (external)

54. Welcomed
55. Suspicious
56. Want to be involved
57. Another futile gesture

Other law enforcement agencies (external)

58. Supportive
59. Feel exposed
60. Critical

The stakeholder analysis is shown in **Figure 8.8** below.



MC/LC = Most/Least Certain

MI/LI = Most/Least Important

Figure 8.8 Stakeholder Analysis for 'Urban' Group

As examples of the 'meaning' of some of the stakeholder assumptions, shown in **Figure 8.8** above, the following interpretations are offered:

- Item 7 - HQ's 'fad' is little more than the Chief's latest obsession;
- Item 16 - Team building can be seen as helping officers to work together;
- Item 18 - Marketable result shows how NYPA are recognising the public;
- Item 25 - Should have better things to do is related to the view that police officers should be catching criminals and not filling in more bits of paper;
- Item 31 - Costly means that this is yet another expensive 'spin' which does not make policing more effective;
- Item 36 - Sceptical in terms of making the criminal justice system more effective;
- Item 39 - Welcoming is seen as NYP at last recognising that the public are important;
- Item 47 - Doubt leads to the marginalised groups asking what are NYP trying to cover up?
- Item 51 - Encouraging for business in terms of making NYP more accountable;
- Item 52 - Critical attitude by business in terms of more expense for little measurable return;
- Item 56 - Community leaders involvement with respect to the amount they can influence police strategy and operations.

Group 3 - Headquarters perspective

This group also had trouble in deriving a Quality of Service perspective relative to stakeholders. The group initially searched for inputs (on an individual basis) that would form a basis for the development of a group perspective. The group used the trigger question 'What is Quality of Service?' and responses included:

- Customer Satisfaction;
- Speed of Response;
- Effective use of Resources;
- Crime Prevention;
- Value;
- Infrastructure;
- Meeting Public Expectations;
- Man Management - Morale;
- Listening to Public - Consultation and Action;
- Honesty - Response to Criticism;
- Training Needs.

Discussion of these issues led to the group defining their Quality of Service perspective as:

'The expectations that others have of them, both inside and outside the force, the service they should be providing in response, the standards they should be meeting, and then consistently to meet those expectations and standards.'

The stakeholders were identified as:

A. Internal Personnel

B. National Policy

ACPO

HM Inspectorate (HMI)

Home Office (HO)

C. Finance

Police Authority

Local Authority

Audit Commission

Home Office

D. Implementation

Quality & Performance Review (QPR)

Concept Implementation

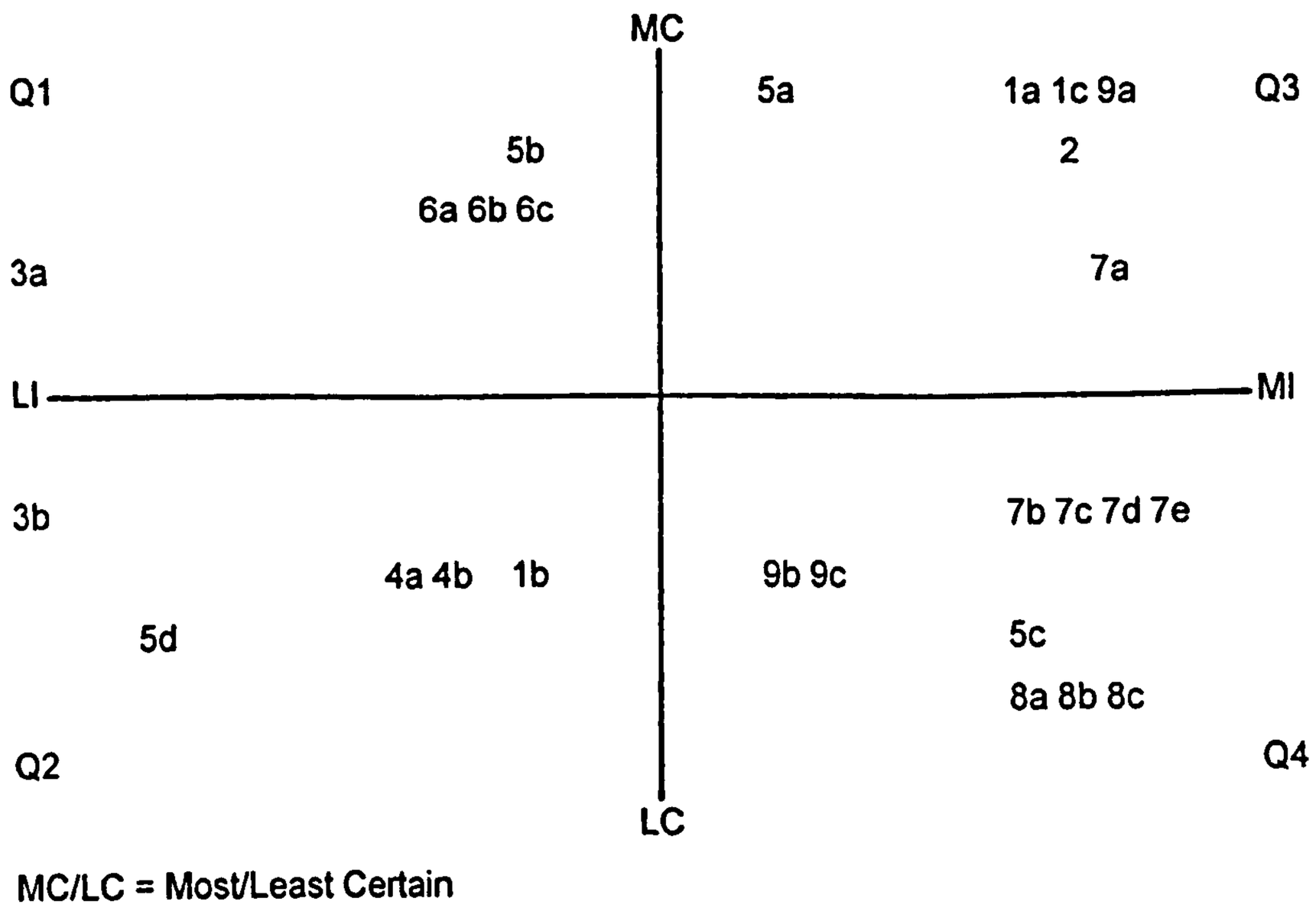
E. Public

The stakeholder assumptions were surfaced as:

National Policy	Grid Quadrant
1. ACPO says we will have a Quality of Service Strategy	
(a) Strategy	3
(b) Believe public want it	2
(c) Will be satisfied with a workable strategy	3
2. HMI Measure effectiveness by P.I.'s	3
3. Home Office	
(a) Follow Government line - Citizen's Charter	1
(b) Require higher productivity to make up lack of funding	2
Finance	
4. Local Authority	
(a) Want to influence Q of S Policies in general	2
(b) Will not want to provide additional funding	2
5. Police Authority	
(a) Will not provide extra funding without proof of improvements	3
(b) Will have far more information	1
(c) Will seek more control	4
(d) Will seek political 'brownie points'	2

6. Audit Commission	
(a) Want it but with low costs	1
(b) Will compare with best practice	1
(c) Will seek savings	1
Implementation	
7. Quality of Performance Review (QPR)	
(a) Will want to design and market Q of S Strategy	3
(b) Assume all will understand	4
(c) Assume all will want Q of S Strategy	4
(d) Assume that it will work	4
(e) Put systems before people	4
Internal	
8. Staff (Personnel)	
(a) Need co-operation of all staff members	4
(b) Need total understanding	4
(c) Need total acceptance of Q of S Principles and Concepts	4
Public	
9. North Yorkshire	
(a) Support Q of S	3
(b) Need to have realistic expectations of NYP	4
(c) Whole public will receive same level of service	4

The stakeholder analysis is presented in **Figure 8.9** below.



MC/LC = Most/Least Certain

Mi/LI = Most/Least Important

Q1,2,3,4 = First, Second, Third, and Fourth Quadrants of the Analysis

Figure 8.9 Stakeholder Analysis for the Headquarters Group

As for **Figure 8.8**, an explanation of selected items from **Figure 8.9** above is appropriate as follows:

- Item 2 - Is related to the manner in which the HMI assess NYP;
- Item3a - Is associated with the political mileage seen to be gained by adopting the Citizen's Charter approach;
- Item 5a - Concerns the need for NYPA to be seen to have effective control of the budget;
- Item 6a - Is similar to 5a but at a National level;
- Item 7c - Makes an assumption using a HQ perspective that all NYP officers will see a QofS strategy as valuable;
- Item 8b - Recognises that for the QofS strategy to work all officers had to understand it;
- Item 9a - Makes an important assumption that the whole of North Yorkshire will support it.

Workshop Dialectic Debate

The outputs from each of the three groups were presented in plenary session, as a precursor to the dialectic debate phase. These outputs are summarised in the following paragraphs.

Group 1 (rural perspective) pointed out that they had had trouble in seeing the value of making assumptions with respect to stakeholders. However, stakeholders were eventually identified and assumptions were surfaced. The group presented a summary of their views:

- Sceptical with respect to the draft Q of S document as 'the system' appears to be of primary importance;
- For any Q of S strategy to succeed the concentration must be on people and not systems;
- Realism of public expectations is a serious concern. Public often see police as 'skivers';
- How will NYP communicate the Q of S strategy to the public and how will NYP ensure that all of the public receive the same level of service?
- Assuming an eventual Q of S strategy, more information will be available to the Police Authority - how will the Police Authority use that information?

Group 2 (urban perspective) had attempted to look at external and internal factors as separate items. This had led to a wide-ranging initial list of stakeholders with a correspondingly large list of assumptions that was problematic in itself. This had been 'honed' to develop a manageable and meaningful list of stakeholders and assumptions. The views and concerns included:

- Police staff are important in terms of their understanding of, and commitment to, Q of S;
- Internal Q of S is vital, if this is not achieved then it will be impossible to achieve good external (public) Q of S;
- The draft Q of S document is hard to understand and is not 'user friendly';
- Understanding of Q of S by the public is essential and there is no known benchmark;
- The media can hinder this effort by highlighting failures and ignore successes;
- Minority groups are likely to be suspicious and negative with respect to the Q of S strategy;
- Business interests can also be sceptical, as this group judges the police in terms of business criteria for success and failure.

Group 3 (headquarters perspective) felt that, initially, the SAST methodology 'got in the way'. They had used SAST to reaffirm views that had arisen whilst the Q of S strategy was being developed. As a result, they had spent a lot of time going over old, well-trodden ground. There was an assumption within the group that everyone knew what 'quality is', and that all stakeholders had been identified months ago. Eventually the group did identify stakeholders and surfaced relevant assumptions. The views of the group were summarised as:

- People will be the biggest problem in terms of what influences a Q of S strategy;
- There must be a focus on internal NYP people;
- Concerned with respect to key players such as ACPO, HMI, HO, QPR, and Police Authority;
- NYP must 'sell' Q of S to the public;
- Performance standards will be important, and NYP need to use technology to capture 'best performance';
- NYP has resource limitations, and the public must be made aware of them;
- What is strategy? NYP needs vision/mission, strategy and policies.

Following on from the group presentations the debate surfaced many general points and issues that are summarised as follows:

- Need to decide which comes first - systems or people;
- It is not clear from the draft Q of S strategy document exactly what the strategy is;
- There will be resource implications;
- The important issues include communication, consultation, training, awareness, ownership, commitment, system definition;
- Other high-level aspects include benchmarks for customer satisfaction, what is our business area?, definition of priorities and responsibilities, provision of internal training and awareness;

- Senior management must 'sign up' and show commitment;
- Delivery of the Q of S strategy at the operational level involves training, communications, awareness, ownership, and shareholding, consultation, information, education.

These issues and the debate produced a 'rich picture', shown in **Figure 8.10** below, leading to an attempt to synthesise the thinking. In this rich picture, on the top left, the input from statutory bodies such as ACPO and HMI is shown as 'solid' arrows. These were seen as 'direct influences' on the work of the QSCG, as agents of FSG, in their derivation of the Q of S Strategy. The QSCG had produced the Q of S Strategy based on specified requirements and constraints. The Q of S Strategy, it was argued, had also been subject to 'indirect influences' from the public through divisions and internal policy groups. This point was rejected by the operational divisions who had claimed a lack of consultation during the preparation of the Q of S Strategy Document. The public, who could provide direct feedback to NYP, were portrayed as recipients, beneficiaries, or victims of the Q of S. The permeable boundaries were seen as separating internal NYP functions and, indeed, NYP from the wider system of North Yorkshire.

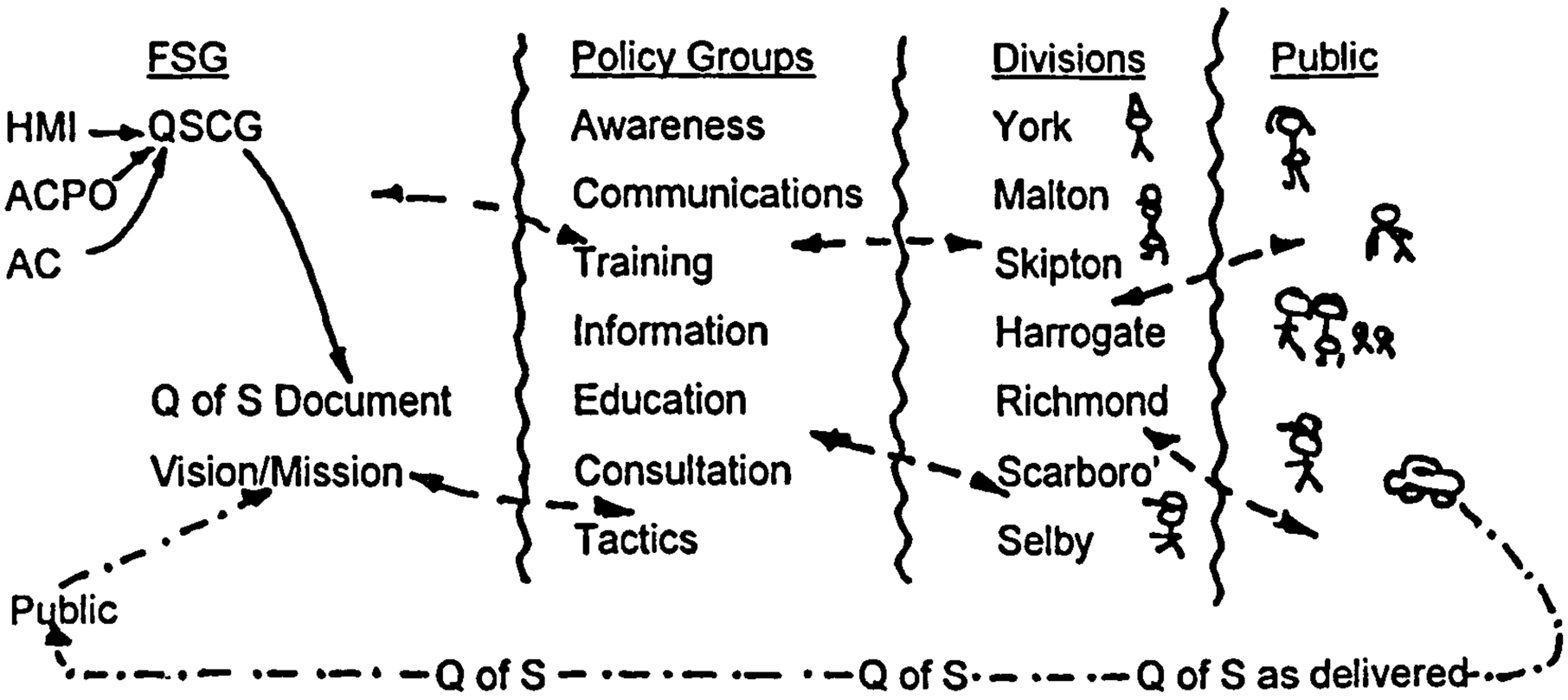


Figure 8.10 Dialectic Debate 'Rich Picture'

Workshop Synthesis

It is not always possible to produce a synthesis of the views that emerge from the dialectic debate. If such an impasse occurs, it is necessary to establish areas and factors that need further research. After some five hours of debate, it became clear that synthesis was not going to emerge.

In this case, a summary and recommendations for further work were made. The factors and issues for further research and work are set out in the following paragraphs.

Firstly, it was agreed that all of those taking part in the SAST workshop were committed to delivering high quality service to North Yorkshire.

Secondly, it was recognised that there were certain 'givens' which had been imposed on NYP with respect to the Quality of Service Strategy. These included ACPO, HMI, and AC.

There are internal factors associated with delivering service quality. These included:

- Education;
- Training;
- Leadership;
- Appraisal;
- Rewards;
- Consultation (Intra);
- Communication.

Significant external factors are related to service quality such as:

- Public standards;
- Public Expectations;
- Resources;
- Consultation (Inter).

General factors included:

- Feedback;
- Improvement;
- Managing change.

There was a recognition that the 'givens' would be difficult, if not impossible, to control. Therefore, it would be necessary to concentrate on internal and external factors. Immediate work on the internal factors would be likely to produce results that would serve as a basis for addressing the external factors.

The decision of the workshop was that all operational divisions, plus the QSCG, would nominate one person to form a sub-group charged with the responsibility for producing a revised Q of S Strategy within three months. The issues that were surfaced during the dialectic debate, together with the associated learning, would form the driving imperatives for the sub-group. The revised Q of S Strategy would be subject to agreement by the Assistant Chief Constable (Operations). A second one-day workshop, facilitated by the author, would be convened to address the internal and external issues, mentioned above, as a basis for producing the revised Q of S Strategy. This second workshop took place in the early autumn of 1993 producing a final Q of S Strategy Document which was incorporated into NYP Standing Orders.

The workshop participants presented the revised Q of S Document to the ACC(O) at the end of the workshop. The recommendations were agreed, becoming the formal policy of NYP. The main points of the Q of S Strategy were identified in a format that lent itself to being incorporated on a two sided credit-card type document to be carried by all operational beat officers.

8.4.5 Reflection

This intervention was difficult both practically and theoretically; the difficulty was compounded by the inexperience of the author relative to using SAST. As this was a conflict problem situation then, on the face of it, SAST was indeed an appropriate methodology. However, it was not realised by the author just how sensitive the 'protagonists' were. This sensitivity was particularly apparent within the headquarters group. The members of this group were all relatively senior officers and were not used to having their views and work subjected to semi-public criticism from junior officers and support staff. This sensitivity was particularly apparent at the outset of the plenary session involving the dialectic debate.

TSI was not used, and SAST was applied with insufficient thought relative to relationships that already existed. These relationships were based on power and authority. If a TSI analysis had been undertaken, such relationships might have become apparent. SAST was used in a purely pragmatic sense with absolutely no attempt to understand the totality of NYP. This was a severe error on the part of the author, as the theoretical underpinning of SAST was not well understood.

The conflict was, at times, difficult to control in terms of using this conflict to bring about creative thinking. That useful outputs were achieved is a testimony to the power of the SAST methodology, the stamina of the workshop participants, and the determination of the facilitator. SAST, if effectively and sensitively applied, is an approach that can assist in managing conflict in a creative manner.

However, it is argued that this intervention was useful to both NYP, as an organisation that was struggling to bring about a shift in strategic direction, and to the author in terms of learning about the practicality of intervening in an organisation undergoing complex change. Specifically, it can be asserted that:

- Useful outputs were achieved;
- The organisation did achieve required changes;
- Members of NYP learned that different perspectives on a situation are inevitable, and that these can be useful in bringing about creative change from conflict;
- The members of the QSCG (HQ group) in particular realised that developing a strategy in isolation, and then trying to impose it, can be met with resistance to the changes needed;
- Organisational learning can be achieved, but this can only be realised if the inherent defensive routines are overcome.

Although Quality of Service is directed towards external customers, it is concluded that this change was also beneficial internally. NYP was intent on preserving identity and coping with powerful external agencies by using established internal defensive routines. On reflection, and using **Figures 7.4, 7.5 and 7.6** as a basis, the intervention can be analysed as follows:

- At the outset of the intervention, from **Figure 7.4**, NYP seemed to have been a simple-stable system with machine properties, and participant relationships of a common unitary nature;
- Also at the outset, using **Figure 7.5**, it is argued that NYP appeared to be working within a Form One, First Order Change context;
- However, as the intervention progressed, particularly during the early stages of the workshop, it became apparent that, in reality, NYP was a complex-transforming system with conflictual hostile negotiation as the participant relationship;
- Therefore, the investigative context was really that of Form Three, Second Order Change as shown by **Figure 7.5**;
- As such, the political metaphor becomes readily apparent, from **Figure 7.6**, and NYP seemed to metamorphose from machine to political/cultural in nature;
- Further consideration of the intervention, using **Figures 7.5 and 7.6**, reveals that the picture was really that of a complex-transformational system, with conflictual hostile negotiation participant relationships. This produced a Path C trajectory resulting in Form Three, Second Order Change.

That the interventionist was a novice should be readily apparent. However, this intervention was particularly valuable as a learning forum. Firstly, the author realised the importance of the need for an interventionist to have sound knowledge of the theoretical principles associated with the intervention process(es) being used. Secondly, it was also recognised by the author that it is necessary for an interventionist to have requisite process skills with respect to the use of the methodology in practice. Thirdly, the author understood that theory and practice are interdependent, and that this is particularly important if the intervention is to produce effective and sustainable change as the preferred outcome. It was clear, after the

intervention that, although a workable Quality of Service Strategy had been developed, the potential for failure had been very high throughout the intervention.

Using **Figures 8.2, 8.3, 8.4, and 8.5** this intervention can be further analysed in terms of the realisations alluded to above:

- Clearly, from **Figure 8.2**, it can be seen that there was a use of systems thinking as a 'driving agent' for the intervention, and that the author has at least partially followed the developmental cycle;
- As TSI was not used, then no learning with respect to TSI, as shown in **Figure 8.3**, took place;
- The intervention, as a set of interacting elements, shown in **Figure 8.4**, helps us to realise that , however attractive and powerful SAST appeared as words on paper, the reality of the intervention involving complex and hostile conflict was very much different;
- It was this realisation that encouraged the author to rigorously evaluate himself and his knowledge of intervention processes;
- Using **Figure 8.5** it is suggested that using SAST for the first time was a steep learning curve. The author's inexperience meant that SAST had to be tailored to the specific approach adopted given the nature of the real world situation being addressed. It also became evident that it would be necessary to search for a sound Systemic Theory of Organisational Change (STOC) and to rigorously examine TSI with a view to bringing about improvements;
- If the inexperience of the author with using SAST had become exposed during the intervention, the credibility of the author could have been undermined;
- The change was of a radical nature, which would be observable to those likely to be affected by NYP. However, there were powerful factions within NYP intent on identity preservation. This reveals that the second order changes, which were made because of this intervention, are inherently difficult to implement. This is often the case with novel change, which requires moving out of a known and familiar framework into a new and uncomfortable 'box'.

This Case Study, and the analysis above was the first tentative step in this research programme. Reflection by the author indicated that there was a need for a Systemic Theory of Organisational Change (STOC) underpinned by Critical Systems Thinking (CST). Furthermore, as CST would underpin the STOC, the author also felt that TSI should form the basis for the development of a systemic intervention meta-methodology that would be inter-dependent with the STOC. Case Study Three in this chapter, and Case Studies Four and Five in Chapter Nine, will show how the learning from this Case Study was encapsulated into the STOC and the development of the CPIM.

8.5 CASE STUDY NUMBER THREE: NORTH YORKSHIRE POLICE - STRATEGIC PLANNING PROCESS

8.5.1 Organisational Details

This intervention also took place within North Yorkshire Police (NYP) in mid 1994 and the organisational details are the same as those for Case Study Number Two. These were discussed in paragraph 8.4.1 above.

8.5.2 Outline of the Change Programme

As a result of the intervention associated with the Quality of Service Strategy, the Chief Constable indicated that he would wish to see the development of a 'mission statement' for NYP. A one-day workshop to address this issue, which was facilitated by the author of this thesis, produced an agreed mission statement for NYP. At the end of this workshop the Chief Constable expressed the view that NYP should create a long-term organisational strategy. It was pointed out by a Divisional Commander, of Superintendent rank, that NYP did not even have a planning process through which to create such a long-term plan. It was this response that led directly to this change programme.

It was agreed that a project should be undertaken to develop a strategic planning process for North Yorkshire Police. The investigating team consisted of the author as lead researcher and the Divisional Commander referred to above. This officer, who was following an MA Degree Course at The University of Hull, used the project, which was supervised by the author, for the purpose of his dissertation. The Divisional Commander worked under the direction of the author in terms of the intellectual development and content of the project, but with the intention of producing a strategic planning process for NYP that would also form the basis for the MA dissertation. The author was fully involved in both the theoretical and practical aspects of the intervention. Apart from the dissertation written by the Divisional Commander, a paper was published and presented at a conference in 1995 (See Ellis and Humphreys, 1995). The brief for the project specified an "...overall *aim* of developing a 'top level corporate strategic planning process'...together with the *approach* to be used." (Humphreys, 1994; 12) (Italics in the original).

From the outset, it was emphasised to the Chief Officer team of NYP that:

> "...[p]lanning is a complex area...[and]...as a complex organization...[NYP]...has always prided itself in its ability to 'crisis manage'...this expertise together with the...propensity for reactive planning...has left a legacy of limited approach to long-term 'strategic' planning. (Humphreys, 1994; 12).

There was an expectation that this intervention would have a significant output likely to generate major operational and long-range changes to the management of NYP. Indeed,

"...[even though]...the Chief Officers of NYP...[would be]...significant stakeholders in this problem situation, they...[would also be]...viewed in TSI terms as the 'clients'." (Humphreys, 1994; 13). With the potential for Chief Officer dominance, it was decided to involve "...the widest possible range of stakeholders...[would be]...used to establish the best possible understanding of the problem situation." (Humphreys, 1994; 13).

The intervention team, consisting of the author and the Divisional Commander referred to above, agreed with the Chief Officer Team that this major intervention in the NYP system would occupy a period of about one year. It was also agreed that the intervention team would have a 'free hand' to utilise any methodology considered appropriate. The intervention team would conduct feedback workshops with the Chief Officer Team during the course of the intervention. Having established the administrative 'rules' for the intervention, the next task for the intervention team would be to establish the methodological basis.

8.5.3 Systems Based Approaches Utilised

The author resolved not to repeat the mistakes made during the first two interventions. The intention was to conduct a full TSI based intervention. At the start of this intervention, the 'germ' of the STOC had been formulated, and ideas regarding the CPIM were being developed.

The methodologies identified and utilised during this intervention resulted from a full application of TSI. The systems based intervention methodologies selected were Interactive Planning (IP) and the Viable System Model (VSM).

8.5.4 Outputs Achieved

To gain an understanding of NYP as a system and "...the problem situation associated with the 'top level' strategic planning process for ...NYP...it was...vital to obtain the widest possible range of views from internal and external stakeholders." (Humphreys, 1994; 49).

A stakeholder group was identified on a representational basis and it consisted of:

- NYP Chief Officers;
- Divisional Commanders and Police Officer Departmental Heads;
- Police Staff Associations #;
- Special Constabulary #;
- Police Authority Chairpersons #;
- North Yorkshire County Council Senior Officials #;
- Community Consultation Representatives #;
- Her Majesty's Inspector of Constabulary (HMI) #;
- Police Staff College Bramshill;
- Humberside Police Force;
- Northumbria Police Force.

Those stakeholders identified with # were labelled the 'wider stakeholder group'. This separated them from the Chief Officers who are also the clients.

Some 42 persons were interviewed over a seven-week period during May and June 1994. All interviews were tape-recorded but contributors remained anonymous. The interviews were semi-structured, based around a set of 'trigger questions'. The interviews were important as they provided "...the widest possible view of the problem situation as it related to...strategic planning within NYP..." (Humphreys, 1994; 51).

The interview programme of the stakeholders was a preliminary phase in that the "...primary data collection was...[intended]...to provide the foundation within TSI for the appropriate choice and implementation of systems methodologies aimed at...develop[ing]...a 'top level' strategic planning process." (Humphreys, 1994; 51).

Based on the analysis of the data obtained from the stakeholder interview programme, the Creativity Phase of TSI was entered.

8.5.4.1 TSI Creativity Phase

The preliminary interview programme avoided direct reference to metaphor analysis during the actual interviews, as it was necessary for the intervention team to surface organisational issues relative to long-term planning. It was felt that process understanding and acceptance by the stakeholders was more important than getting bogged down in academic phraseology during the interviews. Nevertheless, a metaphor "...analysis was undertaken immediately after each interview...[and]...this process produced a 'metaphoric' picture of the organization..." (Humphreys. 1994; 51-52).

The metaphors of Morgan (1997) used as the basis for the metaphor analysis were:

- Organisation as a machine;
- Organisation as an organism;
- Organisation as a brain;
- Organisation as a culture;
- Organisation as a coercive (political) system.

NYP was seen by most of the stakeholders "... as a hierarchically based organization frequently engaged in repetitive functions...controlled by resource limitations...and that the primary element of control was vested in finance which was a 'given' from...central government." (Humphreys, 1994; 52). The interview programme also revealed that for "...top level planning a 'closed system' approach was...used...excluding or ignoring environmental influences." (Humphreys, 1994; 53). An overriding view emerging from the interviews was that there was a lack "...of clear organizational direction...[that]...fuelled the need to 'refer' along the hierarchical chain of command, adding to the dominance of mechanistic operating

characteristics." (Humphreys, 1994; 53). It was very clear that NYP was a goal-seeking organisation dominated by machine like characteristics.

Notwithstanding the machine like characteristics identified by the majority of stakeholders, "...the environmental disturbances...[facing]...NYP create[d] a need...to examine the organization as an adaptive organism...[as this had]...resulted in a 'survival' mode of operation." (Humphreys, 1994; 53). NYP had been forced to adopt an increasingly open systems approach by recognising its operational environment.

Although this was exemplified by the introduction of local divisional, or service, planning which introduced "...the need for increased involvement from stakeholders...[the]...trend...[was]...not...being mirrored at the top level of planning." (Humphreys, 1994; 54). This move towards an open systems approach, commensurate with the organism metaphor, was only weakly observed by the stakeholders interviewed. Therefore, it was concluded that the organism metaphor was latent but weak within NYP.

The fact that NYP was weak in terms of adaptive capabilities indicated that only passive learning took place. Many of the stakeholders observed that NYP did not possess the information systems necessary to support active learning and proactive approaches to adaptability. Although many stakeholders recognised that the senior levels of NYP desired feedback, no active feedback system existed. This, the stakeholders felt, meant that all available information was collected by the Chief Officer Team because they were concerned that they might 'miss something'. In consequence, the Chief Officers were "...operating at a lower *tactical level* in maintaining the organization...to the detriment of NYP." (Humphreys, 1994; 54) (Italics in the original).

Such a mode of operating resulted in Divisional Commanders working "...for the best interests of their divisions whilst ignoring the wider organizational needs and requirements...[by actively withholding feedback information to the Chief Officer level]." (Humphreys, 194; 54). Interviews revealed "...a perceived inability...to identify the elements of co-ordination and control within NYP,...[and this]...coupled with...[a]...limited *intelligence function* and *audit* capability raise[d] serious concerns for the organization..." (Humphreys, 1994; 55) (Italics in the original). It was also observed that "...[t]hose...[operating]...within the *policy and identity* element...appear[ed] uncertain of their role and tend[ed] to operate at lower levels due to a lack of 'feedback' structures." (Humphreys, 1994; 55) (Italics in the original). Operationally, NYP was clearly identified and well understood. However, the future of NYP as an organisation was seen as non-viable in that "...NYP is seen not to consider the consequences of decisions...[and]...as an entity NYP 'seeks' but 'fails' to be a 'learning organization'." (Humphreys, 1994; 55). As a result, the brain metaphor was not particularly strong.

The stakeholders recognised that NYP was a complex mix of cultures and "...saw the existence of *culture* camps which manifested themselves through phrases such as 'shapers' and 'doers' or 'dreamers' and 'implementers', relating to individuals tagged as *innovators* or

applicators." (Humphreys, 1994; 55) (Italics in the original). Many of the stakeholders "...identified...*language zones*...manifest[ed] through pleas for a 'common language', 'management speak free documents', clarified value statements', and 'targeted documents'." (Humphreys, 1994; 56) (Italics in the original). The stakeholder analysis identified two broad culture camps within NYP; the first of these was the camp associated with the 'single issue of policing with ever diminishing resources'. The second camp identified itself with 'socially demanded 24 hour policing in a multi-faceted community'. This provided evidence of an organisation moving from a unitary to a pluralist basis in terms of internal relationships. It was concluded that the culture metaphor was quite strong within NYP.

Remarks by stakeholders revealed that political activity "...is evident and inevitable with the tripartite arrangement involving central government with the police...[and]...[e]ntwined within this political arena...[is]...the concept of power." (Humphreys, 1994; 56). The indications were that political activity was endemic with power being exercised through top down decision making related to planning. Power being utilised to enforce plans developed at Chief Officer level was seen by stakeholders as commensurate with NYP as a goal driven organisation. Clearly then some coercion was evident and inevitable within NYP. However, the level of coercion was not seen to be high, and this indicated that the coercive metaphor was not particularly strong. It will be seen later that this conclusion was entirely misplaced.

From the metaphor analysis it was concluded that "...[although]...NYP...exhibits strong *mechanistic characteristics*...the organization is moving away from...the...*closed system* approach towards an *open system*...[related to]...a more *organismic* organization..." (Humphreys, 1994; 60) (Italics in the original).

The information that emerged from the stakeholder interview programme strongly suggested that "...NYP require[d] a planning process at the top...that can assist in its movement towards an *organismic*, *learning organization*..." (Humphreys, 1994; 60) (Italics in the original). Furthermore, the:

> "...organization...need[ed]...viable structures that would enable it to move from a 'closed' *mechanistic* entity, through an 'open' *organismic* body, into a 'learning' *brain* organization. Equally it need[ed] to be capable of addressing the pluralist views...being created through rapid...change which has brought in its wake *culture* issues, exacerbated by...*political* influences and changes..." (Humphreys, 1994; 61) (Italics in the original).

Clearly, although the metaphor analysis had concentrated on the 'here and now' of NYP, it was also evident that the development of an effective strategic planning process depended upon bringing about fundamental and radical changes in NYP. Therefore, it was felt that the metaphors should be used in future oriented terms with the intention of choosing systems based intervention methodologies likely to bring about those changes.

Given this 'worldview', it was apparent to the interventionists (the author and the Divisional Commander) that the metaphors most likely to be appropriate in methodology choice would be:

- Organism and brain, which would offer assistance in establishing viable organisational structures to support effective strategic planning;
- Culture and political, offering help in creating recognition by the Chief Officer Team of the need to bring about a more pluralistic approach to strategic planning.

8.5.4.2 TSI Choice Phase

Within this phase, the System of Systems Methodologies (SOSM) framework was used in conjunction with the metaphor analysis discussed above. The details of the SOSM were outlined in Chapters Five and Six, therefore it is not necessary to repeat them here.

Examination of NYP as a system revealed that it contained "...many 'sub systems' which contain many *components* which contain even more *elements*." (Humphreys, 1994; 63) (Italics in the original). Based on this, it was concluded that NYP operated as a complex system.

The participants in NYP, as a complex system, were seen as a reflection of the wider society that the police 'serve'. Indeed, the "...changes that have occurred...[in recent times]...in society...have had an impact upon the stakeholders in the 'policing system...[in that]...society has become more liberal allowing 'opposition' to what may have been seen as the 'establishment' view." (Humphreys, 1994; 65). The societal role of police officers has become more demanding and challenging brought about by a "...diversity of opinion...[of the]...role of the police and just how they do their job." (Humphreys, 1994; 65).

Such societal changes, mirrored by changes internal to NYP, has led to a "...wider range of values and beliefs, or at least the ability to express them,...[leading to]...a divergence of values and beliefs...[between Chief Officers and lower ranks]..." (Humphreys, 1994; 65). Given such an emerging shift in NYP culture, it was concluded that the relationship between participants in NYP, as a system, could be described as pluralist.

Therefore, all the indications were that NYP was a systemic pluralist system. It was on this basis that the approach to methodological choice was undertaken. Given the metaphors that were surfaced, and the conclusion that NYP was systemic pluralist system, the methodology chosen, by the interventionists (the author and the Divisional Commander) to develop the strategic planning process was Interactive Planning (IP).

It had also been realised that NYP needed to develop internal organisational structures capable of supporting effective strategic planning once such a process had been designed. Given that it had been recognised that the NYP co-ordination, control, and audit functions and that the intelligence gathering system were all very weak, it was decided that the Viable System Model (VSM) would be the appropriate methodology for this aspect of the intervention. The

author and the Divisional Commander made the methodology choice in both cases. At the conclusion of the Choice Phase of TSI, NYP had been categorised as a systemic pluralist system, and IP together with the VSM had been selected as appropriate systems based intervention methodologies.

8.5.4.3 TSI Implementation Phase

In methodological terms, the VSM was dominant with IP as dependant . The VSM was used in diagnostic mode to surface organisational structural weaknesses, and was closely coupled to the initial stages of IP in developing the strategic planning process.

The VSM diagnosis revealed that policy and identity (System Five) was weak and fragmented. Indeed, a commonly held stakeholder view was that the Chief Officers did not act as a team. This left NYP with "...no identifiable *strategy* making process...effectively ...[leaving]...NYP without...corporate direction..." (Humphreys, 1994; 85) (Italics in the original). Although the Chief Officers, with others, sat on the Force Strategy Group, the activities of this group were dominated by lower tactical and operational issues.

This diagnosis also showed many other serious weaknesses including:

- Lack of operational unit co-ordination (System Two);
- Poor operational control by the managerial system (System Three);
- Limited and ineffective audit of operational unit activities (System Three *);
- Almost non-existent intelligence function (System Four);
- Executive interference in operational activities (System Five collapsing).

(Source: Ellis and Humphreys, 1995; 669).

IP was used to develop the strategic planning process as an 'idealised design'. The five stages of IP were split into two phases:

- Phase one - 'mess' formulation;
- Phase two - ends, means, resource planning and implementation.

The 'mess' formulation was derived from the creativity phase of TSI. A wealth of information had been gained from the stakeholder interviews, and this helped in the building of a 'reference projection' revealing a multiplicity of discrepancies and conflicts. The 'mess' itself was almost a 'given' in that there was a lack of a strategic planning process in NYP. Furthermore, the requirements of a process to enable strategic planning were ill defined.

The stakeholder interviews had also helped to establish that there was a desire, on the part of the wider stakeholder group, for involvement in the strategic planning process. The 'gap' then, was associated with moving NYP from 'no strategic planning' towards 'an effective strategic planning process involving wider stakeholder participation'.

To summarise, the synthesis of the mess formulation included:

- A desire for participation in strategic planning by the wider stakeholder group;
- Improved communication and dissemination of strategic plans;
- Co-ordinated implementation of all derived plans;
- The use of agreed planning terminology;
- Clarification of organisational values.

(Source: Humphreys, 1994; 90).

Phase two of the IP process, involving ends, means, resource, and implementation, developed the strategic planning process. This development was guided by Ackoff's (1981) principle of 'idealised design'. From this work, a draft strategic planning process emerged that aimed to fulfil specific aims, including:

- Involvement of all those who might affect, or be affected by, strategies relating to policing in North Yorkshire;
- Informing and communicating, through involvement, thus avoiding the pitfalls associated with 're-telling the strategy';
- Enhancing the relevance of strategic planning to operational policing by concentrating on core service areas;
- Ensuring continuity in the planning process;
- Providing a clarity of purpose within community consultative bodies;
- The provision of a basis for innovation within the dynamic of an unstable environment.

(Source: Ellis and Humphreys, 1995; 669).

The draft (idealised design) strategic planning process was presented to a two-day workshop held in September of 1994, and attended by most of the wider stakeholder group and the Chief Officers as the clients.

Information critical of the Chief Officers, which had emerged from the stakeholder interview programme, had been fed back to the Chief Officers prior to the start of the workshop. Many stakeholders felt that the Chief Officers were not working as a team, and that this was detrimental to the long-term viability of NYP. Although this "...information was accepted by the Chief Officers it was critically challenged during the...workshop...[in an autocratic and coercive manner by the Chief Constable]..." (Ellis and Humphreys, 1995; 670). This vigorous and unexpected challenge almost wrecked the presentation of the draft strategic plan. The challenge revealed that the metaphor analysis had failed to expose the political reality of NYP in terms of the latent potential for coercive behaviour on the part of senior officers.

Evidently, the Chief Constable saw his authority being challenged and weakened by the presence of senior NYP Police Authority personnel and felt a need to defend his position. Indeed, "...this raised doubts...concerning emancipation particularly if clients and stakeholders are brought together...[in that]...the 'messages' which came from the stakeholders were, in some cases, very different from those received during the stakeholder interview programme." (Ellis and Humphreys, 1995; 670). It is likely that "...these changes in views were associated

with power, giving concern...[with respect to the efficacy of metaphor analysis]..." (Ellis and Humphreys, 1995; 670).

Despite this disastrous intervention by the Chief Constable, at a critical stage in the presentation of the draft planning process, the situation was recovered. Therefore, the workshop was effective in achieving useful modifications to the strategic planning process. The outcome of the intervention was a NYP Five Year Strategic Planning Process being agreed and operationalised. This process came into affect in 1995 and full details of this process can be found in Appendix One. Plans derived from the first NYP Five Year Plan are contained in Appendices Two and Three. These are Local Policing Plans and Crime Strategy respectively. Therefore, it is argued that this intervention produced change that was clearly effective and sustainable. Evidence that supports this claim is the derivation of the NYP Five Year Plan and the subordinate Local Policing and Crime Plans.

8.5.5 Reflection

Using SAST, in the previous Case Study, created an understanding that a Systemic Theory of Organisational Change (STOC) would be a vital underpinning for effective and systemic intervention in organisational change situations. Prior to this intervention for the development of a strategic planning process for NYP, considerable thought was given to the development of a STOC and an associated CPIM. Research work into organisational change was undertaken, and TSI was critically examined with a view to bringing about modifications to its process and structure.

For this intervention, it was decided to use TSI as it existed and not to pre-empt the development of the STOC or a CPIM. Knowledge of organisational change 'per se' was incomplete, and it was essential to test TSI without modification. This intervention provided a good opportunity to use TSI at the level of the organisation as the analytical basis. In the event, this proved a sensible strategy as much was learned about TSI, organisational change, and also NYP as the organisational system embroiled in complex and ongoing change. As a result of this intervention, change was recognised as processual in nature, and not simply a series of unconnected events.

The complexity of this intervention provided an organisational change situation from which the emerging STOC and CPIM could be developed. It was, again, a difficult intervention, with interlocking power play, political action, process development, structural issues, problems of domination and status, and issues of boundary judgement all being present. Clearly, this intervention involved complex interactions between, and with, senior people in a public sector organisation. The need to understand participant relationships was most important in this intervention. Recognising this led the author to conclude that a weakness of TSI lay in the way that the participant relationships were characterised, and that these would need analysis and modification.

An added complexity was that the NYP senior officers were subject to political constraints by elected local authority officers in whom budgetary and political control was vested. Taking a 'vertical slice' through the NYP, as the intervention arena, and also the wider stakeholder groups provided a wide 'nominal group' for the investigation. Indeed, it must be asserted here that the development of a strategic planning process was a vehicle within which the development of the STOC and CPIM might be further progressed.

Systemicity was achieved by using a nominal group approach. Care was taken to include all possible wider stakeholders in an attempt to balance the power of the client set with the wider stakeholder group. The use of TSI guided the intervention and provided a powerful analytical framework for the intervention. Interestingly, the concerns for systemicity and emancipation, using the principles of TSI underpinned by Critical Systems philosophy, did guide the intervention. This is substantiated by the stakeholder interview programme and the manner in which issues of power and domination were encapsulated in the attempt to ensure that 'no surprises' would confront the Chief Officer team during the workshop. Therefore, it was something of a shock when the Chief Constable decided to re-inforce his power in a demonstration of his authority as 'keeper' of strategy within NYP vis-à-vis the Police Authority. It is rational, and reasonable, to conclude that the metaphor analysis had not been sufficiently rigorous and searching. However, it can also be argued that the author failed to recognise the emotion contained within the situation and that this aspect was entirely missed in this intervention.

This was a successful intervention in that a draft strategic planning process was delivered to NYP. The finalised version that emerged from the stakeholder workshop was used to design and implement the first NYP Five Year Plan in 1995. Therefore, it can be argued that the intervention produced effective, sustainable, useful, and verifiable output for NYP, which included:

- A strategic planning process that replaced ad hoc tactical planning;
- Acceptance by the Chief Constable that wider stakeholder input to strategic planning would be useful;
- Police Authority input to strategic planning;
- A systemic understanding, by senior police officers and the Police Authority, of the nature of NYP as a complex organisation undergoing radical change;
- A recognition by the Chief Officer Team of the strategic nature of their role(s) in terms of boundary scanning and the relationship between NYP and the wider system at local and national levels;
- The understanding that NYP needed to become a 'learning' organisation, and the necessity to overcome organisational defensive routines;
- A meeting of minds between the Chief Constable and the Chair of the Police Authority to bring about co-operation between two mutually dependent bodies.

Strategic planning is a means for creating organisational direction and identity for the longer term. Therefore, it is both internal and external in nature. A difficulty that emerged was

that of hidden coercive power. In that sense the Chief Constable appeared to become aware of the challenge to his position that could result from the nature of strategic planning. Clearly, the issues of empowerment and emancipation were not fully understood by the Chief Constable. The defensive routine adopted by the Chief Constable was overcome by the use of persuasion designed to convert his mindset from that of 'I'm in charge' to that of 'Involvement of other parties spreads the risk'. He also needed to be persuaded of the creative power available to NYP through the involvement of the wider stakeholder group in developing strategy, policy, identity, and derived plans.

On reflection, and again using **Figures 7.4, 7.5, and 7.6,** the intervention can be analysed as follows:

- From the TSI creativity phase, NYP was understood as a systemic - pluralist organisation;
- Using **Figure 7.4** it is clear that NYP was best understood as a complex - transformational system with divergent - pluralistic relationships amongst the system participants;
- Also from **Figure 7.4**, it is concluded that surfacing the culture, neuro-cybernetic, organism, and political metaphors did provide a reasonable basis for selecting the VSM and IP as appropriate methodologies;
- Using **Figure 7.5** it is argued that this was Second Order, Form Three Change following Path C. This is supported by Scenario Three associated with **Figure 7.6**. (See paragraph 7.3.4).

This intervention, although daunting, provided a sound framework within which to learn with respect to the STOC and CPIM. NYP derived real benefit from this work, and this assisted in developmental work on theory and methodology development. The potential for failure was high as the intervention took place within a highly political 'atmosphere'. Indeed, the intervention came perilously close to disaster during the stakeholder workshop. This near disaster was a revealing and remarkable insight into the insecurities and defensive mechanisms referred to by Argyris (1990). This insight was significant in terms of input to the STOC and the CPIM and resulted in a draft STOC and an early version of the CPIM. It is asserted that this intervention produced effective and sustainable change that was second order in nature.

Figures 8.2, 8.3, 8.4, and 8.5 will again be used as an analytical framework for this intervention, with respect to the learning achieved, as follows:

- **Figure 8.2** shows that the intervention was driven by systems thinking in that the change situation was addressed using the learning sequence shown;
- TSI was applied in full, in accordance with **Figure 8.3**, in a perceived change situation by the author as a knowledgeable interventionist. By engaging in critical reflection, with respect to the methodology in use, the author has refined the methodology as shown in **Figure 8.11** below;
- **Figure 8.4** supplies a grounding framework, as a set of interacting elements, relative to learning about the methodology in use. This reveals that the intervention process in a

change situation is, in itself, a system. The boundary judgements with respect to the containing (NYP) organisational system were not fully understood. In this case, errors were made with respect to the political boundaries that were revealed by the challenge made by the Chief Constable during the stakeholder workshop;

- The evaluation of the methodology, as it was used in the development of the strategic planning process, meant engaging in active learning in the context of a multi-dimensional analysis as shown in **Figure 8.5**. This involved the author in understanding TSI as a set of recognisable principles and then using TSI in a manner appropriate for the situation that existed in NYP at that time in order to bring about sustainable change.

This intervention confirmed, to the author, that organisational change is multi-dimensional. Change could not be thought of as a first order type only or as a single event. Nor could TSI be effective as a two dimensional methodology. Clearly, the perceptions, values, and beliefs of the interventionist had a significant bearing on the manner in which TSI was used during the development of the strategic planning process. The outcomes changed the perceptions and views of the author with respect to organisational change, TSI, and systems based intervention methodologies in general in terms of understanding participant relationships and system complexity characteristics.

An important conclusion to be drawn here concerns the LUMAS model shown in **Figure 8.5** above. This model, according to Checkland (1999), indicates that TSI, in itself, cannot bring about improvement. However, the use of TSI not only helped the author to bring about effective and sustainable change within NYP but also, through critical reflection, help the author to learn more about the methodology of TSI itself. This learning created the conditions necessary for the author to enrich the methodology and improve it for future use. This enrichment will be discussed below.

NYP was initially analysed as a systemic pluralist system using metaphor analysis and the SOSM methods of TSI. After the completion of the intervention, it was clear to the author that the analysis had not fully surfaced all that it should have done. On reflection, it became apparent that:

- Organisational change was not simply first order in nature, but was at least a first and second order phenomenon;
- TSI needed modification in terms of participant relationship characteristics, extension of the system complexity dimension, and the addition of a third dimension through which to include the order and type of change phenomena;
- Work was needed to bring about clarity in the contextual relationships between participant characteristics and system complexity in terms of metaphor analysis during the creativity or initial phases of the intervention.

8.6 CONCLUDING SUMMARY

Total Systems Intervention did provide a powerful guiding meta-methodology for this intervention. However, there were theoretical and practical shortcomings with respect to power relationships, emancipation, empowerment, political activity, and boundary judgements. Additionally, the complexity of change as a phenomenon, clarification of participant relationship characteristics, and improved contextual understanding with respect to participant relationships and system complexity characteristics with respect to metaphor analysis also needed to be encapsulated in TSI. The need to include such features in an intervention methodology, grounded in CST, prompted the design of a three dimensional framework as a basis for such a methodology. This forerunner of CPIM is shown in Figure 8.11 below.

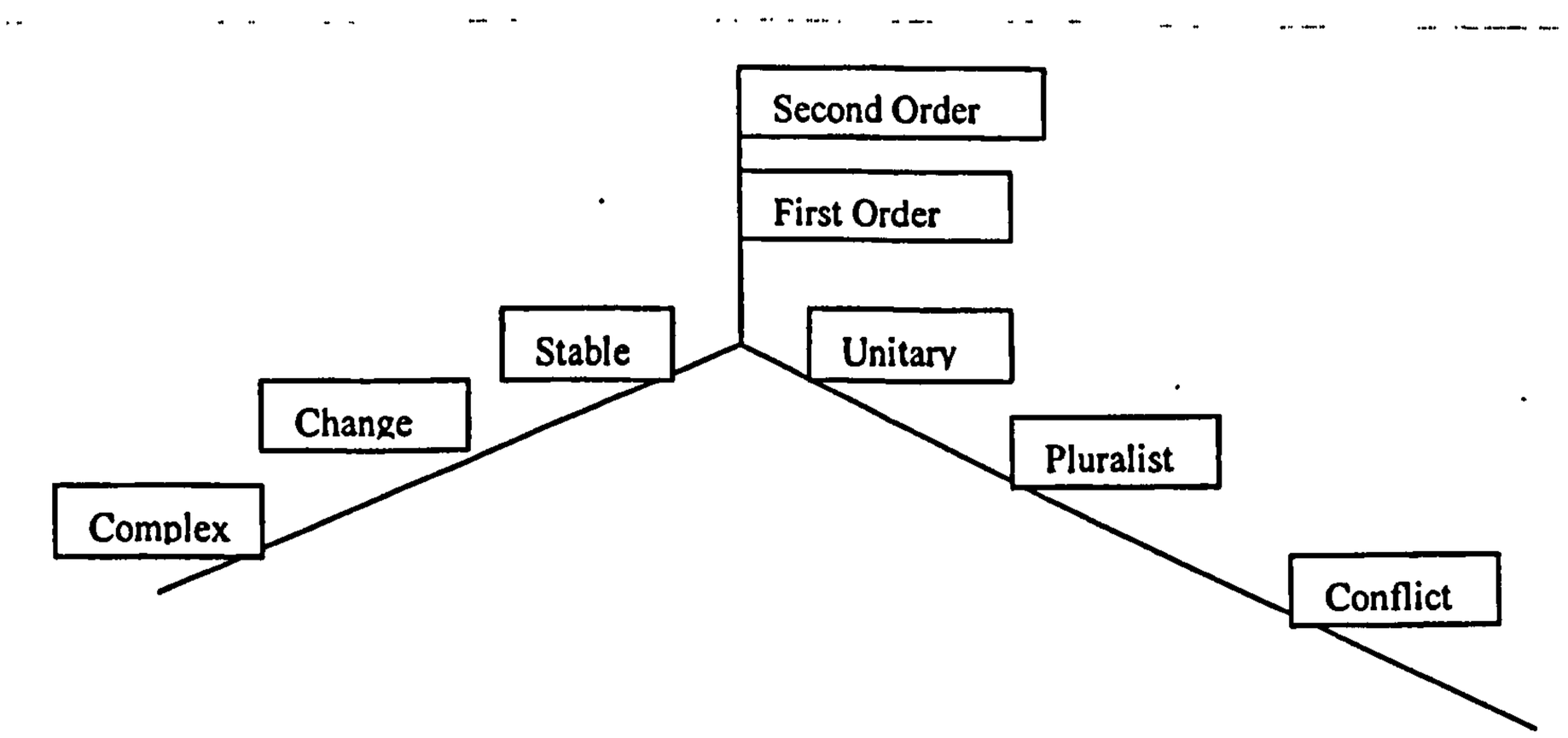


Figure 8.11 Modified System of Systems Methodologies

Having understood the need for an underpinning theory for effective intervention in organisational change situations, desk research was undertaken as a first step in the derivation of such a theory. This led to the Burrell and Morgan (1979) framework, and the work of Watzlawick, et al (1974). From this research came an epistemological and ontological framework for organisational change, the understanding of first and second order change, and the development of a contextual model encapsulating expanded dimensions of human characteristics and system complexity . A first iteration systemic theory of organisational change was formulated as follows:

Supported by a sound epistemological and ontological basis, the environment, orders, and forms of change will be identified such that paradigms of change can be derived. This will establish a basis for a systemic and holistic approach to organisational change, grounded in critical systems thinking, that will assist interventionists in bringing about effective and sustainable change in complex organisations. Such conditions can only be brought about if the issues of power, emancipation, politics, and empowerment are actively considered in the change process.

The first iteration had been completed. These important steps in the research programme would form the bedrock for the remainder of the work, which will be set out and discussed in Chapter Nine.

CHAPTER NINE

TESTING AND DEVELOPMENT OF THE SYSTEMIC THEORY OF ORGANISATIONAL CHANGE AND THE CRITICAL PLURALIST INTERVENTION METHODOLOGY - SECOND ITERATION

9.1 INTRODUCTION

Chapter Eight dealt with the first three Case Studies, which formed a bedrock for the development of the STOC and the CPIM. At the end of what has been termed the first iteration of the research work, it was concluded that:

- The epistemological and ontological framework for organisational change had been put in place;
- A first iteration of a Systemic Theory of Organisational Change had been derived;
- An understanding of first and second order change had been established;
- An extended System of Systems Methodologies had been formulated;
- The first version of a Critical Pluralist Intervention Methodology had been designed.

This Chapter Nine will outline and discuss the fourth and fifth Case Studies, as the second iteration, leading to a finalised STOC and CPIM. The format for the Case Studies used in Chapter Eight will also be used here.

9.2 CASE STUDY NUMBER FOUR: NORTH YORKSHIRE POLICE - FINGER PRINT BUREAU

9.2.1 Organisational Details

This was the third Case Study that took place within North Yorkshire Police (NYP). The work was carried out during late 1995 and early 1996. Again, the organisational details are broadly similar to those outlined in Paragraph 8.4.1 above. On this occasion, the intervention occurred within the Criminal Investigation Department (CID).

9.2.2 Outline of the Change Programme

Late in 1995, the author was approached by the head of CID concerning conflict within the Scientific Support Group (SSG) of the CID. There were three sections within SSG:

- Scenes of Crime Section (SOC);
- Closed Circuit Surveillance Section (CSS);
- Finger Print Bureau (FPB).

A conflict situation that existed within the Finger Print Bureau (FPB) formed the system in focus for this intervention. The FPB staff, all 'civilians' were:

- Head and Deputy Head of Bureau;
- Six 'expert' fingerprint assessors;
- Two 'trainee' fingerprint assessors;
- Two clerical officers.

The FPB processes finger print recognition work received from Scenes of Crime Officers (SOCO's) and from routine patrol arrests. All outputs from the FPB are directed to CID, SOCO's, arresting officers of NYP, and to New Scotland Yard for inclusion in the National Finger Print Recognition Files.

The conflict within the FPB had emerged over a period of several years. This conflict, which had become severe during the previous year, was the outcome of managerial misjudgements regarding senior appointments in the FPB. The current Deputy Head of FPB had previously headed the department, but had been seconded to the National Automatic Finger Print Recognition (AFR) project.

A new, external candidate was appointed to the position of Head of FPB. The previous head, who also applied for the position, was appointed as Deputy Head of FPB. These two appointees became involved in 'personality' clashes, which then polarised the lower staff levels of the FPB.

Since the two appointments were made, some twelve months prior to the start of the intervention, the following difficulties were perceived, by CID management, with the person appointed as Head of FPB:

- His technical finger print recognition skills were considered to be suspect by CID management;
- His managerial style was confrontational downwards and sycophantic upwards;
- He was suspected of being 'economical with the truth';
- He challenged the technical competence of the experts with poor evidence;
- Fear and polarisation emerged amongst FPB staff;
- Advertisements for staff received 'nil' returns indicating an emerging poor reputation for NYP.

This situation within the FPB was seen as dangerous for the following reasons:

- Errors in finger print recognition had potentially serious consequences;
- Current levels of conflict were destroying the operational capability and credibility of the FPB;
- The confrontational style of the Head of FPB was exacerbating the conflict;
- Disagreement between, and 'name calling' amongst, the FPB staff had become public knowledge with a detrimental effect on police evidence in court cases.

The author agreed to engage in an intervention that would be complex, interesting, and potentially dangerous! Under such circumstances, and learning from the reflections associated with Case Studies two and three, it was clear that this intervention would need a careful and sensitive approach within a CST framework. The client identified for the intervention was the Head of SSG and, in agreement with him, a project programme was derived. The details will be outlined in the following paragraphs.

Project Programme Outline

The likely stakeholders were identified as:

- Assistant Chief Constable - Operations;
- Head of CID;
- Head of SSG;
- All FPB staff including the Head and Deputy Head of Bureau;
- Detective Inspector of a Representative Operational Division;
- Local Area Police Commander of a Representative Operational Division;
- One Divisional Commander;
- Union and Police Federation Representatives.

The Objectives for the Intervention

Clear objectives for this intervention were essential and included:

- To identify all possible stakeholders who might affect, or be affected by, FPB activities;
- To objectively establish and appraise current FPB activities;
- To surface stakeholder opinions and views relevant to future FPB roles and activities;
- To evaluate structure, practices, and managerial effectiveness of the FPB;
- To establish a future oriented structure for the FPB;
- To establish agreed objectives for the FPB;
- To facilitate an action plan, designed by the stakeholders, to derive and implement harmonious working practices within the FPB.

The client was firmly of the view that the intervention process should be made as clear and transparent as possible. Bearing in mind the ethical need to create an outcome acceptable to the rationality of the client, this was accepted. An outline of the intervention process was derived as follows:

- Carry out structured interviews of stakeholders;
- Carry out analysis of stakeholder interviews as an input to the remainder of the intervention;
- Use TSI Creativity Phase to establish structure of the system in focus in terms of system complexity and stakeholder relationships;
- Use TSI Choice Phase for methodology selection;
- Design an interactive stakeholder workshop using the chosen methodology;

- Conduct the interactive workshop as the TSI Implementation Phase;
- Prepare and present a report as the output of the intervention.

9.2.3 Systems Based Approaches Utilised

At the outset of this intervention, it was clear that neither the STOC nor the CPIM were ready for rigorous testing. Nevertheless, it was also clear that this intervention would be invaluable as a developmental vehicle for both the STOC and the CPIM. Having clarified these points and issues, it was decided that the CPIM, developed at the end of the third case study, would be used in an attempt to:

- Gain a clear perspective of the FPB and the conflict situation that existed;
- Create conditions conducive to resolve the conflict;
- Bring about a major shift in internal mindsets;
- Develop a platform for change within FPB;
- Use the knowledge gained in previous interventions;
- Learn with respect to the continued development of the systemic theory and intervention methodological processes;
- Produce a systemic theory of change and a methodology that would be ready for testing.

Therefore, the stakeholder interviews would be used, both as a structuring device for client needs and expectations, and as an important facet of the modified TSI Creativity Phase. The stakeholder interviews were structured around fifteen questions that are contained in Appendix 4 . The analysis of the stakeholder interviews was very useful as an input to TSI Creativity Phase.

This early work did produce a clear perspective of the conflict situation, and the remainder of the intervention proceeded by using the modified TSI which resulted in SSM being selected as an appropriate intervention methodology.

9.2.4 Outputs Achieved

The analysis of the stakeholder interviews revealed that the FPB appeared to be an organisation intent on destroying itself. Indeed, an observation made to the Head of SSG was that 'the FPB was suicidal in nature'. The major conclusions drawn out of the analysis were:

- Dysfunctional and destructive conflict was the major issue facing the FPB;
- Interpersonal relations were severely strained among senior and experienced staff;
- The FPB was not seen as either co-operative or effective by its clients;
- Professional disputes between staff were damaging the reputation of the FPB;
- Internal operating procedures were non-existent and no performance indicators existed;
- Training was not properly designed or monitored;
- FPB management was weak and exercised through memo and dictat;

- Such internal co-ordination that did exist relied upon the little goodwill that remained amongst staff;
- Lack of strategic thinking resulting in a lack of identity and policies;
- Poor internal communication caused role conflict and high levels of stress;
- The FPB was not viable as an organisational entity and was in danger of collapse.

The conclusions above, in conjunction with observation of the FPB at work and conversations with all stakeholders, led to the view that the FPB was 'sick' and non-viable in that:

- The FPB was in severe internal conflict mode;
- The metaphor that best described the FPB was that of 'total war';
- Attempts, by the Head of FPB, to force non co-operative staff into compliance were coercive;
- Relationships among FPB staff were hostile and appeared to be non-negotiable;
- The system was dysfunctional and chaotic.

It became obvious that the analysis had moved 'outside' the modified SOSM as shown in **Figure 8.11**. No systems based intervention methodology immediately suggested itself as appropriate for this situation, and the author was faced with a dilemma of significant proportions. It was realised that 'out of the box' second order thinking would be necessary if improvement were to be achieved in this difficult situation. Indeed, it is argued that second order change can only be brought about by stepping out of an existing framework and into a new framework. CSH was ruled out largely because of total inexperience with this methodology, and conflict resolution techniques did not seem appropriate for the 'total war' situation that existed.

In order to make progress, **Figure 8.11** was re-examined in an effort to find a way forward. It was clear that:

- The FPB as a system was in a dysfunctional state and chaotic;
- The relationships amongst the protagonists were 'war-like' in nature;
- There was no obvious methodology.

In terms of stepping into a new framework, it was decided to extend **Figure 8.11** further to bring about a basis for an interactive workshop that would surface the issues in a manner likely to encourage exploration of the conflict in a constructive spirit. The existing form of **Figure 8.11** was very close to that shown in **Figure 7.8a** with the following exceptions:

- Third order change had not been recognised;
- The three dimensions needed to be clarified in terms of dimension characteristics;
- The participant relationship dimension needed to incorporate different forms of conflict;
- The type of change dimension had to be extended to include third order change;
- The system complexity dimension needed to incorporate the concept of a chaotic dislocational system.

These additions and changes were made to **Figure 8.11** resulting in the final form of the extended SOSM shown in **Figure 7.8a**.

At this stage of the intervention, it was felt that a basis existed for a workshop design. The FPB had been recognised, using the contextual relationship model (**Figure 7.4**) and the characteristics of the associated human and system complexity dimensions, as a dislocated chaotic system within which dysfunctional conflict, power struggles, and 'war' existed amongst protagonists who were in a conflictual domination non-negotiating relationship. It was also recognised that the FPB was operating as a closed system with high levels of entropy. The situation existed whereby the FPB appeared to have a future dominated by destructive shifts and, if nothing were done, then FPB would certainly die. This provided the author with the basis from which to derive the characteristics of third order change. Having progressed thus far, it was still the case that no methodology fitted this situation. However, **Figures 7.5, 7.6, 7.8c and d** were used to provide a theoretical basis for the choice.

Figures 7.5 and 7.6 reveal that the FPB was on Path E toward Form Four, Third Order change that would involve destruction of the FPB as a system as indicated by Scenario Five. SAST might have been applicable but it was rejected, as it was more appropriate for use in stable or transformational systems. CSH was also rejected because of the perceived difficulty with making sensible boundary judgements and establishing differences between experts, witnesses, and affected categories of workshop participants. CMRT approaches were also rejected largely because of the author's inexperience in this field. After having pondered this dilemma for a considerable time it was decided to use SSM as a learning process, as it would be appropriate for dealing with both second and third order change, and the associated issues of power and domination.

Clearly, from **Figures 7.8c and d**, SSM provided a reasonably well founded approach for this situation as it is 'situated' in a central position in both diagrams. It is also argued that, in fundamental terms, the thinking behind this choice was that the FPB needed a viable future, and that this would best be facilitated through the creation of a shared understanding of the issues that SSM could provide. Such an approach would provide a basis for shifting the FPB away from a chaotic - dislocational system, with 'war' as the dominant metaphor, and Third Order system destruction as a likely outcome. The shift had to be toward a remedial 'path of change', to that of a complex - transformational system, with radical Second Order change as the outcome. This would involve shifting the FPB away from Form Four, Path E, Scenario Five, Third Order change toward a Form Three, Second Order change along Path D as indicated by Scenario Four. This view was predicated upon the willingness of the stakeholders to engage constructively in a learning process designed to produce an outcome that they owned. This was a high-risk strategy but it was felt that the potential benefits outweighed the risk. The methodological rationality was that of the author, but it was with the intention of bringing about effective and sustainable change thus creating a viable FPB.

It was on this basis that a two-day interactive workshop was designed for the end of May 1996. The workshop was held in a neutral venue and twenty-five stakeholders, including the Head and Deputy Head of Bureau, attended. The workshop commenced with a presentation by the author during which the conclusions derived from the stakeholder interview analysis were outlined. The SSM process was then explained, and the stakeholders were directed into three groups separated into different rooms.

The three groups started work in similar fashion. All groups had been asked to produce individual rich pictures and then explain them to the full group as a precursor to developing a group rich picture. This did not happen initially, instead all three groups engaged in blunt and frank discussion. It appeared that the air needed to be cleared by putting the cards on the table, and the discourse amongst the protagonists did not pull any punches.

Emotions were running high, and the workshop participants seemed to feel the need to make their views known. There were tears and very harsh words, but eventually the participants did, of their own accord, start to draw group rich pictures. These were revealing in that all three groups saw that the FPB was on a 'self destruct' course unless action were taken and that the destiny of the FPB lay in their own hands. An example of a group (Group One) rich picture is provided in Appendix 5. All three groups extracted problem themes and then proceeded to reduce these to four or five major issues.

The lists of identified major issues were as follows:

- Group One:
  Professionalism;
  Interpersonal skills;
  Management inadequacies;
  Poor communication;
  Practices and procedures;
- Group Two:
  Trust and relationships;
  Ineffective management;
  Communication;
  Policy and strategy;
- Group Three:
  Poor management;
  Conflict;
  Communication;
  Marketing and image.

All three groups identified communication and poor/ineffective/inadequate management as major issues. Conflict, trust and relationships, and interpersonal skills were seen as similar in nature, and identified as major issues. This reveals that many of the stakeholders had little difficulty in identifying the major problems and issues facing the FPB.

Each group went on to develop root definitions of relevant systems. Each root definition was tested using CATWOE. As an example, a root definition and CATWOE test for 'management inadequacies' derived by Group One is offered.

Inadequate management had to be transformed into adequate management. The root definition developed was:

> 'An SSG owned and managed system that will create an environment designed to promote professional and personal management standards and working relationships that will enhance the FPB operations and the service provided to its clients.'

Customers: FPB, Police Officers, SOCO's, New Scotland Yard, General Public.
Actors: FPB.
Transformation: Inadequate and unprofessional management into adequate professional management.
Worldview: Management based on trust, consistency, respect, support, teamwork, and communication.
Owners: SSG and CID.
Environment: NYP requirements and budgetary constraints.

Conceptual models were not developed by any of the groups. Instead, the groups were asked to compare the CATWOE tests and the root definitions themselves to the rich picture to establish a means of achieving the required transformations in terms of 'what' needed to be done. In this particular case, an 'agenda for change' was produced and this included:

- Management training for skill development;
- Developing improved lines of communication;
- Internal consultation for change requirements;
- Review of the departmental and command structures;
- Use of team building exercises for attitudinal change;
- Review staffing requirements;
- Team meetings for relationship improvement.

Agendas for change were derived for all of the major issues identified by the groups. These separate agenda were then brought into plenary for dialectic debate by all stakeholders. This was considered an effective means of synthesising the separate 'what' agendas into a single platform for change that ensured stakeholder ownership of the workshop output.

The developed synthesis included:

- Re-structure the management of the FPB to provide a clearly identified roles for all members of the FPB;
- Appraise the current head of FPB to develop a personal training programme with targets to be set for improvement in his managerial capability and skills;
- Appraise the two senior fingerprint experts on a similar basis as the head of FPB;

- Ensure continuity of appointment of the CID appointed head of SSG;
- Establish regular and routine FPB staff meetings;
- Establish a steering group for FPB development in terms of strategy, policy and identity;
- Introduce team-building exercises;
- Use staff and steering group meetings and team-building exercises to bring about attitudinal change in terms of creating mutual respect amongst FPB staff;
- Provide structured training, based on formal performance appraisal, as a means for developing and improving professional and interpersonal skills.

This 'platform' for FPB change, using dialectic debate facilitated by the author, was derived by the stakeholders and was almost the final act of the workshop. There was a most interesting occurrence at the end of the debate; the Commander of the Harrogate Division commented that the whole of NYP wanted the FPB to succeed and that this platform provided a sensible basis for that success. However, he also went on to say, with some force, that anyone from the FPB staff who felt that they could not sign up to this platform should seriously consider leaving the employ of NYP.

The non-FPB stakeholders then left the workshop but the FPB staff remained for a period of critical reflection. All but one of the FPB staff were enthusiastic and felt that the synthesis was a platform for change that would prevent the FPB from falling into the abyss. One female member of staff, a finger print expert, refused to accept the synthesis and was extremely upset at the outcome of the workshop. During ensuing discussion it became apparent that she had been acting as' the power behind the throne' of the Deputy Head (former head) of the FPB. FPB staff suggested to her that she should take the advice offered by the Harrogate Divisional Commander and consider resigning; she indicated that she intended to do just that. This aside, the output from the workshop was accepted as the way forward for the FPB. Discussion then took place to establish responsibilities for carrying forward the platform into an action programme. At this juncture, it was agreed that the inaugural FPB staff meeting would be scheduled for the following Monday morning. The author was asked to attend this meeting to provide guidance as the final aspect of the intervention proper. Bearing in mind the failure experienced after the first intervention (see paragraph 8.3), the author also agreed to attend further meetings to ensure that the platform for action was fully implemented. The author attended a further six staff meetings over a period of three months with the result that the FPB implemented all major aspects and made progress towards all other aspects of the platform for change.

This was a good example of Second Order change as the FPB had undergone systemic change that was clearly 'visible' to observers in the environment. It is also a good example of how an organisational system, on a particular trajectory, can be steered away from destructive Third Order change to that of radical, but effective and sustainable Second Order change through the use of a critical pluralist approach.

The fact that the FPB was operating as an effective unit six months after the intervention, and with all major aspects of the platform for change in place, justifies the claim that this intervention produced effective and sustainable change. From this intervention, it is possible to derive a 'definition' of effective and sustainable change and this would be that:

Sustainable organisational change is that change which produces recognisable and continuing participant behaviour and system characteristics that were derived during the intervention process, and which are manifestly different from those that existed prior to the intervention.

9.2.5 Reflection

This intervention had been most challenging and yet most helpful in terms of contribution to the research programme. The output of the intervention indicated that the FPB in particular, and the CID of NYP more generally, had derived considerable benefit. Without the intervention, it was entirely possible that NYP would have shut down the FPB and 'bought-in' scientific support services from another police force. If that had happened, several experienced people would have been rendered unemployed.

It is noted that the intervention was, in fact, a process made up of several interlinked events. For example, the initiation of the intervention occurred in December 1995 with the Head of CID making contact with the author. The stakeholder interviews and the workshop then made up the total process that ended in June of 1996 with the first FPB staff meeting.

The design of the intervention was exciting and perplexing for the author in that new ground was being broken in theoretical, methodological, and experiential terms. Nevertheless, this intervention has been most influential in the development of the STOC and the CPIM.

The stakeholder interview programme revealed levels of hostility never previously experienced. Indeed, it was observed by the author to the client, that this was a serious source of concern with respect to the workshop design. The problem situation, as originally seen, was composed of conflict, politics, hostility, and indifference.

Behaviourally, the interviews had suggested that:

- There was almost universal hostility toward the new head of FPB;
- There were both covert and overt attempts by FPB staff to undermine the authority of the head of FPB;
- Administrative FPB staff were treated with contempt by professional FPB staff;
- The overwhelming view of junior FPB staff was that of managerial ineptitude;
- Two of the experts (the ex-head of FPB and the 'power behind his throne') were psychologically isolated;
- The negative attitude of experts towards each other had caused a 'fiddling while Rome burns' attitude;

- There was no room for compromise amongst FPB staff.

Some of these behavioural characteristics were caused by fear, frustration, and a lack of confidence with respect to the future. The FPB did not operate as a team and a culture of blame existed. It was clear that some of the responsibility for this situation rested with NYP management. Previous managerial regimes had made promises only to renege on them. Commitments had been abandoned and personnel had been appointed to positions that were beyond their capabilities, skills, and experience. It was against this background that workshop design had to take place.

The stakeholder interviews had suggested the metaphor was that of 'total war' and that a modified approach to TSI was essential. The participant relationships, such as they were, were of a conflictual nature where domination and non-negotiable attitudes prevailed. Analysis of the FPB as a system suggested that it was something more than just 'complex'. The concept of anarchy came to mind, and it was decided to label the FPB as a chaotic dislocated system with dysfunctional conflict and power struggles being the operational mode. It was this thinking led to Figure 7.4. Referring to paragraphs 7.3.2.4 and 7.3.2.7 it can be seen that the characteristics of dominant conflict relationships and chaotic - dislocational systems were indeed evident in the FPB. It became obvious that the change necessary to 'rescue' the FPB would have to be radical.

Conversations with the stakeholders had suggested that this form of behaviour had not always been normative. Indeed, it was obvious that the FPB had operated with clear objectives, and little disagreement amongst staff, with the functionalist paradigm governing the normative behaviour of the group. Therefore, it was entirely reasonable to suppose that the FPB had worked as a simple - stable system with common unitary relationships amongst the staff. The system changed to complex when the original head had been removed, and the relationships had changed by moving into divergent pluralistic, and then into a conflict driven basis. Using these assumptions as a framework for thought the use of SSM, as will be discussed below, as a potential methodology surfaced and a first iteration of Figure 7.5 with the associated concepts of forms and types of change emerged.

Using a first iteration of Figures 7.4, 7.5 and 7.6, it became apparent that the FPB had started 'life' as a simple - stable system with common unitary relationships. The appointment of the new Head of FPB had caused a shift towards a complex - transformational system with divergent pluralist relationships. Continued deterioration in relationships, and increasing levels of conflict then generated what must be thought of as a 'seismic' shift in that FPB moved towards a chaotic - dislocated system with staff relationships degenerating into conflictual non-negotiable mode. The conflict had shifted from functional to dysfunctional, power struggles were evident, and it is clear that 'total war' was an appropriate metaphor for the FPB. Further thought developed the idea that FPB, as a complex - pluralist system, had been capable of developing constructive change by creative use of the emerging conflict. That opportunity had been lost when the conflict shifted to dysfunctional. It was realised that not only were there orders of

change, but also forms and paths of change, and this led to a second iteration producing the current and final forms of Figures 7.4, 7.5 and 7.6.

Having established this basis, the change that did take place within FPB is best depicted as Second Order, Form Three Change (see paragraph 7.3.4) that proceeded along Path D and described by Scenario Four. It became clear that the FPB had moved very close to total destruction as described by Form Four, Third Order Change as shown by Scenario Five. Indeed, this intervention was almost a rescue mission!

With respect to methodological choice, the choice of SSM can be theoretically justified by referring to Figures 7.6, 7.7 and 7.8c and d. These four figures, which were also developed during this intervention, were of great help in resolving the issues surrounding both the initiation of change context and design of intervention process. Figure 7.6 suggests that the FPB had been operating within a divergent pluralistic relationship and as a complex - transformational system. Furthermore, if the conflict had remained within a creative context, then a radical second order shift would have emerged with SSM as entirely appropriate as suggested by referring to Figure 7.7. It can be argued that CSH should have been the methodological choice, but this is rejected because CSH is a methodology that is appropriate for social system design where the conflict is institutional rather than between individuals.

Remembering that the FPB system metamorphosed into a chaotic - dislocational system, where relationships became conflictual non-negotiable, then SSM was considered more appropriate for surfacing the issues, concerns, and worries within that conflict situation. The reasoning for this is that creative conflict, as a management process, dominates the centre of Figure 7.6. This suggests, from Figures 7.7 and 7.8c and d, that CSH is contained within the SSM sphere of methodological influence. This indicates that CSH might be appropriate within an SSM intervention and not the other way around. In other words, SSM would be used to surface 'is' and 'ought' questions and in boundary judgements relative to the effective use of CSH within that intervention. Indeed, there is support for this reasoning within Multi-methodology (Mingers, 1997) using a de-compositional approach. This approach was not pursued in this intervention as the author felt that the danger inherent in the situation justified a keep it simple approach.

The fact that SSM did produce a platform for change supports the foregoing analysis. The careful reflection, which followed the intervention, helped to finalise Figures 7.4, 7.5, 7.6, 7.7, and 7.8. In addition, the STOC was reformulated into that discussed in Chapter 7, and the CPIM emerged into that outlined in Figure 7.9.

The post intervention reflection included learning with respect to theoretical and methodological development. Figure 8.2 provides the basic form followed by the intervention as a learning process revealing that intervention, in complex organisational problem and change situations, must be processual in nature if the intervention is to be effective.

The modified form of TSI, employed in this intervention, was developed and modified still further. **Figure 8.3** indicates this aspect of learning very clearly. The author, as interventionist, was much more knowledgeable about TSI compared to previous interventions, but the interacting elements associated with this intervention are revealed by **Figure 8.4**.

This intervention was undertaken with the author actively seeking to learn in a 'methodology-informed' manner. This form of approach, as indicated by **Figure 8.5**, is essential if the work undertaken was to make a useful contribution to systems thinking. The fact that the STOC and the CPIM were finalised, and that the output from the intervention 'rescued' the FPB, suggests that a useful contribution was achieved for both NYP and for systems thinking. Indeed, it is argued that asking the rhetorical question 'what can I do?' at the outset of the intervention helped to establish the necessary and sufficient conditions for an intervention that:

- Was carried out within the principles and philosophy of CST;
- Was critically pluralist in nature in that it brought about, for all but one of the protagonists, emancipation from the constraints of NYP;
- Protected paradigm diversity by thinking across paradigmatic boundaries and adopting a processual approach;
- Extracted, from a recognisable methodology, an approach that was appropriate for the situation by deriving sustainable and effective change;
- Created a developed form of TSI known as the Critical Pluralist Intervention Methodology;
- Established a Systemic Theory of Organisational Change;
- Contributed to systems thinking in terms of theoretical and methodological outputs.

The claims made above needed a further test, and it is the next intervention case study that will deal with that test.

9.3 CASE STUDY NUMBER FIVE: WEST YORKSHIRE POLICE - OCCUPATIONAL HEALTH UNIT

9.3.1 Organisational Details

The activities for this intervention were carried out, during late 1996 and early 1997, in the Occupational Health Unit (OHU) of West Yorkshire Police Force. A Force Medical Officer employed by WYP professionally headed the OHU.

West Yorkshire Police (WYP) covers a mainly urbanised area centred on Wakefield, Bradford, Huddersfield, Leeds and other large West Yorkshire conurbations. WYP employs over 5000 personnel and operates on an annual budget that exceeds £120,000,000.

A Chief Constable commands WYP, with a Deputy Chief Constable as his 'right hand man'. Four Assistant Chief Constables, reporting directly to the Chief Constable, command Divisional Operations, Crime, Personnel, and WYP Force Strategic Planning respectively.

This intervention was carried out for the Assistant Chief Constable for Personnel, ACC(P), who was the identified client.

9.3.2 Outline of the Change Programme

The author was approached by the ACC(P) who was concerned with the effectiveness of the WYP Occupational Health Unit (OHU) This unit was staffed entirely by 'civilian' staff as a support activity to WYP. A brief was developed against the following issues:

- Confusion over the role of the OHU;
- Communication problems between WYP Management and OHU staff;
- A culture clash between the OHU and WYP at large;
- The 'visibility' of the OHU being exacerbated by the confidential nature of OHU work, and the need for WYP Management to have access to information concerning absence of police officers from duty;
- A 'clash of values' leading to the view that health related concerns are neglected;
- Resource wastage;
- Adaptation of OHU working practices.

An operating brief was agreed to include the following objectives:

- To identify the main stakeholders as those individuals, or groups of individuals, who can affect, or may be affected by, the activities of the OHU;
- To appraise the value of current OHU activities;
- To establish stakeholder views concerning the future role of the OHU;
- To evaluate the structure of the OHU;
- To design 'future oriented' managerial and operational structures and processes for the OHU;

- To develop an agreed set of objectives for a future OHU;
- To facilitate the development of a plan of action for the implementation in practice of agreed objectives, future structures, and role(s) of the OHU.

From the operating brief, a methodological approach was developed in consultation with the ACC(P) and the Force Medical Officer. The methodology was developed to take into account the needs and expectations of WYP management, the OHU, and the need of the author to test the CPIM. The agreed approach was as follows:

- Identify all possible stakeholders;
- Prepare a basis for structured interviews of stakeholders;
- Carry out a stakeholder interview programme;
- Analyse the outputs of the stakeholder interviews as the Initiation of Understanding Phase of CPIM;
- Using the outcomes from the Initiation of Understanding Phase, prepare the Design of Intervention Process Phase of the CPIM;
- Having Designed the Intervention, use the Systems Based Intervention Methodologies selected, as the Implementation Process Phase of the CPIM, to bring about the required changes in the OHU thus benefiting WYP as the wider containing system.

9.3.3 Systems Based Approaches Utilised

This intervention was seen, from the outset, as the opportunity to carry out the test of both the STOC and the CPIM. It was considered essential to proceed with learning through a 'methodology-informed' approach in which the rhetorical question 'what is the most appropriate methodological choice within the context of the STOC and the CPIM as developed?' guided the learning process.

Therefore, the systems based approaches used were derived from the CPIM underpinned by the STOC. As a reminder, the CPIM is a Critically Pluralist Meta-Methodology grounded in Critical Systems Thinking (CST) and underpinned by the Systemic Theory of Organisational Change (STOC). In that context, the CPIM guides a change-oriented intervention in an organisation in three phases:

- The Initiation of Understanding Phase that seeks to:
  Develop an understanding of participant relationship characteristics;
  Develop visibility of system characteristics;
  Make transparent the richness of the change situation in terms of types and forms of change.
- The Design of Intervention Process Phase that includes:
  Clarification of the initiation framework of understanding;
  Gaining participant acceptance of the new knowledge derived during the initiation phase;
  Developing participant commitment to a robust intervention process;

Developing participant understanding of the nature of diverse forms of organisational change;
Involvement of participants in intervention process design.

- The Implementation Process Phase that includes:
  Involvement of participants in the intervention process as designed to bring about effective, robust, and sustainable organisational change.

This 'framework' drove and guided the intervention. For the author, an aspect of major importance was that of testing the STOC and the CPIM, and it was necessary to establish a means of evaluating both the STOC and the CPIM. Appropriate questions for testing the STOC and the CPIM are:

- Was the intervention carried out within the principles and philosophy of CST?
- Was the intervention process Critically Pluralist in nature in terms of human emancipation?
- Was paradigm diversity protected by using cross paradigm thinking and by adopting a process driven intervention design?
- Did the intervention process design select systems based intervention methodologies in terms of forms, types, and paths of change that were appropriate for the change situation encountered?
- Were the fundamental epistemological and ontological aspects of organisational change taken into account?
- Did the CPIM derive sustainable and robust change in the change situation encountered?
- Does the CPIM need further development?
- Has the STOC contributed to systems thinking and theories of organisational behaviour and change?

These questions will form the basis for reflective discussion at the end of this particular intervention.

9.3.4 Outputs Achieved

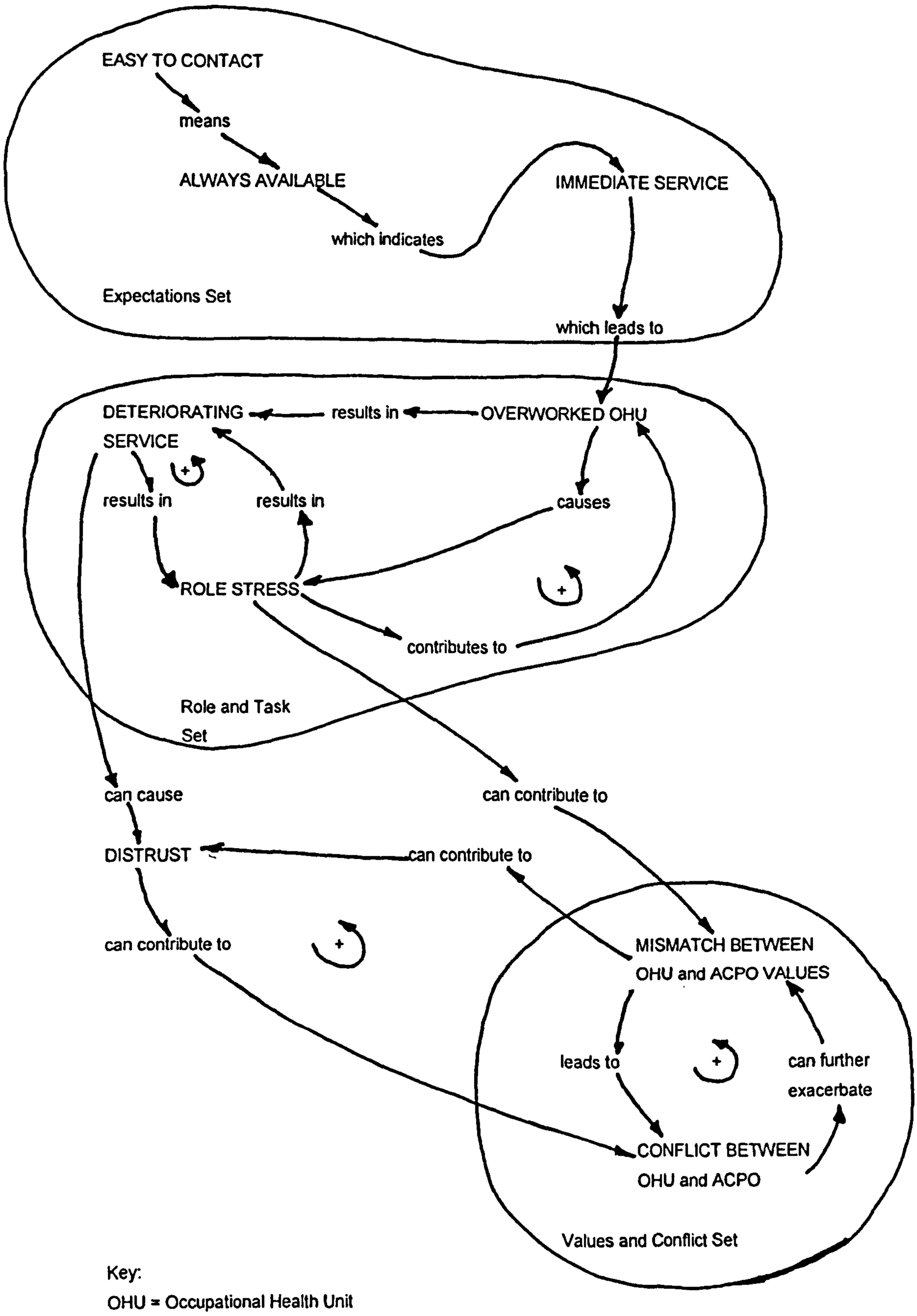
9.3.4.1 Initiation of Understanding Phase

Audiotaped interviews were conducted with forty-five stakeholders within WYP using a set of sixteen structured questions (See Appendix 6) to guide the interviews. The stakeholders were selected across all main organisational functions and constituted a 'vertical slice' through WYP, from the Deputy Chief Constable to operational police officers. All OHU staff were included in the stakeholder interview programme.

Analysis of the stakeholder interviews generated interlinked themes that were grouped into three sets:

- An expectations set;
- A role and task set;
- A values and conflict set.

There were four clear positive, or reinforcing, loops evident within the analysis, that were potentially useful in terms of possible intervention points. The sets, containing themes, and reinforcing loops were developed into an influence diagram as shown in **Figure 9.1** below.



Key:

OHU = Occupational Health Unit

ACPO = Association of Chief Police Officer Level (Assistant Chief Constable and above)

Figure 9.1 Stakeholder Analysis Output

From the stakeholder analysis and the influence diagram shown in **Figure 9.1** above, the 'big issues', emphasising the richness of the change situation, were also identified as:

- The actual role(s) of, and services provided by, the OHU;
- Apparent clashes of values, interests, and loyalties;
- Actual relationships between the OHU and operational policing at Divisional and ACPO levels;
- Medical confidentiality;
- Internal management of the OHU;
- OHU reporting line to ACPO and independence of OHU;
- Relationship between OHU and Health and Safety at Work;
- Status and remuneration of OHU staff;
- OHU involvement in operational policing policy and strategy.

Within the context of initiating understanding, and using **Figures 7.4, 7.5, and 7.6**, the analysis led to the following conclusions:

- The participant relationships were recognised as hostile - conflictual;
- System characteristics were recognised as complex - transformational;
- The potentially dysfunctional conflict could be managed and turned into creative conflict designed to bring about the radical second order change necessary for system transformation;
- Following the stakeholder analysis, the characteristics of change were observed to be Form Three - Second Order following Path C as outlined by Scenario Three;
- The political, organismic, and culture metaphors were all evident, with the political metaphor being dominant;
- The neuro-cybernetic metaphor, whilst present, was relatively weak;
- The OHU staff felt under threat in terms of survival and under domination from ACPO in terms of a task orientation.

This, then, was the output from the Initiation of Understanding Phase of CPIM which provides a clear basis for the Design of Intervention Phase.

9.3.4.2 Design of Intervention Phase

Using the analysis emerging from the Initiation of Understanding Phase, the Design of Intervention was undertaken with the principles of Critical Pluralism and CST as uppermost. From the analysis, and using the information derived from the stakeholder interviews, a two-day workshop, facilitated by the author, was recommended. This workshop would provide an emancipatory (by removing ACPO domination of proceedings) nominal stakeholder forum, the output of which would be a design for the future of the OHU that:

- Would be owned by the OHU and WYP;
- Must be implemented by the OHU and WYP;
- Would develop commitment from both the OHU and wider WYP management and staff;

The membership of the nominal stakeholder group for the workshop was:

- ACC (P);
- WYP Personnel Officers;
- Divisional Chief Inspector for Personnel;
- Divisional Inspector;
- WYP Force Medical Officers and Psychologist;
- Welfare Officer;
- Nursing Officer;
- Unison Representative;
- Police Federation Representative;
- Superintendent's Association Representative;
- Serving Police Officers (male and female);
- Members of OHU Support Staff.

During the Initiation of Understanding Phase of CPIM, the OHU had been analysed as:

- A complex - transformational system;
- Having participant relationships that were conflictual in terms of hostile negotiation;
- Being best described by the political metaphor;
- Having Form Three, Second Order, Path C change characteristics.

Given these conditions, the methodologies best suited to bringing about radical but constructive change were identified as SSM for addressing the conflict and OHU process issues, and the VSM through which to develop a sustainable OHU future structure. SSM would be used to provide the basis for the two-day workshop whilst the VSM would be used in an 'off-line' mode, after the workshop, for OHU structural diagnosis and re-design. The methodological basis, and the reasons for the choice, was explained to, and accepted by, the identified client.

The Design phase had:

- Clarified the issues, concerns, and worries of the stakeholders;
- Gained acceptance, by the stakeholders, with respect to the information that had emerged from the Initiation of Understanding Phase;
- Developed the necessary and sufficient commitment by the stakeholders to the process of intervention;
- Involved the stakeholders in the Design of the Intervention Process thus ensuring the critical pluralism with respect to the principle of improvement in the human condition as an essential feature of the intervention.

9.3.4.3 Implementation Process Phase - Stage One

The two-day workshop was held in late February 1996 at WYP Force Headquarters Training School. The twenty-five stakeholders attending the workshop were provided with a brief outline of SSM. The stakeholders were divided into three groups with a mix of ranks, roles,

and functional responsibilities. The atmosphere was one of 'structured informality' to reduce the potential for dominance by senior management and ACPO police officers. This approach was in keeping with the emancipatory principle of CST and, indeed the declared intent that CPIM would incorporate critical pluralism, including that of a commitment to improvement in the human condition, in any intervention undertaken within the theoretical basis of the STOC

The need to 'focus' was emphasised to the stakeholders during the introduction to the workshop. To establish and maintain this focus the workshop design included a phrase that would guide and concentrate the thinking of the stakeholders during the SSM process. This guiding and focussing phrase was:

'The management of the Occupational Health Unit in terms of its contribution to the effectiveness of West Yorkshire Police as an organisational system.'

The objectives of the workshop were stated as:

- To develop a 'mission statement' for the OHU;
- To develop a basis for the design of an appropriate management structure and reporting line for the OHU;
- To define the roles and services to be offered by the OHU to WYP;
- To derive the working relationships between the OHU and WYP operational policing including OHU input to WYP Strategy and Policy Making;
- To establish guidelines for the resolution of issues of loyalties, values, and interests.

The stakeholder groups were isolated from each other and asked to develop group rich pictures by using the focusing phrase. The groups were asked to concentrate on how they 'saw' the OHU and to avoid developing 'solution statements'. There were fractious elements within all three groups, and considerable effort had to be expended in keeping the groups 'on track'.

All three groups did produce rich pictures, which are presented in Appendix 7. These were then presented in a plenary session enhancing the stakeholder learning process. During the plenary session, and using all three rich pictures, the stakeholders were able to surface a series of 'problem issues'. These were then formulated as activity systems relevant to 'doing something about' the issues as follows:

- A system to identify the key contributory roles of the OHU in terms of the organisational effectiveness of WYP;
- A system to identify the key expectations of the OHU in terms of contribution to operational efficiency;
- A system to identify the core services offered by the OHU to WYP;
- A system that will establish effective OHU structures and internal management processes;
- A system that will develop guidelines for the resolution of conflicts of values, interests and loyalties between WYP Management and the OHU;

- A system to establish what information is necessary for the OHU to provide an effective service to both 'patients' and WYP Management;
- A system that will identify necessary OHU contribution to WYP strategy development and policymaking activities of WYP;
- A system to facilitate a mission statement for OHU commensurate with overall WYP strategy.

Discussion then revealed that the stakeholders were strongly in favour of moving to a solution-deriving approach for the remainder of the workshop. Therefore, recognising the 'pluralist mood' of the workshop, and the need to recognise that the outcome of the intervention had to reflect the rationality of the problem owners, the author decided to modify the rigorous SSM approach. Having 'structured' the problem situation, and developed a stakeholder perspective, the groups were directed towards producing recommendations for the issues that had been surfaced from the rich picture analysis. This was advantageous in terms of maintaining focus for the workshop. However, this was a worry for the author as there might be a loss of rigour in the application of SSM in terms of systemicity. However, it is argued that rigour and systemicity were maintained as the process continued within an SSM framework by taking a Mode 2 approach that recognised the situation in cultural terms. In other words, the social and political aspects of the situation were recognised by including the stakeholders in the 'would be improvers of the situation' category. Indeed, the Multi-methodology of Mingers (1997) recognises such situations, and it is argued that this 'decomposition' of SSM was a valid means of using appropriate parts of systems based intervention methodologies, in a critically reflective posture, to bring about effective change that reflects the rationality of the problem owners. This point of view is also evident in Checkland's (1999) LUMAS model which advocates a user (**U**) tailoring a methodology (**M**) to a user specific approach (**A**) to guide inquiry and action in a real world situation (**S**).

Therefore, stakeholder groups were shown how to use the rich pictures, as a representation of the current 'mess', providing a comparison with the requirements that emerged from the activity systems. The stakeholders then worked on comparisons between the rich pictures and the defined activity systems producing, as outputs, a series of minimum recommendations commensurate with the workshop objectives.

For the issues of key contributory roles and expectations for the OHU, the following recommendations were made to develop:

- A marketing role: making WYP Divisional and HQ staff aware of the services available from the OHU;
- A clarification role: by managing the OHU resources in co-ordination with skills available to provide clarity of the core services;
- An information management role: by using dialogue and feedback to personnel services creating an awareness of the OHU in terms of roles and services;
- A contribution role: by creating an awareness of effective contribution to the well being of all WYP staff through the provision of high quality OHU services;

- A strategic planning role: by developing active links with other functions, to provide input to WYP strategic planning.

For the issues of core services, information requirements, and management processes, the following recommendations were established:

- The provision of a wide range of management information including sickness monitoring, health education, fitness for service, pre-employment, senior officer subordinate referrals, sickness statistics, trends in organisational health, and health surveillance;
- Establish an internal Management Information System (MIS) to capture relevant data from client enquiry and assistance activities;
- Provision of in-division clinics;
- Provision of training services and in-service medicals for over 35's;
- Provision of welfare and counselling services for family issues, financial problems, stress, and post-traumatic incidents;
- Pioneer 'good practice' in occupational health by participating in national developments;
- Act as a national model for occupational health in the police service by participation in ACPO forum;
- Develop effective and efficient internal OHU management processes through client management systems, record systems, budgetary control, co-ordination of internal activities, gaining understanding of the operating environment, liaison with other WYP functions, establishing OHU strategy and policy relative to WYP direction, and creating an OHU steering group;
- Draw up and implement Service Level Agreements (SLA's) based upon objectives drawn from the mission statement;
- Derive Performance Indicators (PI's) that will reflect the SLA's;

The OHU mission statement was then derived by the stakeholders as follows:

"The OHU will provide and maintain a professional support service to WYP and its members in all matters relating to Health, Safety, and Welfare through:

- **The provision of a range of occupational health and welfare services;**
- **Advice and education with respect to personal health;**
- **Responsive and responsible management of WYP healthcare;**
- **Developing good practice in terms of safety at work;**
- **The provision of appropriate health information to WYP senior management;**
- **Contribution to WYP Strategic Planning and Policy;**
- **Co-operation and liaison with all WYP functions."**

Having derived the series of recommendations, the stakeholders argued that the complex issues such as OHU management structure, input to strategy and policy development, and the conflict of values, beliefs, and loyalties should be addressed by the author, together

with appropriate OHU staff and the ACC (P), in an 'off-line' mode. At this stage, the stakeholders felt that the objectives of the workshop had been achieved.

However, it was clear to the author that the intervention was far from complete and it was pointed out to the stakeholders that further work was needed if all the objectives of the intervention were to be realised. All stakeholders agreed that a second stage to the Implementation Process Phase, utilising the outputs and recommendations derived from the workshop as a basis, should be undertaken. This second stage would involve a nominal group of appropriate personnel from the OHU and WYP working with the author in workshop format. The nominal group, including OHU staff and the ACC(P), were chosen by the stakeholders and a date for a one-day workshop was set.

9.3.4.4 Implementation Process Phase - Stage Two

The second one-day workshop convened early in April 1996 with the following objectives:

- To carry out a structural diagnosis of the OHU Management Structure as a basis for a re-design of the OHU Structure;
- Use the structural re-design to develop mechanisms for OHU involvement in WYP Strategy and Policy;
- Within the OHU re-design, create a basis for measurement of the OHU in terms of effective contribution to WYP;
- Build into the OHU re-design a means for managing conflicts of values, beliefs, and loyalties.

The ten workshop members were:

- ACC(P);
- Force Medical Officer and Force Psychologist;
- Senior Nursing and Welfare Officers;
- WYP Personnel Manager and OHU Administrator;
- Unison, Police Federation, and Superintendents Association Representatives.

The author acted as the facilitator with an 'active' posture. This approach was adopted because of the presence of articulate and dominant people in the meeting. The first task was the structural diagnosis of the OHU. Prior to the workshop, the author had carried out a VSM Mode 1 diagnosis of the OHU with the following outcome:

- No identifiable group is responsible for developing strategy, policy, future positioning, or the creation of a recognisable OHU identity;
- There is no identifiable mechanism for gathering environmental intelligence for immediate or future scenarios;
- Little co-ordination exists in terms of service provision resulting in overload and stress;
- The OHU has little visibility of its performance or capability;
- No one audits operations;

- The professional functions (Welfare, Medical, Nursing) only work through a high degree of self-organisation;
- OHU administrative staff skills are not recognised and not used to deliver high quality service;
- The OHU is regarded by clients as 'superb' and used as a walk-in surrogate for NHS General Practice;
- The OHU is regarded by WYP Senior Management as an expensive 'walled garden' that did not act as part of the wider system.

The VSM diagnosis revealed that there were no Systems Five, Four, Three, no Three Star, and no System Two. Within the context of the VSM, the OHU did not appear to be viable as a system. Indeed, the label 'system' was inappropriate for the OHU. After a short explanation of the VSM, this diagnosis was presented to the workshop in very blunt terms and the metaphor of a 'headless chicken' was used to describe the OHU. No one dissented.

Using the VSM in Mode 2, and the analysis above, the OHU structure was re-designed by the group to eliminate the weaknesses and to develop an OHU that would be viable. The re-designed VSM structure was then used as a basis for the creation of a matrix structure that would be 'recognisable' in WYP organisational terms. These two structures are shown in **Figures 9.2 and 9.3** below.

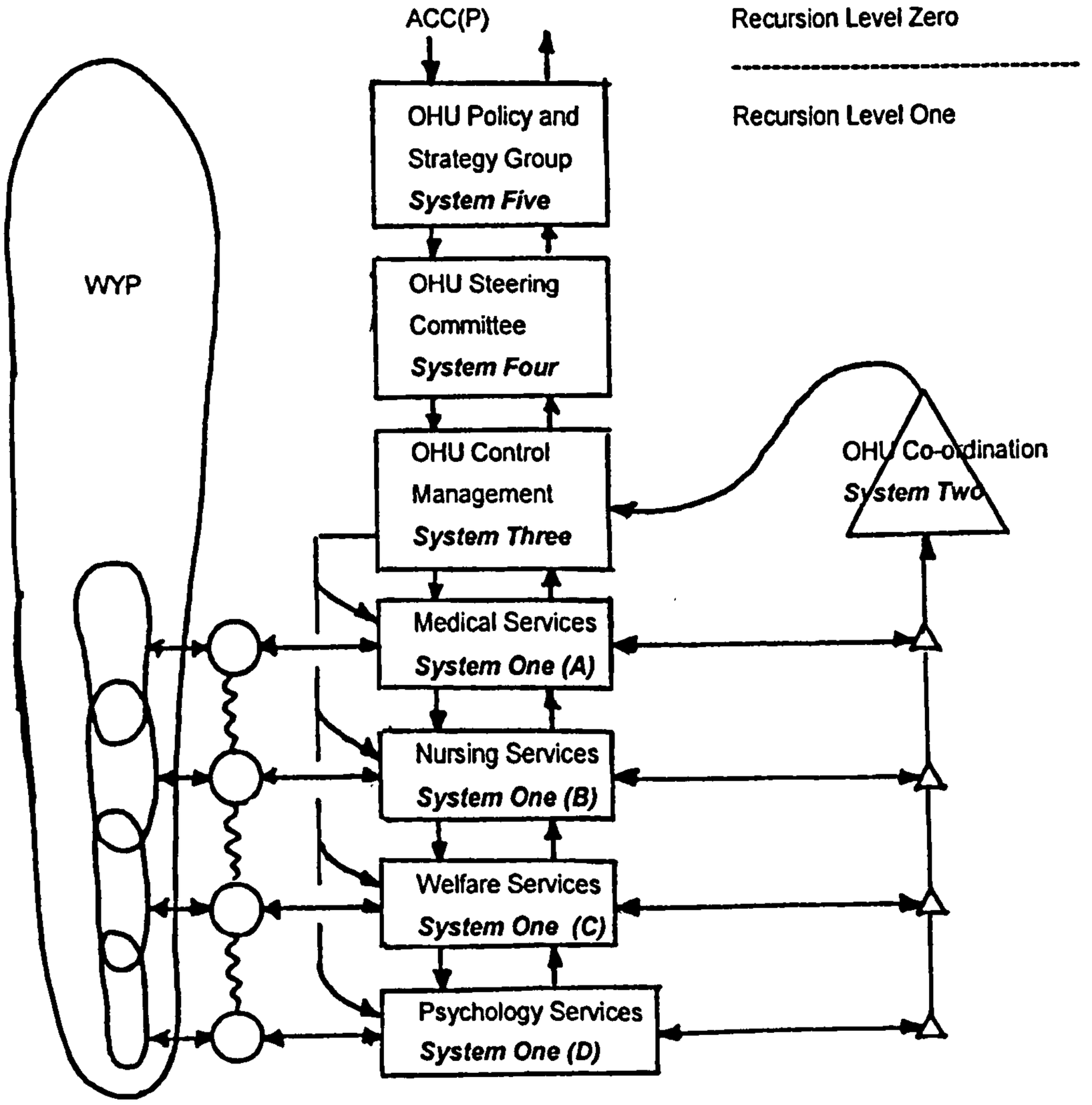


Figure 9.2 OHU Viable System Re-Design

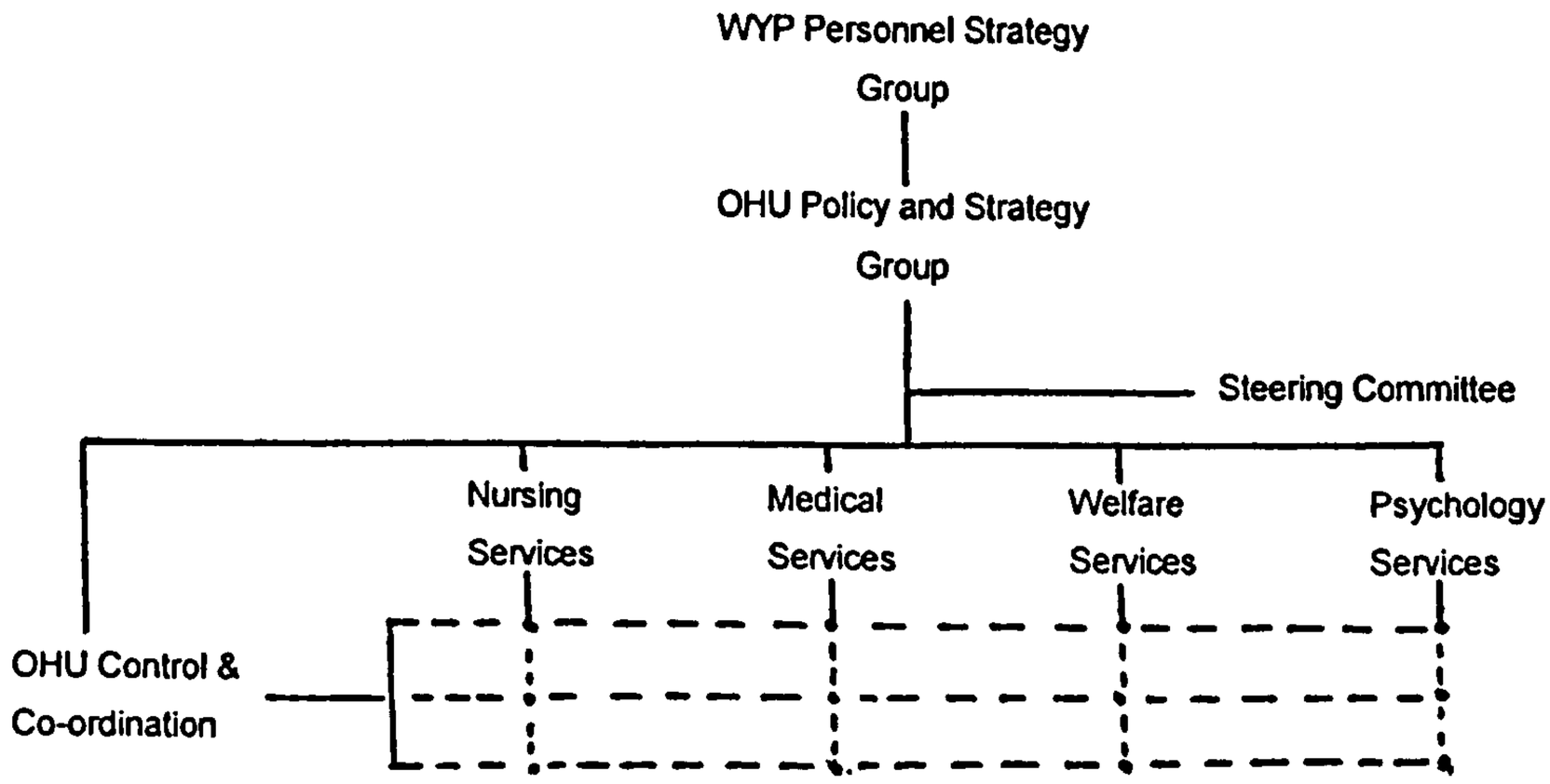


Figure 9.3 Derived OHU Matrix Structure

The VSM and matrix structures were then used to develop the mechanisms for OHU involvement in Strategy and Policy. The issue of OHU identity creation was also brought into the remit, as this was seen as important. The associated issues of OHU measurement and conflict management, which were addressed through the allocation of roles and responsibilities, will be outlined in the following paragraphs.

An OHU Strategy and Policy Group was proposed consisting of the Force Medical Officer, plus Senior Nursing and Welfare officers and the OHU Administrator. The Force Medical Officer was to be the OHU representative, at the next level of recursion up, on the WYP Personnel Strategy Group thus resolving the problem of the OHU reporting line. This group would fulfil the requirements of VSM System Five.

Secondly, an OHU Steering Committee, to act as an Intelligence Function, was designed. This committee would be charged with responsibility for external development and liaison with professional bodies, ethics, confidentiality and standards, operating protocols, liaison with other WYP departments concerning future requirements, information gathering, advice to the Strategy and Policy and Control Management groups. The members of this group included the ACC(P), the Force Medical Officer, a Divisional Commander, the Personnel Manager, the Health and Safety Officer, and the Force Psychologist. This group would carry out the functional requirements of VSM System Four.

The third structural aspect to be considered was that of OHU Control and Co-ordination Management. The functional responsibilities included development and maintenance of Service Level Agreements, Performance Indicators, Operational Measurement Statistics including management reports, Client Management System and records, management of the operating protocols, liaison with the Steering Committee with respect to policy and strategy implementation, liaison with WYP Personnel Management for immediate operational issues, resource allocation to the OHU functional operating units commensurate with OHU policy, and local audit of OHU Services to WYP. This group, headed by the OHU Administrator, would include all clerical staff. This group would be responsible for VSM Systems Two and Three.

Finally, the structural requirements for service provision were taken into account. These were relatively simple in that the OHU needed to provide nursing, medical, welfare, and psychological services. Each of these functions would fit into the matrix structure headed by the appropriate senior staff member. The individual functions would carry out work utilising resources allocated, co-ordinated, and controlled by the OHU Administrator. This arrangement corresponded with System One of the VSM.

The workshop participants debated the credibility and viability of the structure and functions of the OHU in terms of effectiveness and contribution to WYP. All were agreed that the proposed structure and functions would be a significant improvement over the existing arrangements. It was also agreed that the structure and functions proposed would provide the means, and formal arrangements within which issues of client confidentiality, performance measurement against agreed SLA's, effective resource management, OHU contribution to WYP Strategy and Policy, and conflict resolution could be managed. It was recognised that the objectives for the intervention had been achieved, and the workshop concluded with an agreement to proceed along the lines established during the two phases of the intervention. The Force Personnel Manager and the Force Medical Officer were identified as the joint managers for the implementation of the agreements made. The joint managers would develop the OHU matrix structure and appoint appropriate people into the roles contained within the structure. The issue of remuneration had not been addressed, and it was agreed that this would be a primary task for the new OHU Steering Committee.

9.3.5 Reflection

This intervention had been lengthy, complex, and interesting involving issues of power, conflict, and organisational effectiveness within a strategic change context. For the author there had been the issue of dual requirements. Firstly, this intervention had been undertaken to bring about effective and sustainable Second Order change for WYP constrained by specific client objectives and disagreements amongst the Stakeholders. Secondly, the intervention had formed the basis of a 'test vehicle' for the STOC and the CPIM. To some extent, these dual requirements were in conflict and this did present difficulties for the author.

A good example of this conflict is provided by the changing stakeholder requirements during the workshop of the first phase of the implementation process. Here a shift was necessary away from formal SSM towards the expressed view - of all stakeholders - that solutions should be pursued. This went against all the academic inclinations of the author, but the client's needs, expectations, and rationality were the driving imperatives. Hence, the direction of the workshop had to change.

During the shift, the author was dismayed and felt that the whole intervention was, in academic terms, 'coming apart at the seams'. However, on reflection, it is clear that shifts such as this must be expected because, as it has been argued earlier, the intervention was being dealt with as a dynamic process and not as a single event. The methodological issues of

systemicity and propriety were dealt with earlier in this chapter and it is concluded that the outcome of the intervention did not suffer as a result of the methodological change during the intervention. The issues of ethics and methodological propriety will be re-visited a little later on. Indeed, the intervention achieved all of the important objectives and addressed all but one of the major issues that existed. The participants of the second stage workshop, who were the principals in the change situation, expressed the view that the intervention had been successful for the following reasons:

- WYP and the OHU had developed a sensible operating structure with clearly defined roles and reporting lines;
- Establishing clear lines of communication among and between the WYP departments would eliminate previous 'black holes', and the issue of confidentiality would become manageable;
- OHU resources would be properly managed, and WYP Senior Management would no longer see the OHU as an expensive 'walled garden';
- OHU staff would develop a sense of identity with a recognisable culture, and of being valued by WYP Senior Management;
- OHU working practices would be under control, and the levels of stress caused by overload would be reduced;
- The clash of values, beliefs, and expectations between the OHU and WYP Senior Management would become manageable;
- A robust structure and management system would provide a basis for an effective OHU contribution to WYP that would satisfy the needs and expectations of all stakeholders;
- That the change had been radical and of major importance to both WYP as the containing system and the OHU as the system in focus.

The author carried out follow-up activities through subsequent visits to WYP to ensure that the new structures and management processes were being implemented and made operational. Although the new structure and managerial processes were seen to be in operation and effective, several staff observed during one of the follow-up visits, that the 'new OHU' was unable to understand itself in terms of efficiency and effectiveness.

As a result of this observation, a half-day workshop was organised, during the late summer of 1996, with the objective of establishing Performance Indicators (PI's) for the OHU. The PI's were then used to measure the OHU in terms of client throughput, costs per client, feedback information to WYP management etc. This managerial technique provided local and WYP management with real and useful information regarding the effectiveness of the OHU to WYP. Indeed, the performance improvement was such that the OHU were able to provide, on a fee-earning basis, Occupational Health Services to Wakefield Council. Therefore, from what was seen as a 'failing unit' the OHU rose, phoenix like, to become an effective internal service provider and a revenue earner for WYP. This provides evidence that the Second Order change brought about by this intervention was effective and sustainable, and that the 'definition' of sustainable change, derived at the end of Case Study Number Five, can be seen as viable.

Reflection will again use **Figures 7.4, 7.5, 7.6, 7.7, 7.8, 8.2, 8.3, 8.4, and 8.5** as a basis to maintain consistency with previous Case Studies. The STOC and CPIM will also be evaluated using the questions established in paragraph 9.3.3.

The CPIM had been used in its complete form, and the intervention had proceeded according to plan with the exception of incomplete use of SSM. Even though the SSM workshop had to be changed the workshop did produce outputs that provided a basis for OHU structural re-design. The VSM diagnosis and re-design worked well, and no problems were experienced.

The use of the Contextual Relationship Model (**Figure 7.4**), in conjunction with the stakeholder analysis output shown in **Figure 9.1**, provided a sound basis for the Initiation of Understanding Phase of the CPIM. From these two models, the organisational system characteristics were recognised as complex - transformational, and the participant relationships were seen to be hostile - conflictual. The Forms of Organisational Change Model (**Figure 7.5**) showed that the characteristics of change were likely to be Form Three, Second Order and would follow Path C and, most importantly, this was actually borne out in practice. Using the Initiation of Change Context Model (**Figure 7.6**) assisted in the realisation that the political metaphor was dominant with the organismic, culture, and neuro-cybernetic metaphors also in evidence. These models were found to be powerful in terms of providing a clear view of the organisational change situation (as Second Order, Form Three, following Path C and described by Scenario Three) as a basis for a robust Design of Intervention Phase to be undertaken. Although the Initiation of Understanding Phase had been lengthy, the level of understanding gained by the author meant that the Design of Intervention Phase could be approached from a sound base.

The Design of Intervention Process Phase utilised the Methodology Relativity Ordering and the extended SOSM Models (**Figures 7.7 and 7.8c**) to select appropriate systems based intervention methodologies. This was to ensure that not only would the chosen methodologies have a high probability of bringing about effective and sustainable change, but also that the dimension of the order of change would be taken into account.

Figure 8.2 provides an indication of the totality of the intervention with the author deciding to become involved in an existing change situation. In so doing, the sequence and stages of this cycle were all used and, forms a basis for appraisal of the intervention as part of critically reflective learning. The cycle illustrated in **Figure 8.3** has been consciously used as an evaluation of CPIM in accordance with the set of questions set out in paragraph 9.3.3 above.

Clearly the author did use CPIM, and subsequently SSM and VSM, in the context of an interventionist with knowledge of these methodologies to bring about improvement in the problem situation and, importantly, to evaluate the CPIM in particular. This aspect is illustrated by **Figure 8.4** and it is argued that, in the case of the OHU, the author was not only engaged in using the CPIM to bring about effective and sustainable change in the OHU, but also evaluating the CPIM.

The **LUMAS** model, shown in **Figure 8.5**, provides a fourth formal mechanism through which the use of CPIM can be evaluated. The author, as a user (**U**), used the CPIM (**M**) within a real world change situation (**S**). In this intervention, the user tailored **M** to **S** to give a user specific approach (**A**) that guided the inquiry and action particularly in the Implementation Process Phase. This approach facilitated learning (**L**) by the author with respect to CPIM as a critically reflective process of inquiry and, indeed, his own perspective with respect to complex second order organisational change. Clearly, the shift of stakeholder requirements during the Implementation Process Phase (stage one) required a change of approach by the author. It was realised that this shift was necessary if the CPIM process was going to bring about the changes required in the system in focus. In other words, it was clear that using SSM tailored to meet the dynamic associated with stakeholder needs was appropriate, within the guiding framework of CPIM, to design and effect change. Here learning by the author took place in terms of the situational dynamics, CPIM, and the requirement to modify SSM. If the change in approach had been resisted by the author, then the outcome of the intervention might have been adversely affected.

The desired outcome for this intervention was that of Second Order, effective, desirable, and therefore sustainable change for the OHU of WYP. It was clear that the author, as the user of **M**, had to modify **M** in terms of adaptation to the changing situation **S**, and it is entirely reasonable to assert that CST informed the choice to modify **M** to suit **S**. It was recognised that the choice of approach rested with the author (as **U**), and that this involved the need for systemic ethical awareness. It was ethical for the author to recognise the needs, expectations, and rationality of the stakeholders as elements of the system. The action taken by the author was in keeping with the notion that taking a systems approach, or using a systems methodology, does not ensure that we act in a way that is fully human (Checkland, 1999). It is vital that any interventionist must act systemically, in an ethical manner, with stakeholder and client interests uppermost if the resultant action is to produce effective, desirable, and sustainable change. The author's understanding of what is meant by an ethical systems approach, through the use of CPIM and SSM, has been enriched by this learning experience.

The STOC and the CPIM had been developed over a period of time in action research mode. During this time the STOC and the CPIM had been changed, improved, and developed to a point where it became useful in a complex organisational change situation. In that sense, the developmental work has been in keeping with the premise that CST is associated, as Jackson (2000) argues, with constantly reflecting on the limitations of, and on the level of understanding of an interventionist. Nevertheless, the CPIM has been used in its current form but once, and further work is necessary to develop the CPIM through extended use by other interventionists if it is to become more universally applicable.

It is now possible to evaluate the STOC and the CPIM using the questions posed in paragraph 9.3.3. In using the questions it must be pointed out that a great deal of the argument and justification for the answers has already been rehearsed in the preceding paragraphs of this reflection.

Q1. Was the Intervention carried out within the principles and philosophy of CST?

As the evaluation and re-design of the OHU management structure and practices were carried out under the guidance of the STOC and the CPIM, then the answer is in the affirmative. Justification for this conclusion is based on the fact that all phases of the CPIM were followed rigorously, and that the CPIM had been developed from a theoretical basis that reflects the principles of CST.

Q2. Was the Intervention process Critically Pluralist in nature in terms of human emancipation?

Again, the answer is in the affirmative. The reasoning behind this rests in the fact that the Initiation of Understanding and the Design of Intervention Process phases of the intervention were both in keeping with the principles of CST involving active stakeholder participation in both phases. Additionally, the first Implementation Process Workshop was designed to create an emancipatory forum by adopting a nominal group approach thus ensuring that the potential for ACPO domination was minimised.

Q3. Was paradigm diversity protected by using cross paradigm thinking and by adopting a process driven intervention design?

The intervention utilised knowledge from functionalist, interpretivist, and radical humanist paradigms. The stakeholder interview programme itself drew upon both functionalist and interpretivist paradigms as a basis for the Initiation of Understanding Phase of the CPIM. The information derived from the Stakeholder interviews was used to produce the Stakeholder Analysis Output, shown in **Figure 9.1**. The issues associated with the role and task set are predominantly related to the functionalist paradigm. The expectations set relates to issues that are interpretivist in nature, and the issues contained within the values and conflict set can be seen as radical humanist in nature. These influences, the metaphor analysis, and the models contained in Figures **7.4, 7.5, 7.6, 7.7, and 7.8** produced a process driven intervention. This view is supported by the shift from formal SSM towards a solution driven process during stage one of the Implementation Process Phase. Therefore, it is asserted that paradigm diversity was protected during this intervention using the CPIM.

Q4. Did the Intervention process design select systems based intervention methodologies in terms of forms, types, and paths of change that were appropriate for the situation encountered?

The use of SSM for the stage one workshop was wholly appropriate given the nature of the system that contained the change situation and the relationships amongst the participants. This assertion is based on the use of **Figures 7.4, 7.5, 7.6, 7.7, and 7.8c**. Given the identified needs for effective OHU structure and management processes, the use of the VSM to diagnose and then design structure and process for the OHU was also appropriate. The choices of both SSM and VSM were based on an extensive and thorough analysis of the OHU during the Initiation of Understanding Phase of the CPIM. This analysis provided an underpinning, based on the STOC, which was theoretically and practically sound. Therefore, it is concluded that the

methodological choice for the intervention process did encapsulate forms, types, and paths of change that were appropriate given the situational characteristics encountered.

Q5. Were the fundamental epistemological and ontological aspects of organisational change taken into account?

It is proper to argue for a 'yes' to this question on the grounds of an STOC that is based on the derived epistemological and ontological framework for organisational change contained in this thesis. The fact that the STOC underpins the CPIM that was used in Initiating Understanding, Designing a Process for the Intervention, and then Implementing the intervention using appropriate systems based methodologies provides the basis for this assertion.

Q.6 Did the CPIM derive sustainable and robust change in the change situation encountered?

The OHU was re-visited some six months after the events described above. It was found that the new structure and the management processes were all still in place and working. All the Stakeholders were interviewed again, and the consensus was that of a real improvement in OHU operations in terms of effective contribution to WYP. OHU staff were - without exception - pleased with the outcome and had developed a sense of identity and belonging that was reinforced by the feeling of being valued by WYP. Therefore, the Second Order change had been effective, robust, and sustainable.

Q7. Does the CPIM need further development?

Yes! One successful application does not provide a fully developed process of inquiry and it is essential that the CPIM is tested and developed further.

Q8. Has the STOC contributed to systems thinking and theories of organisational behaviour and change?

The argument must be that the STOC has, indeed, contributed to systems thinking and theories of organisational behaviour and change. The reasons for this assertion will also be addressed in Chapter Ten.

9.8 CONCLUDING SUMMARY

This chapter has provided evidence that the STOC and the CPIM are sound and useful as theoretical and practical 'tools' for the effective management of organisational change. It can be seen, through the five Case Study interventions carried out over a four-year timeframe, that the STOC and the CPIM were developed and tested on a rigorous basis. It is also evident that the development and testing of the STOC and the CPIM were carried out under the grounding theoretical regime of Critical Systems Thinking (CST), and all of the work was consistent with that framework. Therefore, it is concluded that both the STOC and the CPIM contribute to knowledge, theory, and practice of systems thinking in terms of complex organisational change situations, and that they are unique in their theoretical and practical basis.

CHAPTER TEN

CONCLUSIONS

10.1 INTRODUCTION

10.1.1 Preamble

Chapters One through to Nine of this thesis were associated with:

- Developing a methodological approach for the research programme;
- A theoretical exploration of the phenomena of change, in first and second order terms, as a basis for gaining an improved understanding of organisational change;
- Developing an understanding of the sociological basis of organisational analysis in a paradigmatic framework;
- Using the sociological paradigmatic framework of organisational analysis as a grounding theory for the development of an epistemological and ontological framework for organisational change;
- Carrying out a comprehensive review and critique of traditional, contemporary and Critical Systems Thinking (CST);
- Setting out the principles of critical pluralism, within Critical Systems Thinking (CST), as the grounding theoretical underpinning for a Systemic Theory of Organisational Change (STOC);
- Using the epistemological and ontological framework for organisational change to assist in the development of a Contextual Relationship Model of Human Interests and System Complexity for incorporation into the CPIM;
- Developing and constructing Forms, Types, and Paths of Change, using the theory of first and second order change, as important components of the Critical Pluralist Intervention Methodology (CPIM);
- Incorporating a third dimension of Type of Change, in first, second and third order terms in the System of Systems Methodologies (SOSM), such that systems based intervention methodologies could be aligned with the Human, System Complexity, and Type of Change dimensions within the CPIM;
- The development of the Systemic Theory of Organisational Change (STOC) and the Critical Pluralist Intervention Methodology (CPIM) through which to operationalise the STOC;
- Testing both the STOC and the CPIM using real world interventions in keeping with the methodological approach established at the outset of the research programme.

10.1.2 Research Perspective

This research programme was carried out, by the author, with the aims of developing an approach to organisational change that would be theoretically grounded in Critical Systems Thinking (CST), and then testing this approach to demonstrate its viability in bringing about effective and sustainable organisational change.

It was indicated in Chapter Two that this programme originated from the personal experience of the author as a senior manager in an industrial setting. It was this experience that provided a driving imperative for the development of a sound theoretical framework as an underpinning for the design of a systems based methodology capable of bringing about effective and sustainable organisational change.

The author did not wish to approach the research from the 'planning and managing change' or Organisation Development (OD) perspectives; instead, it was decided to approach the research from a perspective which incorporated the nature, process and dynamics of change as a social phenomenon, and that of a methodologically informed practitioner. It is also most important to indicate that the author does not regard himself as a theoretician; his orientation is that of a practitioner who supports and understands the need for managerial action that is underpinned by, and interdependent with, a sound and appropriate theoretical base.

Notwithstanding this pragmatic orientation, the author understood that effective organisational learning is dependent upon sound theory, and that the interdependence between practice and theory is a vital factor in the achievement of sustainable change. This led the author to carry out research relevant to understanding the theoretical nature, process and dynamics of change as a phenomenon. This research produced information (Watzlawick et al, 1974) leading to an understanding of first, second, and during the testing of the CPIM, third order change phenomena. This understanding, using the sociological four paradigm framework of organisational analysis (Burrell and Morgan, 1979) as the grounding theory, guided the development of an epistemological and ontological framework for organisational change, and led on to a deeper understanding of the contextual relationships between a human relationship dimension and the complexity of the organisational system within which change is being addressed. These developments, along with an understanding of the orders of change, created the important concept of forms and paths of organisational change as a process rather than a series of disconnected single events. It is argued that this approach, taken from the perspective of a methodologically informed practitioner, can be theoretically informative and practically useful with respect to the management of complex organisational change. Hence, it is considered that this research programme has shown how systems thinking can make an informed theoretical and practical contribution to the field of organisational change.

The author regards himself as both a user and now, a developer of systems based intervention methodologies. In that sense, this chapter will include reflection that will encompass

the learning imbibed by the author as a methodological practitioner during each Case Study relative to the development and testing of the STOC and the CPIM.

10.1.3 Structure of the Review and Evaluation

Previous chapters have incorporated summaries which have drawn brief conclusions. In particular, Chapters Eight and Nine included critical reflections for all five of the Case Study interventions during which the STOC and CPIM were developed and tested.

This Chapter Ten, the concluding chapter for this thesis, will:

- Evaluate the STOC and the CPIM, as central developments in this research programme by using the Case Studies as a basis;
- Include in the evaluation of the STOC and the CPIM, associated with the Case Studies, the learning by the author as a user of the STOC and the CPIM;
- Reflect on, and evaluate the learning associated with first, second, and third order change in terms of sustainability and contribution to the theoretical understanding of organisational change;
- Show how the CPIM, through consideration of important central elements (e.g., Contextual Relationship and the Forms of Change Models) can make effective contribution to sustainable organisational change through a comparative analysis with TSI;
- Reflect on the status of the research involving an analysis of the hypothesis, research questions, objectives, and the research methodology;
- Draw out the contribution to knowledge;
- Suggest what further work can and should be carried out to further develop the findings of this research work.

10.2 EVALUATION OF THE STOC AND CPIM AS CENTRAL DEVELOPMENTS

It is important to evaluate the developments of this research programme in terms of the practical outcomes, learning and contribution to knowledge. The STOC and the CPIM are the two major developments, and they were developed and tested using five Case Studies. The five Case Studies followed a common framework, and all of them included a critical reflection with respect to the development of the CPIM supported by the STOC. The starting point for all of the interventions was the need for a STOC, underpinned by CST, rooted in the hypothesis postulated in Chapter One of this thesis. This provided a rigorous theoretical framework for each intervention and the associated reflection.

The reflection for each Case Study concentrated on that particular intervention using **Figures 7.4 to 7.8** and **Figures 8.1 to 8.5** as a framework. Additionally, at the outset of the fifth Case Study, a series of questions were formulated as a basis for a critical review of the STOC and the CPIM. It is these individual Case Study reflections and the final evaluation that helps to provide a basis for this review. The STOC and the CPIM will be reviewed relative to each Case

Study where appropriate, and a reflection with respect to the learning of the author will be included with each Case Study.

10.2.1 The STOC and CPIM in Case Study Number One

At the outset of this intervention neither the STOC nor the CPIM had been developed, and the author attempted to use TSI for the first time. The creativity and choice phases of TSI were applied, and the resulting choice of Interactive Management (IM) was based on the fact that, to the author, it seemed to be an appropriate methodology for the problem situation. The problem was regarded as 'technical' in nature, and it was considered that IM would resolve the issues of inter-personal conflict amongst the participants. The intervention produced first order change associated with internal order handling and production lead time.

An important conclusion to be drawn is that the author was not theoretically well informed with respect to TSI at the outset of the intervention. This was not conducive to bringing about practically useful, effective and sustainable change; this was a methodologically weak position for the author, as a methodology user, during the intervention. The evidence shows that the first order outcome of this intervention was neither effective nor sustainable, and it has to be concluded that this was the direct result of poor knowledge of the theory and process of TSI on the part of the author.

Learning with respect to methodology use during the intervention indicates that:

- TSI, or indeed any methodology utilised during an intervention, must be applied in a rigorous manner if it is to produce effective and sustainable change as a required outcome;
- A sound understanding of the theoretical principles which underpin a methodology, by the interventionist, is necessary to support effective application of any systems based intervention methodology in pursuit of sustainable change;
- Careful assessment of the organisation, in terms of system complexity and the human relationships inherent in the problem situation, is necessary before making a choice of systems based methodology with which to address the change situation.

Reflective learning, post intervention, indicated that:

- This intervention produced first order identity preserving change which was not observable to customers of the organisation; what was required was second order change, resulting in customer confidence that their orders would be delivered on time, and to correct specification;
- The assumption that the problem was 'technical' in nature was incorrect, and it is clear the problem was associated with inter-departmental conflict;
- As a theory of change (STOC) was not available to the author for this intervention, then an understanding of the nature, process and the associated dynamics of change, had to be developed by the author as part of the ongoing research programme;

- The author had to become better informed in theoretical terms about TSI if progress were to be made concerning the interdependence between theory and practice;
- The participant relationships, system complexity, and the potential path that the change process might follow all needed to be clearly understood by the author if effective and sustainable change were to be achieved;
- The author needed to develop an improved understanding of sustainability in the context of organisational change;
- Development of an 'encompassing' theory of organisational change, as a basis for methodology choice, would be advantageous in terms of bringing about effective and sustainable organisational change.

10.2.2 The STOC and the CPIM in Case Study Number Two

This intervention was conducted on the assumption that the problem was well defined. Given the declared intention that a defined strategy was to be challenged, then Strategic Assumption Surface Testing (SAST) appeared to be an appropriate intervention methodology. No attempt was made to use any part of TSI. The intervention was carried out very soon after Case Study Number One, and little progress had been made with respect to addressing the associated reflections.

The problem situation was one that involved issues of power, authority, conflict and entrenched positions amongst the participants. Given these factors, a full and critical appraisal, using the Creativity Phase of TSI, would have been beneficial in terms of gaining an understanding of these underlying tensions. Time was taken by the author to gain theoretical knowledge of SAST as a necessary, but probably not sufficient, act of preparation for the Case Study. The lack of methodological practice with SAST, on the part of the author, was not, at the outset, conducive to bringing about useful change for NYP. However, SAST was applied rigorously and on this occasion, the outcome was both sustainable and effective in that a revised Quality of Service Strategy was produced and implemented by NYP. This intervention did bring about sustainable, second order change for NYP.

Learning with respect to the methodology used during the intervention shows that:

- The rigorous application of SAST was a reasonable basis for the production of effective and sustainable form three, second order change;
- The understanding of the theoretical principles of SAST was of help to the author during the intervention in terms of rigour with respect to methodology in use;
- In practical terms, the author did not carry out the necessary careful assessment of the organisation as a system prior to engaging in the intervention, and the choice of SAST was based on pragmatic reasons.

Reflective learning, after the intervention, indicated that:

- This intervention produced observable change, intended to bring benefit to the affected citizens of North Yorkshire, in terms of the manner in which NYP Officers dealt with them;
- The change was radical and 'novel' as NYP would be observably different to those affected by NYP, leading the author to conclude that there were different forms, types and orders of change;
- The change was likely to be sustainable over time as NYP Officers would be monitored for regression to pre Quality of Service forms of behaviour, thus providing an indicator of the nature of sustainability;
- The need for deeper theoretical knowledge of systems intervention methodologies, on the part of the author, had been reinforced;
- An improved understanding of the contextual relationship between the human dimension and the containing system would form an important component of any meta-methodology (CPIM) deriving from the research;
- A meta-methodology (CPIM), derived from TSI and underpinned by a systemic and 'encompassing' theory of organisational change, would become an imperative for the research programme;
- An 'encompassing' theory (STOC) of organisational change, which would underpin any derived meta-methodology, would need a sound epistemological and ontological foundation.

10.2.3 The STOC and CPIM In Case Study Number Three

This intervention emerged from the previous work associated with the Quality of Service Strategy for NYP. The learning derived from Case Study Number Two, indicated that sound theoretical knowledge and a commitment to rigorous application of TSI as a basis for methodology selection, were fundamental pre-requisites to this intervention. Prior to this intervention desk research had provided the author with:

- Knowledge of first and second order change;
- Understanding of the four paradigm sociological mode of organisational analysis;
- Recognition of the usefulness of the four paradigm epistemological and ontological framework for organisational analysis;
- A sound basis for the development of an epistemological and ontological framework for organisational change;
- A theoretical foundation for the development of a Systemic Theory of Organisational Change (STOC), and the Critical Pluralist Intervention Methodology (CPIM).

The development of a Strategic Planning Process was necessary for NYP, and it would involve fundamental and far reaching changes in the management of NYP. Clearly this would involve change an order of magnitude different to current managerial practices, and it was also clear that the resulting change would have to be sustained. Therefore, the interdependency

between theory and practice had to be ensured through rigorous methodological practice based on sound theoretical knowledge.

During the intervention TSI was employed in full, and the methodological choice indicated that Interactive Planning (IP), and Viable System Diagnosis (VSD) were the appropriate methodologies. As a result, the intervention produced effective second order, form three change. The sustainability of this change is evidenced by the subsequent Five Year Plan, the Local Policing Plan, and the Crime Strategy.

Methodological learning during the intervention indicated that:

- The rigorous application of TSI developed a clear understanding of NYP in terms of human relationships and system complexity;
- Knowledge of NYP as a system formed a sound basis for the selection of IP and VSD as intervention methodologies;
- The sound theoretical knowledge of TSI, IP and VSD provided an interdependent platform for effective practice.

Reflective learning after the intervention has indicated that:

- The intervention brought about second order, form three change through the development of a strategic planning process for NYP;
- The change was radical, developing a sustainable strategic framework that would support managerial action intended to provide observable benefit for affected citizens of North Yorkshire;
- The change was also observable through involvement of the North Yorkshire Police Authority in the strategic planning process, thus creating the conditions for long term sustainability;
- The author recognised that the order and radical form of the change were important components of a CPIM, and the requirements for the extension and development of the dimensions of the System of Systems Methodologies (SOSM), as contribution to the CPIM had also become clear;
- The deeper theoretical knowledge of the author had beneficially informed the intervention in terms of theoretical interdependence with effective practice of methodology application;
- Necessary and sufficient practical experience, combined with deeper theoretical understanding on the part of the author, had provided a sound basis to develop the first iteration of the STOC and the CPIM which were then established.

10.2.4 The STOC and the CPIM in Case Study Number Four

The intervention in a complex conflict situation, within NYP Finger Print Bureau (FPB), was neither well defined nor well structured. The FPB was close to collapse as a system, and radical change was essential if the system were to survive.

A first iteration of the STOC and the CPIM had emerged from the development of a Strategic Planning Process for NYP in the previous Case Study. Therefore, this intervention provided the first opportunity to use the CPIM (as a modified TSI and SOSM) as a methodology underpinned by the STOC.

The problem situation, involving dysfunctional conflict and hostile relationships amongst system participants, indicated that the FPB was on a 'self-destruct' trajectory. In terms of learning, this helped the author to identify a third order of change, associated with system destruction, which had not been explicitly recognised by any known previous research. In turn this indicated the need for a theoretically sound intervention that would bring about a methodological approach designed to ensure radical, but constructive, change for the FPB. The dysfunctional conflict had to be reduced, and turned into conflict that would create the conditions for radical change by laying down a platform which would support a constructive path forward for the FPB. The result of this intervention, was to shift the FPB away from the path of destructive third order change onto a path of second order radical change that was sustained over time, revealing the interdependence between theory and practice.

Learning with respect to both methodology and underpinning theory during the intervention indicated that:

- The FPB was on a trajectory for form four, third order change leading toward system destruction;
- The rigorous application of first iteration CPIM developed a sound and useful intervention process that produced radical second order, form three change;
- The epistemological, ontological, and critical pluralist principles of the STOC, were helpful to the author in developing a clear understanding of the human relationships, the system complexity, and the nature of the likely path, form and type of change necessary for system survival;
- The situational assessment provided a theoretically supported choice of SSM, as the intervention methodology, which helped to create the conditions necessary for radical constructive, rather than dysfunctional destructive, system change;
- The situational assessment also provided further practical learning from the CPIM that informed the STOC through the derivation of the concept of third order change.

Reflective learning, post intervention, indicated that:

- This intervention, which averted form four, third order destructive change, brought about effective, form three second order change;
- The resultant change was radical and provided a sustainable platform for the FPB through which to facilitate observable change beneficial to NYP as a whole;
- The second order, system wide, change entailed moving the FPB out of an existing destructive framework, and into a new constructive framework, which was observable to all NYP CID detectives and all commanders of NYP operational divisions;

- The interdependence between theory and practice was clearly in evidence as the first iteration STOC was used to inform the situational assessment of the first iteration CPIM;
- The use of the STOC to underpin CPIM practice was beneficial in learning terms as this helped the author to develop the characteristics of third order change, to finalise the dimensional characteristics of the Contextual Relationship Model, the Forms and Paths of Change Model, the Initiation of Change Contexts Model, the Methodology Relativity Ordering Model, and the final dimensions of the Extended System of Systems Methodologies;
- By engaging in this intervention the author was able to create the final versions of the STOC and the Process of the CPIM.

10.2.5 The STOC and the CPIM in Case Study Number Five

At the outset of this intervention both the STOC and the CPIM had been developed into the form presented in this thesis. This intervention was intended to provide the author with the opportunity to test both the STOC and the CPIM. In addition to the routine reflection, carried out at the end of the four preceding Case Studies, a specific set of questions were prepared as a critical evaluation.

It is argued that the theoretical basis for this intervention was well informed as the developed STOC formed a grounding theory for the interdependent practice of the CPIM. This view is supported by the fact that the STOC was fundamentally grounded and underpinned by the ontological framework for organisational change, critical pluralism and Critical Systems Thinking (CST). This was a powerful interdependent theory - practice framework that had been developed through a combination of theoretical desk, and practical action research. This interdependent framework, which had emerged from critical self reflection by the author leading to deeper understanding of both the theoretical and practical issues, was considered to be sound enough in concept to undergo a critical test.

The intervention created a sustainable Occupational Health Unit (OHU) for West Yorkshire Police (WYP), which emerged from a form three, second order path C change programme. It is important to emphasise that this was identified as the likely path of change during the Initiation of Change Phase of the CPIM.

Methodological learning during the intervention indicated that:

- The rigorous application of the CPIM provided a sound approach, theoretically supported by the STOC, to the complex issues contained in the change situation;
- The depth of understanding of the theoretical foundations of the STOC was beneficial to the author in terms of confidence with respect to the management of the intervention process;

- The CPIM, as an intervention process, provided clear guidance along the process path, using all the contained models, decision points, and feedback loops thus confirming the need for rigour in methodology application and usage;
- The interdependence of the CPIM relative to the STOC, in terms of epistemological and ontological underpinning, was evident through the use of the Contextual Relationship Model to develop a sound analysis of the human and system complexity characteristics, which recognised the OHU as involving conflictual hostile relationships within a complex - transformational system;
- The Forms of Organisational Change Model, and the Initiation of Change Context Model, were used to develop the likely path, form and type of change, which was felt to be particularly useful as a guiding mechanism for the choice of intervention methodologies;
- The use of SSM in workshop format, and the requirement to change the process of SSM to a decomposed format, helped to reinforce the understanding of change as a dynamic process.

Reflective learning, post intervention, indicated that:

- This intervention produced radical, second order change that was observable to the OHU, to the clients of the OHU, and to WYP senior management;
- The CPIM, underpinned by the STOC, developed a systemic change programme for the WYP Occupational Health Unit (OHU), which coped with dynamic shifts during the intervention, had created a future oriented OHU capable of meeting organisational demands in sustained manner;
- The change process involved shifting the OHU out of an existing framework, and into a new framework, indicating that second order change had been achieved;
- The CPIM, Initiation of Understanding Phase, theoretically predicted the path, form and type of change, and that this was borne out in practice provides evidence to support the claim that the STOC provides a sound theoretically supported learning basis for the CPIM;
- The value of theoretical and practical interdependence between the STOC and the CPIM was further revealed by using the Contextual Relationship Model (which utilised characteristics developed from the epistemological and ontological framework for organisational change) to create a clear understanding of the nature of the conflictual relationships, and the system complexity;
- The order of change theory had been of significant practical use, in terms of the Forms of Organisational Change Model, as a tool for creating understanding of the nature of the change situation and likely paths, form and type of change needed to bring about effective and sustainable change;
- The testing of the STOC and the CPIM indicated that the critical pluralist principles, incorporated in the STOC, played an important part in the implementation of the intervention, and that stakeholder emancipation from the WYP power structure was achieved;

- The nature and constitution of sustainability had been understood and clarified by the development of a 'definition' of sustainability (see paragraph 9.2.4) in terms of an intervention, managed through the use of CPIM, theoretically underpinned by the STOC.

10.2.6 First, Second and Third Order Change and Sustainability

Chapter Three of this thesis dealt with the Nature of Organisational Change through the development of dynamics and order of the phenomenon of change. This treatment identified first and second order change in theoretical terms and, in summary, argued that:

- First order change is internal to a system and leaves the system unchanged to an external observer;
- First order change is identity preserving, systematic, and is identified with machine like systems;
- Second order change involves changing the system itself, and is associated with the change of change;
- Second order change involves stepping out of an existing framework and into a new and unfamiliar framework;
- Second order change is identity changing, systemic, and can be identified with organistic systems.

The characteristics summarised above provided a theoretical understanding of the phenomenon of change. This understanding was used during the research as a learning basis for the practical development of the Forms of Organisational Change shown in **Figure 7.5**, which exemplifies the interdependence between theory and practice. The learning that has taken place with respect to forms of change during this research programme has shown that sound theoretical understanding must underpin any practical development, which is, in this case, the Forms of Organisational Change Model.

The author has previously stated in this chapter that his orientation was that of a practitioner who recognised the value of sound theory in an interdependent relationship with practice. The theoretical basis of orders of change was developed from desk research that was then utilised during the Case Studies as a basis for creating the very important concept of Forms of Organisational Change. The theoretical knowledge of first and second order change also helped the author to identify third order change phenomena during a practical intervention. This model (**Figure 7.5**) is positively related and linked to the Contextual Relationship Model (**Figure 7.4**) and both form major components of the Extended System of Systems Methodologies (**Figures 7.7 and 7.8**) and the CPIM. The action research phases of this research programme involved turning the theoretical treatment of orders of change into models that would be practically useful during organisational change interventions. This involved 'operationalising' the theoretical forms of orders of change by developing the model shown in **Figure 7.5**. This is exemplified in the discussion which provides indicative forms and paths of change, through reference scenarios, contained in paragraph 7.3.4 of this thesis.

This learning has provided a practically useful approach to the issue of sustainability in organisational change. For example, first order internal, non observable, change is practically characterised by Forms One and Two change. Such forms of change concentrate on achieving sustainability by focusing on maintenance of system identity, status quo, and retention of control by organisational managers. These two forms of change, which can be related to the Functionalist and Interpretivist paradigms (Burrell and Morgan, 1979) respectively, are both associated with the sociology of regulation. Sustainability in Forms One and Two change is achieved through objectives, set and established at the top of the organisation, which are implemented by the group in a manner that maintains and preserves group identity. The resulting group processes, structure and behaviour, which, although observably different to the internal group members, are not observable to outsiders.

A good example of this is contained in Case Study Number One. The group continued to work together within modified structures, maintaining existing identity, but using alternative means for managing order handling and reduction of production lead time. These changes were not observable to customers who received no reassurance that their orders would be met. The change, which was form one, first order, created internal sustainability for the organisation with control residing in existing management.

Second order, total system, observable change is characterised, in practical terms, by form three change. Such change has been described by several reference scenarios. Form three, second order change is usually addressed from within a complex - transforming system that can proceed along any one of several indicative paths. Such forms of change concentrate on achieving sustainability by ensuring that new forms of behaviour, system structure and operating processes are maintained post intervention. Sustainability in such indicative scenarios is brought about, by those holding positional power, through a pluralistic approach which utilises divergence and conflict creatively. Such a regime recognises that 'difference' is a valuable catalyst that can shift a system out of an existing framework along a constructive path designed by group members. Objectives are established and implemented by the total group in a manner that creates fresh identity, structure and operating processes within a new framework. This generates commitment by group members to the new regime which, in turn, leads to sustainability over time.

A good example of such change and sustainability is shown in Case Study Number Four. The FPB staff, with the exception of one person, created a fresh identity, structure and operating processes within a new framework. The commitment to the new framework was of a high order and the new operating regime was sustained over time. The change was profound, observable to NYP as a whole, and beneficial to both the FPB staff and NYP CID. A second example of such change is that evidenced by Case Study Number Five in which the OHU emerged from the intervention with a totally new way of operating that was observable and sustained over time.

The author has also shown that a third form of change, which has not been identified in any known previous research, is evident in complex organisational change situations. This form of change, which has been identified as third order change, does not produce sustainable organisational change as it is destructive in nature. This form of change emerged during Case Study Number Four by recognising that the identified (first and second order) forms of change did not 'fit' the situation. No theoretical basis is known for this form of change and further research is required in this particular area. However, it is argued that recognition of this form of change, by an interventionist during a change programme, can be most beneficial. It will help the interventionist to identify a path for change that will steer the system towards constructive rather than destructive change. Therefore, sustainable change can be achieved even within a highly emotional dysfunctional situation. This was the case during the FPB intervention and this practical learning is a useful output from this research programme.

10.2.7 Contribution of the CPIM to Sustainable Organisational Change

The CPIM, underpinned theoretically by the STOC, has been designed, developed and tested using action research through five Case Studies. The CPIM used TSI as a starting point for development. As a result, the CPIM is a processual methodology which is built around important central elements and models. These central elements and models are drawn together in **Figure 7.9**.

Building on TSI, the CPIM incorporates:

- The Contextual Relationship Model, which has extended and developed the human and system complexity dimensions of the SOSM, thus providing a basis for deriving an improved understanding of a change context at the outset of an intervention;
- A novel Forms of Organisational Change Model which practically operationalises the theoretical derivation of orders of change by creating indicative paths, forms and orders of change thus providing an interventionist with a potential 'route' for the change process;
- A novel Initiation of Change Context Model which is used in conjunction with the Forms of Organisational Change Model to provide indicators of change contexts;
- A Methodology Relativity Ordering Model which relates systems based intervention methodologies to the type or order of change;
- Extended System of Systems Methodologies Model which has further extended the SOSM by incorporating the third dimension of Type of Change, thus including the order and time dynamic of change.

The Case Studies show how the CPIM, underpinned by the STOC, was developed from TSI. The CPIM was finalised during Case Study Number Four and then tested during Case Study Number Five. The Contextual Relationship Model, which is an important element of the CPIM, exemplifies the practical realisation of the epistemological and ontological framework for organisational change in terms of the characteristics of both the human relations and system complexity dimensions.

The contextual analysis, using the Contextual Relationship Model, in Case Study Four created a clear picture of the conflict, in terms of domination, that existed in a chaotic dysfunctional system. The analysis provided the author with a deeper understanding, over and above that available from the SOSM, of the contextual relationship between the human and system complexity dimensions through the metaphors of 'war' and 'power struggle'. This helped the author to recognise a third order of change which was beyond the capability of the SOSM within TSI. These additional capabilities laid the foundation for a path of change that led to a sustainable outcome. These findings were confirmed during Case Study Five when the developed version of the CPIM was tested during the OHU intervention.

The Forms of Organisational Change Model is the means through which the theory of order of change is operationalised, providing clear evidence of the interdependence between theory and practice. This important and novel model contextualises forms, types and paths of change relative to the human and system complexity dimensions. The model locates, and brings together, the theory of order of change, metaphor analysis, human relations, and system complexity; this is underpinned by Critical Systems Thinking (CST). This inclusive model, together with a preceding contextual analysis, provides an interventionist with a decision making tool that can help to decide the most likely path, type and form of change. Such a basis leads to a theoretically informed choice of methodology for practical intervention in complex organisational change. Although the SOSM, within TSI, provides a basis for methodology choice, the Forms of Change Model is advantageous in terms of the locational characteristic as this provides a practical mechanism, theoretically supported by CST, which will reveal the path, form, and type of change most likely to bring about effective and sustainable change. Therefore, it is argued that the methodology choice has a sound theoretical basis that has a wider compass than that available within the SOSM.

The Forms of Organisational Choice Model was used in both Case Studies Four and Five. The model, which depended on the preceding contextual analysis, provided a theoretically well informed choice of intervention methodology in both cases. In the FPB case, the contextual analysis revealed a situation never previously encountered by the author, and these two models provided a sound theoretical basis for learning within an action research intervention. The Organisational Choice Model, in conjunction with the Initiation of Change Model provided a theoretically informed basis for the choice of SSM as the appropriate methodology. The use of SSM was capable of 'unraveling' the conflict and system dysfunctionality such that a shift from a third order, form four destructive path to a constructive path of second order form three change was achieved and sustained. Without the theoretical understanding such a shift is unlikely to have been achieved, and the result for the FPB might well have been that of system destruction. The use of the Organisational Choice Model in Case Study Five, indicated that the OHU needed form three, second order change if it were to transform itself from a failing system to that of a sustainable future oriented organisation. The intervention proceeded along the path indicated by the CPIM and the resulting output shows that the methodology choice was sound and appropriate.

Both the Contextual Relationship and the Forms of Organisational Change Models are important elements of the CPIM which are theoretically sound. Both models contribute to well informed practice in terms of the likely trajectory of change and methodology choice. The two models, plus the Initiation of Change Context Model, are contained in the Extended SOSM which brings together the extended human and system complexity dimensions as well as adding the dimension of type of change. Such models are of value to an interventionist as they provide a sequenced platform for thinking that is likely to produce an intervention pathway that leads to sustainable and effective change.

10.2.8 The Contribution of the STOC to Learning from Practice

The STOC was developed by taking into consideration:

- The four paradigm sociological framework of organisational analysis;
- A derived epistemological and ontological framework for organisational change;
- Orders and types of change;
- Critical pluralism;
- Emancipatory Systems Thinking;
- Critical Systems Thinking.

These theoretical factors informed and guided the development of the STOC, which has, in turn, underpinned the development and testing of the CPIM. Examples of the use of the STOC, during the development and testing of the CPIM, have already been referred to in this chapter.

The epistemological and ontological framework for organisational change theoretically informed the development of the Contextual Relationship Model in terms of the characteristics of the human and systems complexity dimensions. This learning has created a model that informs practice, with respect to developing a clear understanding of the human conflict and system complexity, during organisational change programmes. Such learning has been of benefit to the author, particularly during the FPB and OHU interventions, which has already been discussed earlier in this chapter.

Development of the order of change theory, as a contributor to the STOC, has been practically incorporated in the Forms of Organisational Change Model. This novel and important component of the CPIM also embodies other aspects of the STOC including the human relations and system complexity characteristics. This learning has produced a helpful model which informs practice through developing likely paths, types and forms of change. An example of additional learning, on the part of the author, is exemplified by the recognition and development of third order change during the FPB intervention

The OHU intervention provides an example of theoretically informed learning through the intervention design. This design incorporated critical pluralism in terms of emancipatory systems thinking. The first intervention workshop was structured to minimise the power of

ACPO rank officers by adopting a nominal group approach. The Design of Intervention Phase of CPIM employs the Contextual Relationship, Forms of Organisational Change, and Initiation of Change Context Models. In terms of theoretically informed learning, these models incorporate many of the contributory theoretical concepts of the STOC and, importantly, CST is firmly embodied in these models. This is a powerful framework which is intended to produce a design that will guide the intervention along a path which will produce effective and sustainable change. That the OHU intervention did produce such change supports the argument that the STOC has, indeed, assisted learning from the practice during the Case Studies.

10.3 THE RESEARCH METHODOLOGY

The research methodology was set out in Chapter Two of this thesis. It was summarised in paragraph 2.4.2 and displayed in **Figure 2.4**. The research methodology has already been referred to earlier in this chapter as an indication of the methodological rigour with respect to the five Case Study interventions.

The theoretical aspects of research methodology were discussed in Chapter Two in order to show that the research programme would be designed in accordance with systemic principles. Such principles are upheld by the concept of an 'idealised design' (Ackoff, 1981) approach to the derivation of the research programme. It was most important that the theoretical aspects of the research design were explored such that a sound process of inquiry could be established and then followed.

It was also considered important to adopt a processual approach to the research programme. This is in keeping with the principle of treating organisational change as a process rather than as a single event.

The research programme was conducted as 'action research' in which the host organisations and their members participated during the interventions associated with developing and testing the STOC and the CPIM.

The orientation was 'systemic' in that the theoretical and practical aspects are mutually dependent. This conclusion is supported by the fact that the interventions were inclusive in terms of client and stakeholder participation. The process of inquiry was continuous over a period of several years involving three separate organisations.

The researcher was involved and immersed in the development and testing of the STOC and the CPIM during the five Case Study interventions. These five Case Study interventions were small samples, and the process of ethnographic data gathering in a longitudinal study was followed. The data gathered during the ethnographic process was subjected to qualitative analysis using critical subjectivity as a basis.

The grounding theory employed was Critical Systems Thinking (CST) with the Systemic Theory of Organisational Change (STOC) emerging, as a defined objective, from the research programme. Hypothesis testing was used in a complementary mode to support the grounding and emerging theoretical stance.

The research process has followed that established and displayed in **Figure 2.4**. Indeed, it can be seen that the research methodology has been beneficial in terms of developing and testing both the STOC and the CPIM. Without this clearly defined process, the research programme would not have produced the outputs that have been achieved. Therefore, it is concluded that the methodology, as designed and followed, was appropriate given the phenomenological nature of the investigation which was undertaken.

10.4 ASSESSMENT OF THE HYPOTHESIS, RESEARCH QUESTIONS AND OBJECTIVES

10.4.1 The Research Hypothesis

Can it be concluded that a hypothesis is true if the researcher has failed to refute it? Conversely, can it also be argued that "...however much data one obtains in support of a scientific theory or law, it is not possible to reach a conclusive proof of that law." (Easterby-Smith et al, 1991; 39).

This research programme was undertaken on the basis of the hypothesis **"That effective and sustainable organisational change is predicated upon the need for a STOC that is grounded in CST...and that...such a basis is necessary for the development of a SBIM designed to bring about the management of second order change based on organisational learning"**. Furthermore, the STOC had to provide a sound theoretical basis from which a Critical Pluralist Intervention Methodology (CPIM), designed to manage first, second, and ultimately, third order change, could be operationalised and tested through intervention in complex organisational change situations.

The research programme was not designed in an attempt to search for evidence that would 'prove' the hypothesis. Clearly, the issues of 'proof' and 'truth' are associated with the positivist paradigm and, as this research was not conducted within that paradigm, then the phenomenological approach using 'critical subjectivity' to test the hypothesis is considered appropriate. Indeed, as the research programme was grounded in CST then it can be strongly argued that this has encouraged the critically reflective posture of the author. This posture permitted the author to utilise 'critical subjectivity' by recognising views held and experiences gained during the research programme. Such views and experiences, which have informed the critical reflection that has been a feature of this research programme, are in keeping with the principles of social and critical awareness embodied within CST. Indeed, the set of questions established at the outset of the final Case Study intervention were critically reflective in that they incorporated the views of, and the experiences gained by, the author during the development and testing of the STOC and the CPIM.

This research programme used the hypothesis advanced in Chapter One, and re-stated earlier in this chapter, as a driving imperative. It is argued that if "...for a given hypothesis, its predicted consequences fit what is observed...then...the hypothesis has been confirmed..." (Schon, 1991; 146). Although it has not been possible to 'prove' the hypothesis, the critical subjective reflection, using the experiences gained during the Case Study interventions, provides a valid basis for claiming that the hypothesis has been 'confirmed'. This claim can be supported by examining the research questions and objectives that were derived from the hypothesis.

10.4.2 The Research Questions

The five research questions were designed to help test the hypothesis and to contribute to the generation of new knowledge. As a reminder, the research questions were:

RQ1. What is the nature of organisational change such that an epistemological and ontological framework for organisational change can be created?
RQ2. Can Critical Systems Thinking form a basis for the development of a Systemic Theory of Organisational Change?
RQ3. Using Critical Systems Thinking and the epistemological and ontological framework for organisational change, what are the necessary and sufficient conditions for the development of a Systemic Theory of Organisational Change?
RQ4. From the developed Systemic Theory of Organisational Change, what will be an appropriate Critical Pluralist Approach through which effective and sustainable organisational change can be brought about?
RQ5. From the interventions carried out in complex organisational change situations, is the developed Critical Pluralist Approach effective in terms of creating sustainable organisational change?

The first research question, **RQ1**, was addressed in Chapter Three which provided a detailed discussion of the nature of change in first and second order terms. This discussion also covered the nature of change in terms of the dynamics of change relative to first and second order change characteristics. From this, the structure and process of change in systems terms provided a basis for a review and critique of existing models and theories of organisational change. The final aspect of **RQ1**, an epistemological and ontological framework for organisational change, was investigated by using the sociological paradigmatic analysis of Burrell and Morgan (1979). Answering this research question provided a grounding for the remainder of the research programme relative to the research hypothesis.

The issues associated with CST as a basis for the development of the STOC were addressed by research question **RQ2**. These issues were subjected to detailed examination in Chapters Three, Five and Six. The review and critique of CST, relative to organisational change, commenced with the development of the framework for an epistemological and ontological framework for organisational change which was based on the work of Burrell and

Morgan (1979). This was continued in Chapter Six in which a detailed analysis of CST led to the derivation of the STOC. The answer to this research question, RQ2, has also lent support to the claim that the hypothesis has been confirmed.

The necessary and sufficient conditions for the development of the STOC were established in Chapter Six. This has answered the research question RQ3 and, in so doing, also provided further support for the claim that the research hypothesis has been confirmed.

In developing the STOC, research question RQ4 asked what would be an appropriate critical pluralist methodology through which effective and sustainable organisational change could be brought about. This question was answered in Chapter Seven which led to the design of the CPIM that fulfilled the requirements: to protect paradigm diversity; to deal with first, second, and third order change; to reflect the tenets and principles of the STOC and thereby incorporate critical pluralism; to deal with complex change as a process rather than single events; and to ensure that the underpinning principles and philosophy of CST were adhered to. Clearly, by answering question RQ4 the research hypothesis has been confirmed.

The final research question, RQ5, was addressed during the five Case Study interventions. These five interventions formed an empirical, double loop, learning framework during which the STOC and the CPIM were both developed and tested as shown by Chapters Eight and Nine. In particular, Case Studies four and five demonstrated that the CPIM is capable of creating sustainable organisational change provided that the process is pursued with rigour. However, it was also concluded, at the end of Chapter Nine, that the CPIM does need further testing and development. Nevertheless, the CPIM in its current form has produced effective and sustainable organisational change in two separate, but related, organisations in which the change situations encountered were complex. This conclusion lends further support for the view that the hypothesis has been confirmed.

10.4.3 The Objectives

At the outset of the research programme the research hypothesis and associated research questions were established. This led to a set of objectives for the research programme. These objectives were:

O1. To create an understanding of the complex nature of first and second order organisational change;
O2. To formulate the understanding of organisational change within the framework of Critical Systems Thinking (CST);
O3. To produce an epistemological and ontological framework for organisational change as a precursor to the creation of a Systemic Theory of Organisational Change (STOC);
O4. To develop a Critical Pluralist Intervention Methodology (CPIM) through which to bring about effective and sustainable organisational change;

O5. To carry out a rigorous programme of testing of the Systemic Theory of Organisational Change and the Critical Pluralist Intervention Methodology within actual situations of complex organisational change;
O6. To critically evaluate the Systemic Theory of Organisational Change and the Critical Pluralist Intervention Methodology in terms of the management of effective and sustainable organisational change.

The first two objectives, **O1** and **O2**, were, in terms of the hypothesis, considered to be fundamental. Without a clear understanding of the principles, nature, dynamics and traditional models of organisational change, it would not be possible to create a Systemic Theory of Organisational Change predicated upon the principles and philosophy of CST. This objective was achieved through the work carried out in Chapter Three of this thesis and provided support for confirmation of the hypothesis.

The third objective, **O3**, was addressed in Chapters Three and Six. Chapter Three established an epistemological and ontological framework for organisational change. These foundations were then used as a support for the creation of the STOC. Without this theoretical foundation the STOC could not have been derived and, without the STOC, the CPIM would not have been developed or operationalised. The achievement of this objective has also contributed to the confirmation of the hypothesis.

Objective four, **O4**, was the subject of Chapter Seven in which the CPIM was developed. As the CPIM depended upon the creation of a STOC then it becomes clear that objectives three and four, **O3** and **O4**, were critically interdependent. This is also true of objectives five and six, **O5** and **O6**, which were achieved as shown in Chapters Eight and Nine. It was also necessary to achieve all of the Objectives to support the confirmation of the research hypothesis.

10.5 CONTRIBUTION TO KNOWLEDGE

Successful doctoral research should make a contribution to the knowledge base of the subject field(s). This research programme has been concerned with the subject fields of systems thinking and organisational change. This has not been problematic since systems thinking has, from the author's perspective, always been associated with bringing about improvement in organisational effectiveness. Therefore, in dealing with the issue of the contribution to knowledge, the subject fields are considered to be organisational analysis within systems thinking. This research programme, and the resulting thesis, has made contribution to organisational analysis within systems thinking.

It has been asserted that traditional theories and models of organisational change are weak in many aspects. A major weakness is that such models and theories deal with change as single, often unconnected, events, and this is simply not systemic. This research has advanced the argument that organisational change must be managed as a process in order that change

programmes are effective in terms of achievable beneficial outputs and sustainability. This aspect is a useful contribution as it reveals an alternative and more effective managerial mind set for dealing with complex organisational change.

This research programme has investigated the phenomenon of change in terms of internal first order and systemic second order characteristics. Indeed the research programme set out to develop such understanding by using previously published research (Watzlawick et al, 1974) as the basis for systemic understanding of organisational change. A significant contribution of this research has been the clarification of the nature of change by incorporating first and second order phenomena. This provides a sound theoretical basis for the management of change involving the total organisational system.

A further contribution has been the realisation that failure to deal effectively with second order change, involving participant conflict, can result in a dysfunctional shift towards total system failure in the form of third order change. Whilst this phenomenon might have been implicitly known, it is this research that has brought it into managerial consciousness by explicitly incorporating it into the STOC and the CPIM. This aspect of the research has also made a contribution by making explicit the need to incorporate the dynamic of time within the CPIM.

The existing organisational change subject literature has made important contribution to the management of change. However, it suffers from the obsession of using a rational unitary goal seeking schema, as a means to an end, for bringing about first order change whilst ignoring the much more important second order change. The traditional form of change theory concentrates on change as an event and not as a continuous process. This research has shown that it is necessary to deal with organisational change in processual mode in order to work with both first and second order change characteristics. This aspect of the research programme is also likely to make an important contribution to the field of change management in terms of theory and practice.

Current literature in the field of organisational change lacks a cohesive theoretical platform. This research has developed an epistemological and ontological framework through which interventionists can approach complex organisational change situations. This framework will provide a sound basis for understanding the systemic nature of change in terms of recognising the different managerial approaches to change. It will also encourage the pursuit of learning with respect to the outcomes of change programmes.

This research programme has evaluated and explored CST and TSI as major contributions to systems thinking in the context of complex organisational problem situations. This exploration has involved the need to protect paradigm diversity by incorporating critical pluralism as a vital feature of organisational change theory.

The derivation of the STOC provides a sound theoretical framework as support for effective intervention in complex change situations. This feature of the research output, which incorporates an epistemological and ontological basis of change and the principles of CST, explicitly addresses necessary and sufficient conditions required for such a theoretical framework. This is considered to be an important contribution to knowledge in the subject fields as these underpin the STOC. The STOC also contributes to the need for organisational learning with respect to sustainability in change situations through the linkage to the CPIM. The issue of human emancipation has also been addressed in deriving the STOC and incorporated in the associated necessary and sufficient conditions.

The CPIM has contributed by extending the SOSM and TSI through:

- The introduction of the third dimension of type of change which makes explicit the nature of change in terms of order and the dynamic of time which are an integral aspect of organisational change;
- The development of the human relations dimension to include the notion of conflict, hostility, and domination through power;
- The expansion of the system complexity dimension to aid recognition of different aspects of organisational systems, in particular, the concept of chaotic dislocational systems.

The CPIM has also made contribution to the process of intervention in organisational change and problem situations by:

- Revealing the types and forms of change that are apparent within organisational change situations;
- Showing that there are paths of potential change thus revealing the dynamic nature of change over time;
- Relating metaphor to initiation of first, second and third order change in terms of stability, radical change, and the potential for system destruction.

The methodology for intervention in complex change situations, the CPIM, has been derived within the principles of CST. This is also true for the STOC, and both of these developments make contribution to the subject fields by:

- Making explicit the systemic nature of organisational change;
- Explicitly including the dynamic of time;
- Underpinning managerial action with sound theory;
- Ensuring that the STOC is operationalised through the CPIM;
- Incorporating modernist and postmodernist thinking;
- Providing a clear relationship of the interdependence between theory and practice;
- Showing that both the STOC and the CPIM are epistemological devices that will support organisational learning within complex change situations;
- Ensuring that critical reflection is an essential part of any organisational change intervention;
- Developing and linking systems thinking with organisational theory.

Although it is important to highlight the contribution to the subject fields of systems thinking and organisational change, it is also important to recognise that there is further work to do. The need continually to develop and contribute to the subject fields has been alluded to earlier in this thesis, and will be taken up again in the final section of this chapter.

10.6 FURTHER WORK

This research has developed a Systemic Theory of Organisational Change (STOC) grounded in Critical Systems Thinking (CST). It has also designed a new Critical Pluralist Intervention Methodology (CPIM) that is intended to provide a systemic approach to the management of effective and sustainable organisational change.

The research programme developed the STOC and the CPIM through action research, using a grounded theory approach, linked to ethnographic data gathering and qualitative critical subjective analysis.

The scope of the investigation was established by a hypothesis linked to research questions and objectives. The process of the inquiry utilised critical reflection at sensitive points to ensure that the hypothesis, research questions, and the objectives were kept in sight.

The STOC and the CPIM were subject to test and critical evaluation using subjective, but defined questions as a basis. These questions reflected the theoretical and practical aspects of the investigation and research.

However, there are several areas which require further investigation and/or development. These, together with suggestions relating to how these aspects of further development might proceed, include:

- Deeper analysis of the epistemological and ontological framework for organisational change by using the framework in actual interventions;
- Further work into the relevance and usefulness of the epistemological and ontological framework for organisational change with respect to the characteristics of human interests and system complexity;
- Further critical evaluation of the STOC with respect to modernist and postmodernist aspects which will involve deeper theoretical analysis;
- Investigating the contribution of the STOC and the CPIM to double loop learning in terms of overcoming managerial defensive routines;
- Simplification of the somewhat complicated CPIM if it is to gain acceptance in wider managerial circles;
- Recognising the need to create a 'user friendly' CPIM which can be brought about through further critically subjective evaluation during further organisational change situations;

- Gaining a deeper understanding of the phenomenon of third order change that emerged during the investigation. This needs further work to develop a full understanding of the types and forms of change.

None of the above will be easy to accomplish. However, it is considered that these would be further worthwhile developments which will make useful contributions to the subject fields of systems thinking and organisational change.

APPENDIX ONE

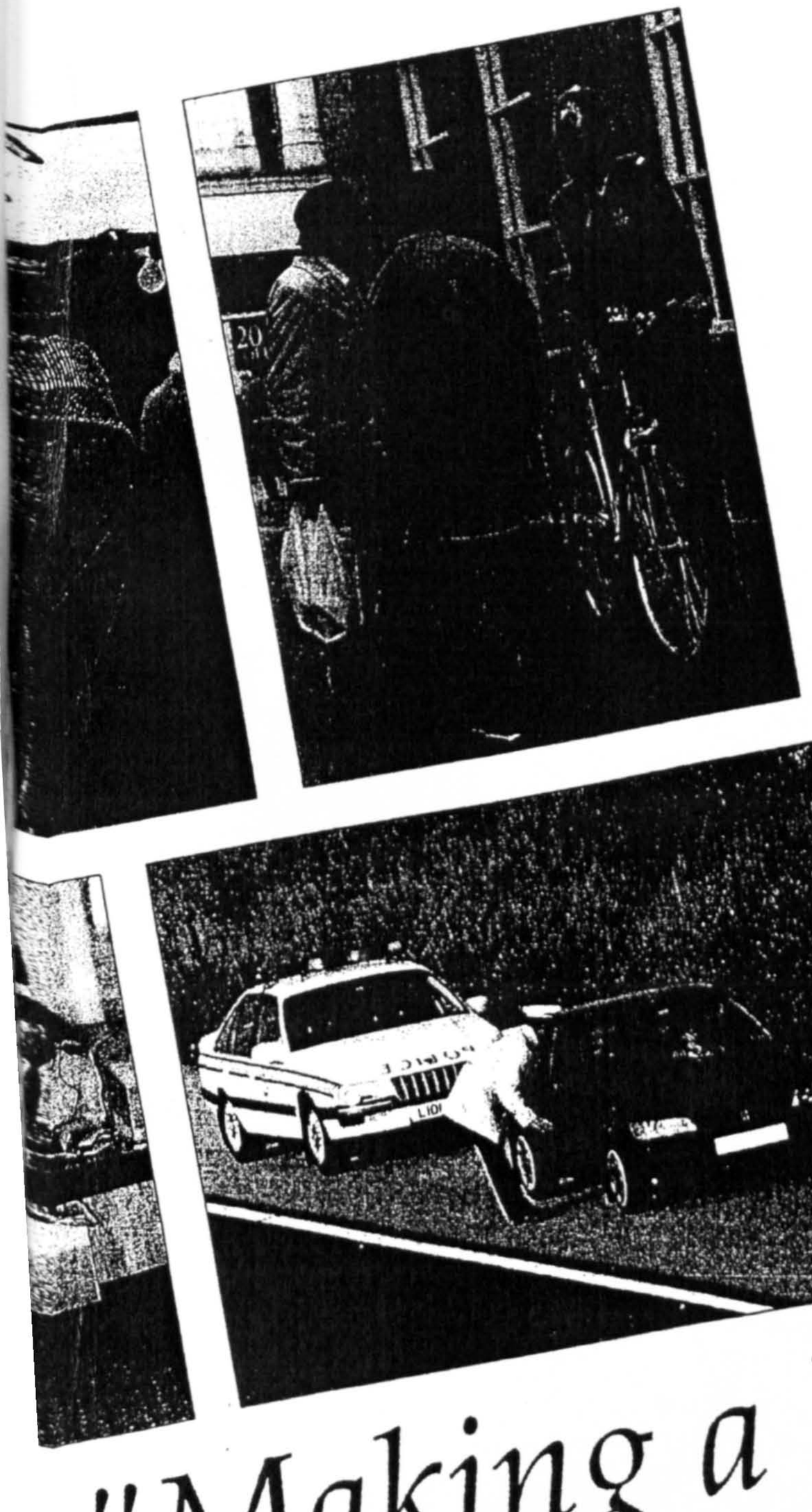
North Yorkshire Police - Strategic Plan 1995 - 2000

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"Making a Difference"

STRATEGIC

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FOREWORD

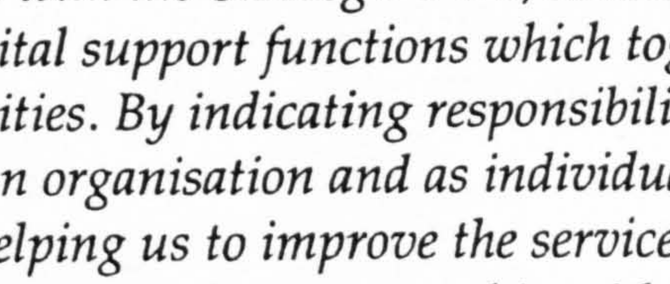
Foreword from the Chief Constable



The police service nationally has entered a period of unprecedented and fundamental change which will have a profound effect on many areas of our work. The Police and Magistrates' Courts Act 1994 and the recent Local Government Review recommendations will have a significant impact over the next few years, as will other factors including the current Home Office study into core and ancillary policing tasks and proposals for "formula" funding. In this increasingly uncertain environment it is more important than ever to establish a clear strategic direction for the Force.
This Strategic Plan represents a consensus view of senior management on the priority issues facing us in the next five years, and sets the corporate aims for North Yorkshire Police towards the year 2000.

The Plan does not, however, stand alone, but forms an integral part of a wider planning structure. More detailed, annual plans at Force and Divisional /Departmental levels will link with the Strategic Plan, addressing the Key Operational Service Areas and vital support functions which together constitute our mainstream policing activities. By indicating responsibilities and setting targets, our performance as an organisation and as individuals can be effectively monitored and measured, helping us to improve the service we give to the public. Our Force Commitment, to work in partnership with local communities to provide a caring, responsive and professional policing service, will continue to form a common thread throughout the plans.

This Strategic Plan establishes a clear understanding of where we are going as an organisation and will ensure that we channel our efforts into making a difference to the quality of life in North Yorkshire.



David M Burke QPM.BA.

"Making a Difference"

OUR PURPOSE

STATEMENT OF PURPOSE AND VALUES

In 1990 the Operational Policing Review, co-ordinated by The Association of Chief Police officers and supported by the Staff Associations, resulted in the publication of a national Statement of Common Purpose and Values for the Police Service.
The statement was adopted by North Yorkshire Police to form the basis for policing in the county.

"The purpose of the North Yorkshire Police Service is to uphold the law fairly and firmly: to prevent crime; to pursue and bring to justice those who break the law; to keep the Queen's Peace; to protect, help and reassure the community; and to be seen to do all this with integrity, common sense and sound judgement.

We must be compassionate, courteous and patient, acting without fear or favour or prejudice to the rights of others. We need to be professional, calm and restrained in the face of violence and apply only that force which is necessary to accomplish our lawful duty.

We must strive to reduce the fears of the public and, so far as we can, to reflect their priorities in the action we take. We must respond to well-founded criticism with a willingness to change."

From this statement, and following internal consultation at management level, a Force Commitment was then developed. This focuses on our values and the quality of service we aim to provide in the Five Key Operational Areas and stresses the vital importance of partnership with the public.

"Making a Difference"

OUR COMMITMENT

The Force Commitment

North Yorkshire Police are committed to making a difference to the quality of life in North Yorkshire

In partnership with the people of North Yorkshire, we will provide a caring, responsive and professional policing service to all our communities.

North Yorkshire Police Value People

We Believe In:

Respecting the rights of all people and dealing with them as individuals.
Being open and honest. Equal opportunities for all

Law Enforcement:

We recognise that we must enforce the law for the benefit of everybody, with fairness, courtesy and impartiality

Our Service To The Public:

We aim to provide high quality services. We know we will be judged on our ability to deliver the five key operational services:–

1. Police Response

We aim to provide a reliable, responsive 24 - hour personal service to all members of the public

2. Crime

In partnership with the community, we aim to detect, prevent and reduce crime

3. Public Reassurance And Tranquillity

We aim to provide a visible police response to deter anti-social behaviour and ensure a safer and better quality of life

4. Traffic

We aim to reduce death and injury by encouraging higher standards on the road and enforcing the law fairly and sensitively

5. Community Policing

We aim to work with the community to harness and develop the energy and goodwill of people for the benefit of the community

"Making a Difference"

STRUCTURE

STRUCTURE AND ORGANISATION OF THE FORCE

The Force Management of Change Programme, which commenced in 1989, continues to modify the organisation and structure of the force. This has resulted in the integration of key components, key functions and support elements into one simplified, responsive and cost-effective structure.
[Appendix 'A'].

Key Components

- *Service Delivery Structure*
- *Support Structure*
- *Management Structure*

Key Functions

- *Operations*
- *Personnel*
- *Finance*

Support Elements

- *Operational Information Systems*
- *Management Information Systems*
- *Financial and Administrative Information Systems*
- *Meetings Structure*
- *Planning Structure*

The organisation is dynamic, and continues to evolve from a process of widespread internal consultation facilitated by the Force planning and meetings structures. An example of such development is the move to Local Area Policing scheduled for April, 1995, which will result in fundamental change to the management and delivery of operational policing services throughout the Force.

"Making a Difference"

PLANNING

THE PLANNING STRUCTURE OF THE FORCE

Development of an effective planning process for North Yorkshire Police led in July, 1994, to a seminar involving senior managers of the Force, representatives of the Police Authority, Community Liaison Groups, Special Constabulary and the Staff Associations. Following this work a consensus was reached on the process to be adopted, and details were published to the Force in October, 1994.

The key documents featuring in this planning process, and the levels of responsibility within the organisation for production of the various plans, are illustrated at Appendix 'B' and Appendix 'C'.

The **Strategic Plan** arose from consensus within the Chief Officer team on the broad, organisational, long-term issues facing the Force. The **Local Policing Plan**, published by the Police Authority will address those **operational** issues which are a priority for the Force for the current financial year.The Home Secretary's Key Objectives and a number of Local Objectives decided upon by Senior Managers, following consultation within the organisation and with our communities, will be taken into account.

Divisional Commanders and Heads of Departments will produce **Service Plans**, integrating these with the Strategic and Local Policing Plans where appropriate, through a similar process of consultation utilising the meetings structure, Community Liaison Groups, Parish Council meetings, surveys, etc.

At the tactical level, **Action Plans** will specify operational matters undertaken by Local Area Policing Teams, with appropriate Departmental support, again using consultation where appropriate.

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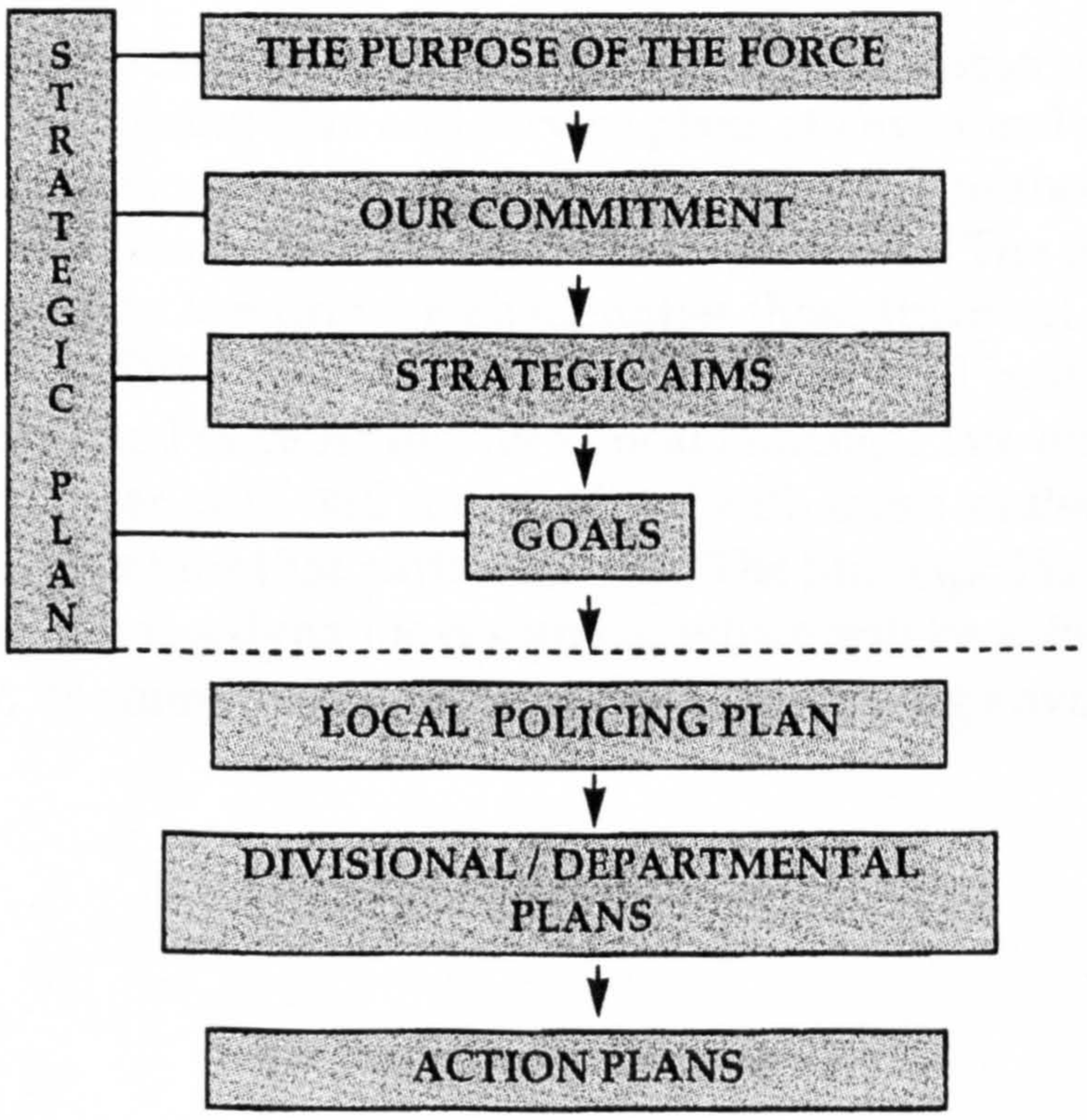
STRATEGIC PLAN

THE ROLE OF THE FORCE STRATEGIC PLAN

The plan contains a set of well defined statements of intent. These statements reflect the consensus view of the chief officer team concerning those major areas within our organisation where there is a need for progress and improvement over the next five years.

The plan establishes broad, strategic aims which will guide senior managers in the development and implementation of their plans at Divisional and Departmental level. The Force, as a corporate whole, can then move forward in a structured and co-ordinated way, with the plan providing a framework for development and for the monitoring and review of performance.

The role of the Strategic Plan is therefore to define the Purpose of the Force and our Commitment, and to clearly establish the way ahead for the organisation, creating standards against which corporate progress can be monitored.



"Making a Difference"

STRATEGIC AIMS

THE STRATEGIC AIMS OF THE FORCE

Three main strategic areas have been identified, together with corresponding aims, and each made the responsibility of a designated member of the Chief Officer team. A number of goals in each area are assigned to lead Departments, who will have primary responsibility for ensuring that work is undertaken toward achieving them. However, it is recognised that such a division of an organisation's goals into discrete areas is, to some extent, artificial. In reality, individual goals must not be considered in isolation.

These strategic areas are not to be interpreted as job descriptions for the Chief Officers. Nor should the goals be considered the sole responsibility of the designated lead Departments; they will co-ordinate and lead the work, but be supported by others. For example, the goal to expand the work of the Special Constabulary will be led by Divisional Commanders, but success will depend heavily on the direct involvement of the Force Commandant and his Divisional Management Teams.

The goals will be addressed by the inclusion of suitable objectives within the Local Policing Plan and service plans at Divisional and Departmental levels. Any activity within the organisation should therefore be linked to one or more of the strategic areas. The goals are incorporated into a matrix which identifies those financial years from 1995/96 to 1999/2000 in which particular goals will continue to be addressed. The Police Authority's Local Policing Plan, effective for one financial year only, will concern itself with those strategic goals identified as relevant for that particular year. The Strategic Plan is not set in stone, but is a dynamic document which will be subject to annual review, its content changing to reflect the policing environment.

"Making a Difference"

GOALS

OPERATIONAL DEMANDS

Local area - 2000

***AIM** - To achieve the most effective use of operational resources.*

It is essential that we make the most effective use of operational resources, in order that the quality of service we can provide to the community is at the highest appropriate level, with front line officers receiving efficient services from our Support Staff.

In order to do this we need to critically examine the methods by which we allocate resources, set priorities, manage abstractions, deliver services, establish targets and monitor performance.

There is a need to prioritise work, focusing on the five key operational service areas and developing, in particular, effective crime policies.

If we are to achieve successful partnerships with other agencies and our communities, we must develop a style of policing which is responsive to local needs and ensures a shared approach to tackling issues of concern.

There is a need for us to monitor every aspect of our performance to ensure that we continue to provide a high quality service both inside and outside the organisation.

Responsibility - Assistant Chief Constable
(Operations)

"Making a Difference"

GOALS *(Not in priority order)*	95/6	96/7	97/8	98/9	99/0	Lead Department
1. Develop and implement a strategy to impact more effectively on crime prevention, reduction and investigation	◆	◆				C.I.D.
2. Develop and implement a strategy to impact more effectively on accident prevention, reduction and investigation	◆	◆	◆	◆	◆	Traffic
3. Enhance the partnership approach to community safety	◆	◆	◆			Divisional Commanders
4. Develop a more locally responsive community style of policing	◆	◆				Divisional Commanders
5. Improve consultation with the community, other organisations and agencies	◆	◆	◆	◆	◆	Divisional Commanders
6. Introduce performance management in order to monitor and evaluate performance	◆	◆	◆	◆	◆	Corporate Development
7. Develop the systems for allocation and deployment of resources	◆	◆	◆			Divisional Commanders
8. Effectively manage absences to enhance operational performance	◆	◆	◆	◆	◆	Divisional Commanders
9. Expand the role of the Special Constabulary	◆	◆				Divisional Commanders

GOALS

ORGANISATIONAL SUPPORT

Revised 2000

***AIM** - Ensure the provision of efficient and appropriate organisational support.*

The focus of our organisation is on service delivery. In order to ensure the optimum use of resources in this area, the support provided must be relevant, appropriate and add value.

People are our most valuable resource and this should be reflected in management policies and practices. They should be encouraged to take on responsibility, and we should recognise both creativity and enterprise. We need to continue to integrate the working practices of our police and support staff throughout the organisation.

Civilianisation of police posts will continue in order to ensure as many police officers as possible are made available for operational duties.

Responsibility - Assistant Chief Constable
(Personnel & Support)

"Making a Difference"

GOALS (not in priority order)	95/6	96/7	97/8	98/9	99/0	Lead Department
10. Progress the civilianisation programme	◆	◆	◆			Personnel & Training
11. Manage the change programme developed for the Force	◆	◆	◆	◆	◆	Corporate Development
12. Develop effective communication within the organisation	◆	◆				Corporate Development
13. Ensure the management style is commensurate with our commitment to valuing people	◆	◆				Personnel & Training
14. Provide adequate training and development for all staff	◆	◆	◆	◆	◆	Personnel & Training
15. Integrate police and support staff as one workforce with common aims	◆	◆	◆			Personnel & Training
16. Provide schemes to improve the health of all staff	◆	◆	◆			Personnel & Training
17. Improve the working environment throughout the force	◆	◆	◆	◆	◆	Health & Safety

GOALS

FINANCIAL MANAGEMENT

AIM - Develop and maintain effective and efficient financial management and administrative systems.

It is vital that we develop financial and administrative management systems which allow the most effective and efficient use of resources. Future Local Policing Plans will be required to provide detailed costings on all areas of our work, including both inputs and outcomes, on which performance will be measured. The systems we introduce must support this need.

New Police Authorities are created from the 1st April 1995 which will be structured to operate independently as corporate bodies providing their own financial support structures. Opportunities for income generation and sponsorship are also created.

Consequently strategies to cater for the development of financial responsibility and the introduction of Compulsory Competitive Tendering will also be required in the short and medium term.

Responsibility - Director of Finance

"Making a Difference"

GOALS (Not in priority order)	95/6	96/7	97/8	98/9	99/0	Lead Department
18. Establish systems to manage the new financial structure	◆	◆				Finance
19. Devolve budgets and financial management to the most appropriate level	◆	◆	◆			Finance
20. Improve financial management information		◆	◆	◆		Finance
21. Develop opportunities for income generation and sponsorship	◆	◆	◆			Corporate Development
22. Develop an information strategy	◆	◆				Corporate Development
23. Develop I.T. systems to support the information strategy		◆	◆	◆	◆	Information Technology
24. Establish an internal system to cater for Compulsory Competitive Tendering procedures	◆	◆	◆			Finance

MANAGEMENT

THE ROLE OF SENIOR MANAGERS

This plan is the primary source of strategy within the Force, providing a framework within which senior managers must formulate their working practices. Activities in the organisation at every level can then be measured to assess their value in the policing of North Yorkshire.

The plan therefore creates the opportunity for managers to perform within defined parameters, whilst enabling the force management philosophy to flourish.

The challenge for managers is to make the most of the plan's potential and to actively participate in its annual review. In order to meet this challenge, managers need to:

Understand the Strategic Plan

- *to comprehend its content and how it should be used*
- *to constructively criticise*

"Making a Difference"

MANAGEMENT

Operate the Strategic Plan

- *as a template for planning/monitoring/measuring policing activity*
- *to manage change*
- *to maintain corporate direction and give leadership*
- *to inform, and be informed by others*
- *to design and create plans which contribute to the goals*

Develop the Strategic Plan

- *to recognise it as a component of a dynamic process to create a shared long term vision for the future*
- *to inform, update and add value*
- *to ensure effective communications from grassroots level*
- *to communicate the content, and to relay criticism*
- *to influence the content by active participation in the review process*

Every member of North Yorkshire Police has a cruical part to play if we are to be successful. The task of managers is to create the conditions under which this can happen, and to use the Strategic Plan as a framework for development at all levels.

"Making a Difference"

MANAGEMENT

PERFORMANCE INDICATORS

Performance Indicators are now an accepted part of management within the Police Service. There has been much controversy surrounding their formulation, feasibility and method of recording, but their potential value is undisputed. If judiciously and appropriately used and interpreted, they can be invaluable in measuring our progress towards the achievement of aims, goals and objectives, and result in the development of more effective and efficient working methods.

The Key Indicators for North Yorkshire Police will be the twenty five defined within the National Police Service Performance Indicators, and those incorporated with the Home Secretary's Key Objectives set annually for the Service. Additional Performance Indicators will be used when setting targets within the Police Authority's Local Policing Plan, Divisional or Departmental Service Plans, and in support of Action Plans.

The introduction of Performance Management into the Force during 1995/96 (Goal 6) will enable us to develop systems to facilitate measurement of performance for:

- *The Force as a corporate body, eg the Local Policing Plan*
- *Parts of the Force, eg. Divisions, Departments*
- *Individuals in the Force, eg. Senior Managers, Executive Officers.*

Review of performance will be continuous, with the intention of improving service by focusing on areas of need and the provision of appropriate support where required.

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MANAGEMENT PHILOSOPHY

Effective policing can only be achieved by the Force through good leadership and clear direction. Our guiding philosophy, as managers, should be to ease the task of those required to meet the operational demands placed upon the Force. The following principles should be adopted in order to define our management philosophy.

● *All staff should know what is expected of them*

Every supervisor and manager should ensure that our purpose, commitment, aims and goals are known, understood and supported by everyone. Selection for tasks and duties should be based on the skills and abilities of individuals, who should be fully briefed as to their specific roles and responsibilities.

● *Decisions should be made at the lowest competent level*

All members of staff should be encouraged to accept ownership of the task, by devolving authority to the most appropriate level. The decision making chain should be kept as short as possible, with those directly affected by the decision having, as far as practicable, the greatest influence upon it.

● *Supervision should be exercised by exception*

Individuals should be encouraged to use initiative and make decisions within agreed guidelines. Managers should feel confident in the delegation of authority, and should develop an environment of trust and mutual respect within their teams.

● *Paperwork should be kept to an absolute minimum*

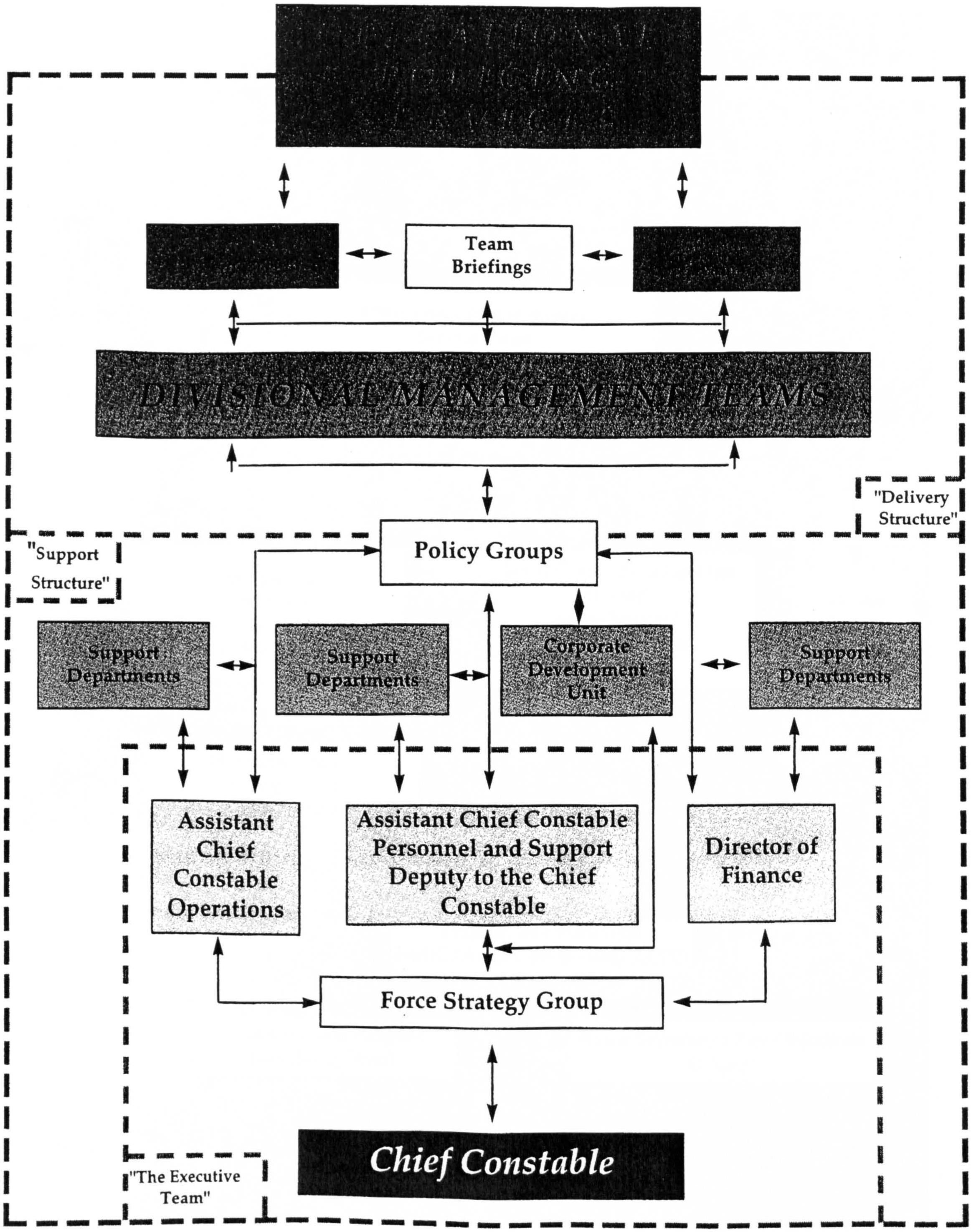
Communication should be clear, concise and understandable. Care must be taken with the introduction of new procedures which might result in additional paperwork and reduce efficiency. Every opportunity must be taken to utilise information technology in order to pass information and produce documents.

● *Supervisors should encourage the development of personal and job-related skills*

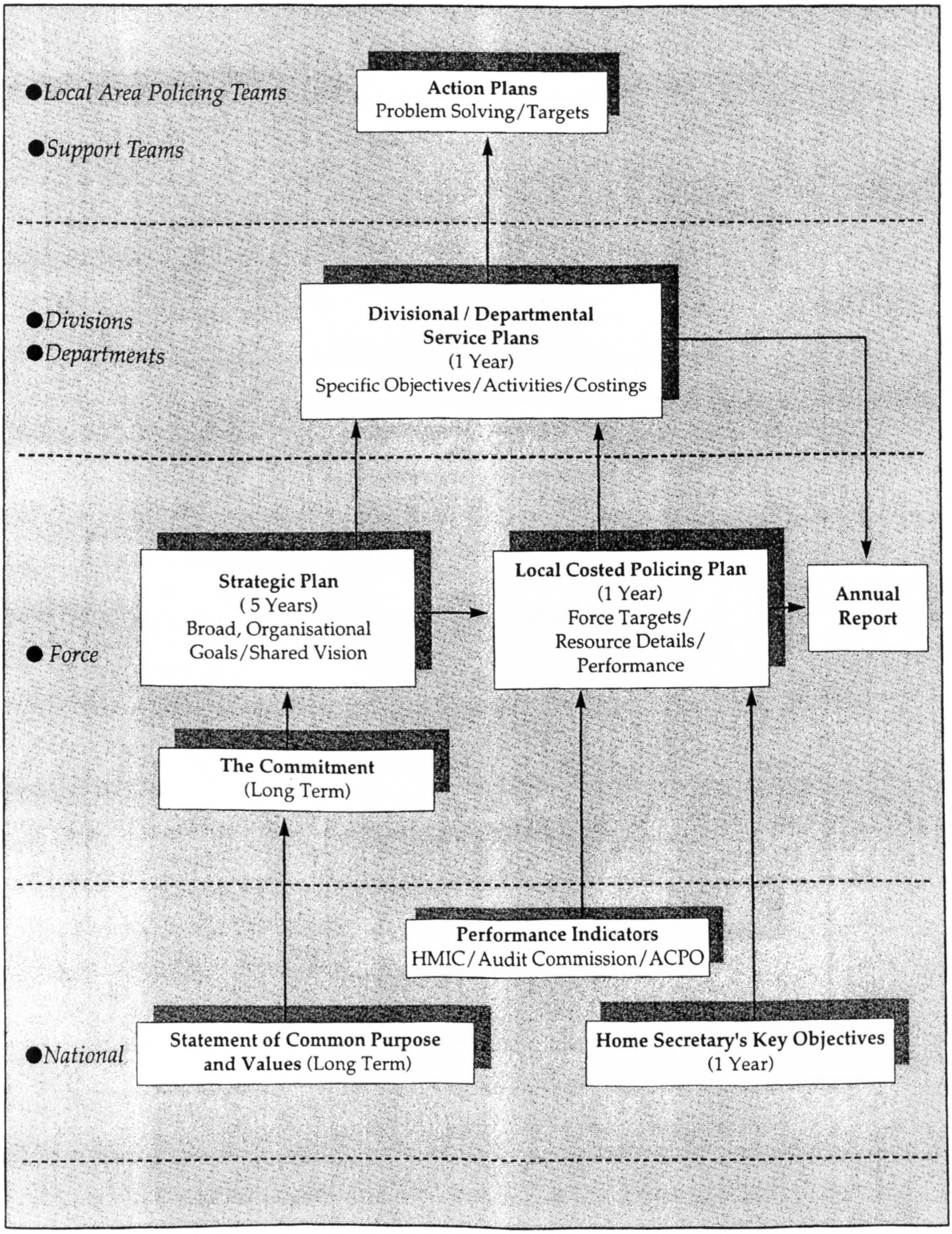
Every supervisor should help individuals to develop and make full use of their potential. Everyone should be treated fairly, with adequate opportunities being provided for training and the learning of skills.

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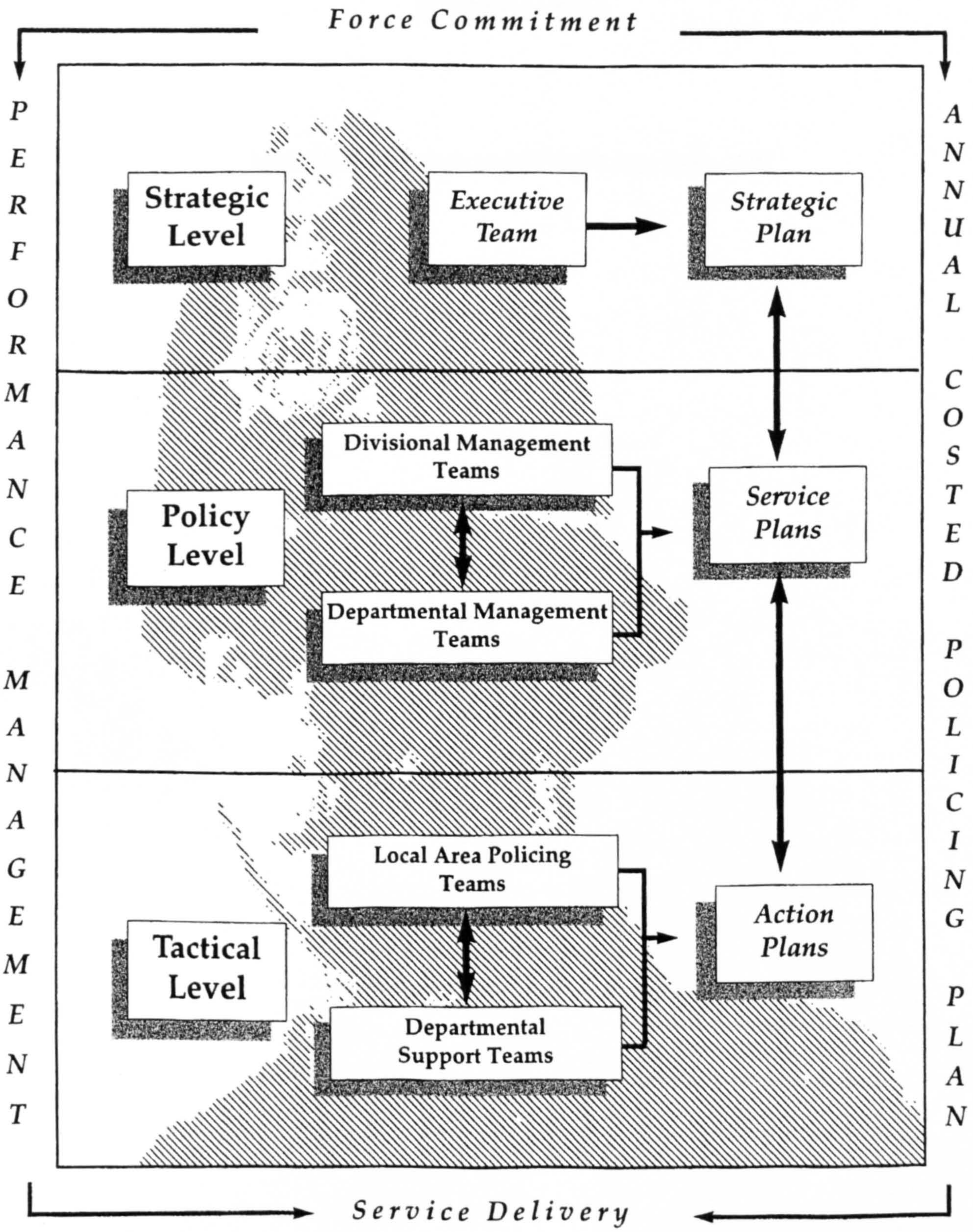
THE STRUCTURE AND ORGANISATION OF THE FORCE



NORTH YORKSHIRE POLICE
PLANNING STRUCTURE - KEY DOCUMENTS



PLANNING - "LEVELS OF RESPONSIBILITY"



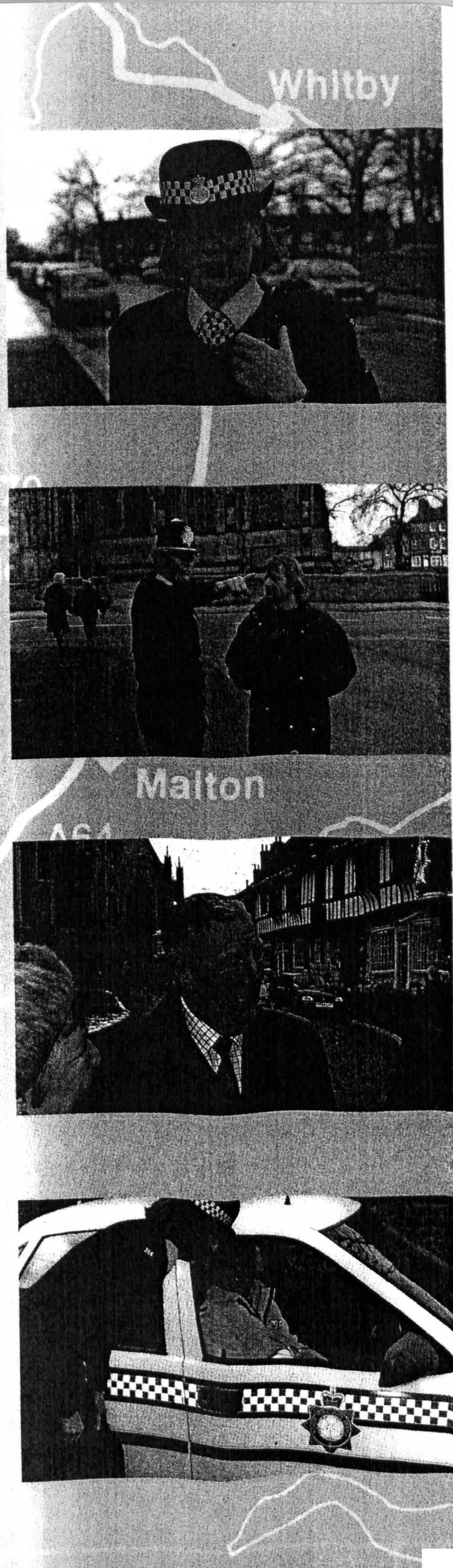
APPENDIX TWO

North Yorkshire Police - Local Policing Plan 1996 - 1997

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North Yorkshire Police Authority

Local Policing Plan 1996/97



Making a difference

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FOREWORD

This is the second annual Policing Plan for North Yorkshire. It sets out the objectives which we - the Police and the Police Authority - have for the policing of North Yorkshire in 1996/7. Some of these policing objectives are set for us, and for all police forces, by the Home Secretary. However, most of the objectives are ones that we have set locally and which relate only to the way in which North Yorkshire is policed. The Plan also sets out our targets and performance indicators so that we can judge how well we are doing in achieving those objectives - and so that you can do the same.

The local policing objectives and targets contained in this Plan have been produced by the Police Authority in consultation not just with the Police but also with local people - through our network of Community and Police groups. This consultative network now covers the whole of North Yorkshire. The groups reflect the real concerns of people in the community - crime prevention, domestic burglary and the desire for higher visibility policing. While this Plan will not allow us to meet everyone's hopes, consultation with people means that we can plan to use the limited resources available to us to police North Yorkshire effectively and efficiently in the light of public concerns.

These links with the public are important and we in the Police Authority will continue to build upon them - by continuing our practice of holding meetings in different places within the area, by establishing effective links with the new City of York Council and by extending our lay visitor scheme. Indeed, the reaction to advance news of our wish to recruit more lay visitors has reassured us both of the sense of community within North Yorkshire and the enthusiasm of people in their desire to work with the police.

The Police and the Police Authority have, over the past 12 months, developed their strong partnership still further. This second annual Policing Plan is also evidence of an increasingly effective partnership with the community. These community links will be strengthened over the coming year through the Community and Police groups. Details of these groups are contained in this Policing Plan. We strongly urge you to get in touch with your local group. It is through them that this Plan, and therefore the policing of North Yorkshire, will be monitored and in the light of their views that future decisions on policing in North Yorkshire will be made.



David Burke QPM, BA
Chief Constable



County Councillor Angela Harris DL
Chairman of the Police Authority

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North Yorkshire Police Authority

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This plan is also available on audio tape at branch libraries and from Social Services at County Hall, Northallerton and from the City of York Council.
It has been produced for people who may have difficulty reading this brochure.

The NYPA wishes this plan to be widely circulated and is happy for it to be copied

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North Yorkshire Police Authority

INTRODUCTION

Police Authority

The Police Authority is under a legal obligation to ensure an efficient and effective police service within North Yorkshire. While the Chief Constable remains independent of the Authority in operational policing matters , he is accountable to the Authority for the performance of the Force. While the Home Secretary retains significant powers and controls, the Police Authority agrees the local police budget and, through this Policing Plan, sets out local police objectives on an annual basis. The Authority then monitors performance against these objectives during the course of the year, holding the Chief Constable to account and, in turn, consulting the local community to identify any changes that may be necessary in policing objectives.

The Police Authority comprises 17 members. Nine members are local councillors (seven appointed by North Yorkshire County Council and two by the City of York Council), three are local magistrates and five are local independent members. The names and telephone numbers of all Police Authority members are set out at the end of this Plan. The Authority meets regularly in different locations throughout North Yorkshire. At each of its meetings the Authority sets aside time to allow members of the public to ask questions. Details of meetings can be obtained from the Clerk to the Police Authority (telephone Carol Hogg on 01609 780780, ext. 2659).

Local Policing Plan

The Police Authority publishes a Policing Plan in March each year. The Plan is for the following 12 months. The Plan has to contain certain police objectives which are set nationally by the Home Secretary. The Plan also sets out policing objectives which are determined locally. In addition to the objectives, the Plan sets out targets and performance indicators. These allow the Plan to be monitored so that the Police, the Police Authority and the public can judge how well the Police perform and whether objectives are met.

The annual Policing Plan is drafted by the Chief Constable together with officers and members of the Police Authority. The Police Authority is responsible for producing the final version of the Plan. The local policing objectives, together with the associated targets and performance indicators, are a central feature of the Plan. They are drafted after consultation with the public. We did not have sufficient time for meaningful public consultation prior to drafting the first annual Policing Plan. Public consultation in advance of this second Plan has been far more effective although we accept that there is still room for improvement in future years. Public consultation has been effected mainly through the consultative groups - now known as Community and Police groups - which cover North Yorkshire. Contact points for these are set out later in this Plan.

Planning Structure

This annual Policing Plan is the statutory responsibility of the Police Authority. However, as described above, it is in fact the product of the partnership between the Authority and the Police. Equally important, this Plan does not stand alone. The North Yorkshire Police have adopted an integrated planning process into which the annual Policing Plan fits.

The North Yorkshire Police have a five year rolling ***Strategic Plan****. This plan concentrates on broad organisational, long term issues facing the North Yorkshire Police.*

The local ***Policing Plan*** *is published annually by the Police Authority and addresses operational issues on a 12 month basis.*

North Yorkshire is policed in seven geographical areas. Each Divisional Commander produces a ***Service Plan*** *which has to be integrated both with the strategic and the annual Policing Plan. These service plans are drafted in consultation with the local community, the Community and Police groups, Parish Council meetings, etc.*

At a community level ***Action Plans*** *are drafted which specify operational matters undertaken by local area policing teams.*

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North Yorkshire Police Authority

THE POLICING ENVIRONMENT OF NORTH YORKSHIRE

North Yorkshire Police cover one of the largest geographical policing areas in the country encompassing the urban areas of York, Harrogate and Scarborough as well as large rural areas including the Yorkshire Dales and the North York Moors National Parks.

With a total population of almost 727,000 (1994 mid-year estimate) and only 1,295 officers (as at 31.12.95) North Yorkshire has one of the lowest ratios of officers to population of any force in the country (1.78 officers to every 1,000 people).

North Yorkshire officers are also amongst the busiest in the country. For example, between April 1994 and March 1995 they dealt with more than 268,000 incidents, or 207 incidents per officer.

Although busy, officers continue to give a good level of service to the people of North Yorkshire. For example, in well over 90% of all incidents which require an immediate or emergency response, a police officer attends within the target time of 15 minutes in urban areas and 20 minutes in rural areas. Also, based on the data available for 1995/96 there has been an increase in the number of detections for house burglary and violent crime.

Because of the reduced number of officers now available to police North Yorkshire (from a previous authorised establishment of 1,418 which is the number of officers the Home Office previously thought necessary to police the County) it is important that the best use is made of the available resources. In order to achieve this, North Yorkshire Police Authority has set an objective in this Plan to ensure that as many officers as possible are made available for operational duties. Special emphasis has been placed on reducing sickness and we will continue to civilianise non-operational posts.

The result of a public attitude survey conducted in 1995 tells us that the public would like to see more officers on patrol and that the police presence should be more 'visible'. To this end one of the targets in this Plan is to increase the amount of time uniformed officers spend on patrol in order to reassure the public.

The policing needs of such a large and diverse county are many and varied. In order to meet this challenge the North Yorkshire Police Force is organised to ensure that local communities are policed according to their individual requirements.

A style of policing called 'Local Area Policing' has been adopted with dedicated teams of officers working closely with local communities in order to solve problems at a local level and to make a difference to the quality of life across the County.

Our partnership approach to policing involves widespread consultation with the people of North Yorkshire, whether by means of surveys or through more structured formal consultation methods such as the Community and Police groups

Through this consultation we have been able to establish that crime prevention and reduction is something very important to the communities of North Yorkshire as well as the detection of serious crime such as house burglary and violence. This Policing Plan addresses those concerns in the Objectives set out in the following pages.

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North Yorkshire Police Authority

OBJECTIVES, TARGETS & PERFORMANCE INDICATORS

Crime Management

		PERFORMANCE INDICATORS
		Number of dwelling house burglaries recorded per 1000 dwellings.
		Number of dwelling house burglaries detected per 100 officers. (KPI)
		Percentage detection rate.
		Number of violent crimes recorded per 1000 population.
		Number of violent crimes detected per 100 officers.
		Percentage detection rate.

KO - Key Objective
KPI - Key Performance Indicator

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North Yorkshire Police Authority

OBJECTIVES, TARGETS & PERFORMANCE INDICATORS

Crime Management

PERFORMANCE INDICATORS

Number of crime prevention initiatives.

Has North Yorkshire Police developed strategies to identify and reduce repeat victimisation, and to evaluate its intervention ? (KPI)

Number of people having suffered 2 or more house burglaries in 12 months (April 1996 to March 1997).

Total crime recorded per 1000 population.

Number of arrests/disposals for drug offences per 1000 population. (KPI)

Number of stop/ searches for drugs.

Number of arrests resulting from stop/searches for drugs.

Has North Yorkshire Police implemented a drugs strategy ? (KPI)

Number of persons from outside the County arrested for crime.

Number of those persons prosecuted/cautioned.

Number of stop/searches of persons from outside the County suspected of travelling to commit crime.

KO - Key Objective
KPI - Key Performance Indicator

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North Yorkshire Police Authority

OBJECTIVES, TARGETS & PERFORMANCE INDICATORS

Police Response

		PERFORMANCE INDICATORS
		Percentage of 'immediate' incidents responded to within the target time (KPI)
		Percentage of 999 calls answered within the target time (KPI)
		Ratio of operational to non-operational officers
		Ratio of police to support staff
		Number of working days lost through sickness per employee

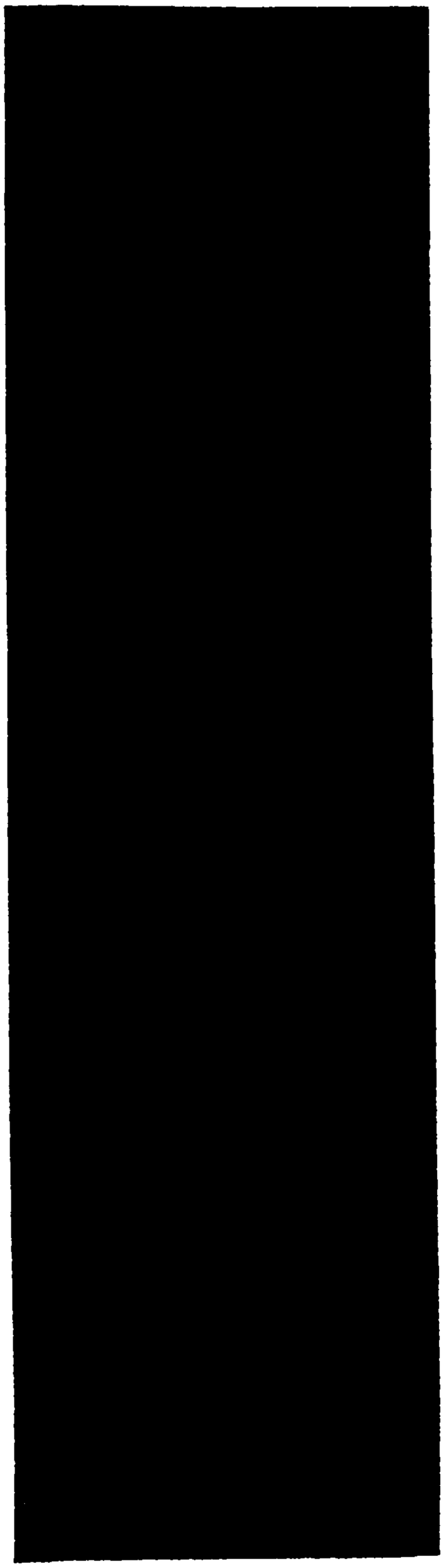
KO - Key Objective
KPI - Key Performance Indicator

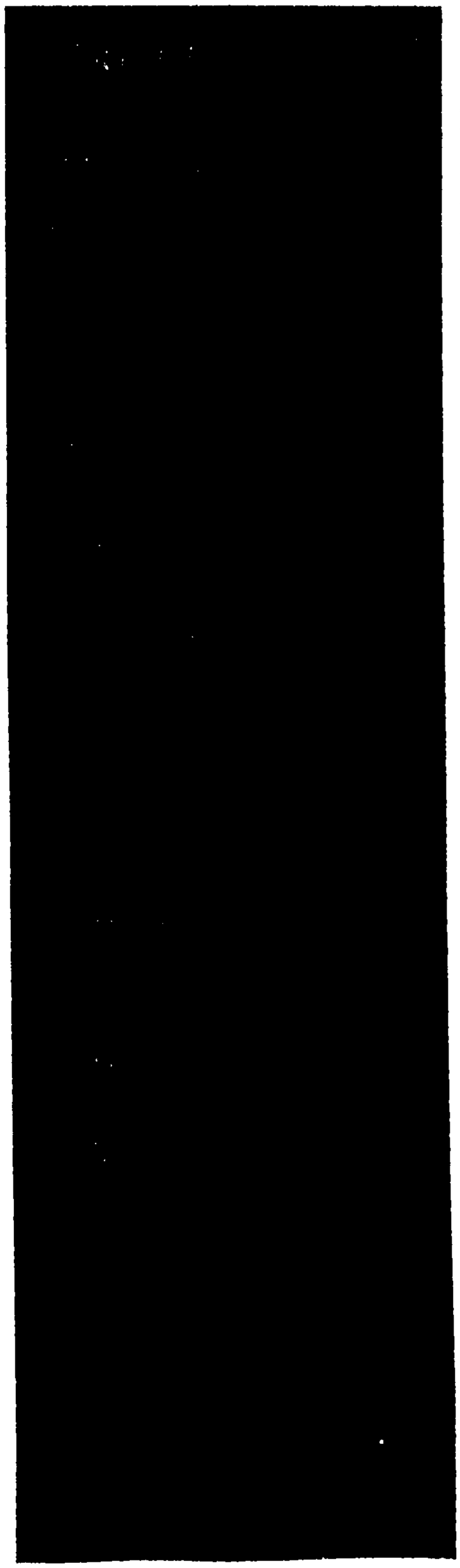
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North Yorkshire Police Authority

OBJECTIVES, TARGETS & PERFORMANCE INDICATORS

Police Response





PERFORMANCE INDICATORS

Percentage of non-999 calls answered within the target time.

Percentage of letters answered within the target time.

Percentage satisfaction with initial contact.

Percentage satisfaction with police response.

Percentage satisfaction with follow-up information.

Percentage satisfaction at police enquiry counters.

KO - Key Objective
KPI - Key Performance Indicator

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North Yorkshire Police Authority

OBJECTIVES, TARGETS & PERFORMANCE INDICATORS

Public Reassurance & Tranquillity

		PERFORMANCE INDICATORS
		Percentage of time uniformed constables spend outside the police station and in public.
		Level of satisfaction with levels of foot and mobile patrol. (KPI)
		Number of duty hours per Special Constable spent on operational duty.
		Number of CCTV cameras established.
		Percentage of people feeling reassured by CCTV.

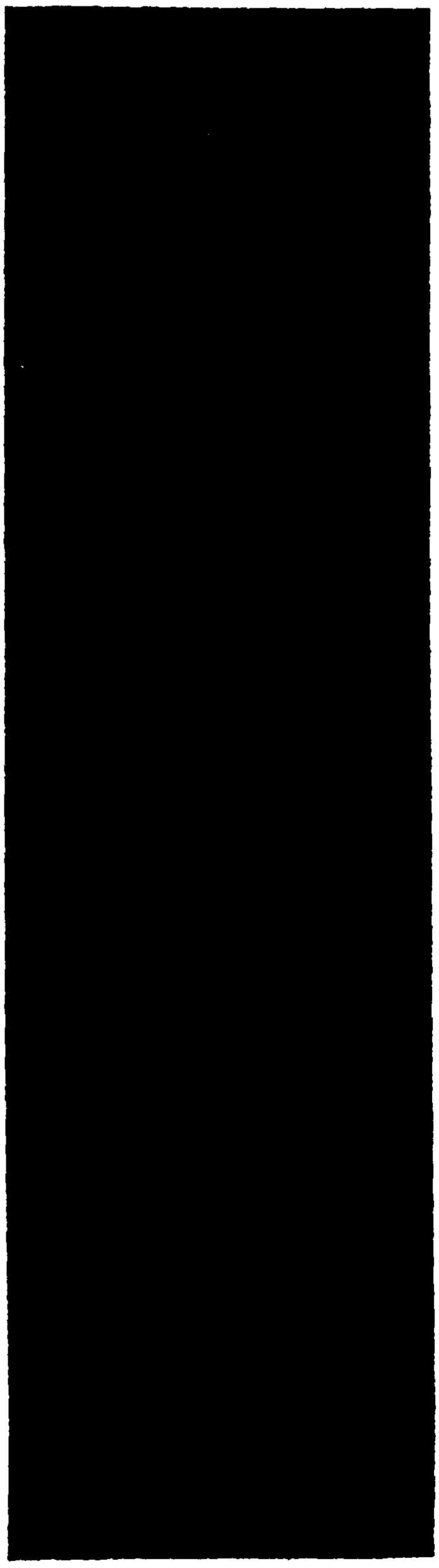
KO - Key Objective
KPI - Key Performance Indicator
CCTV - Closed Circuit Television

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North Yorkshire Police Authority

OBJECTIVES, TARGETS & PERFORMANCE INDICATORS

Traffic Management





PERFORMANCE INDICATORS

Number of serious and fatal road traffic accidents.

Number of arrests for drink/driving.

Number of breath tests administered.

Percentage of breath tests which are positive or refused.

Number of fixed penalty tickets issued for speeding.

Number of persons processed for dangerous driving.

Number of speed detection systems established.

Percentage of people feeling reassured by these systems.

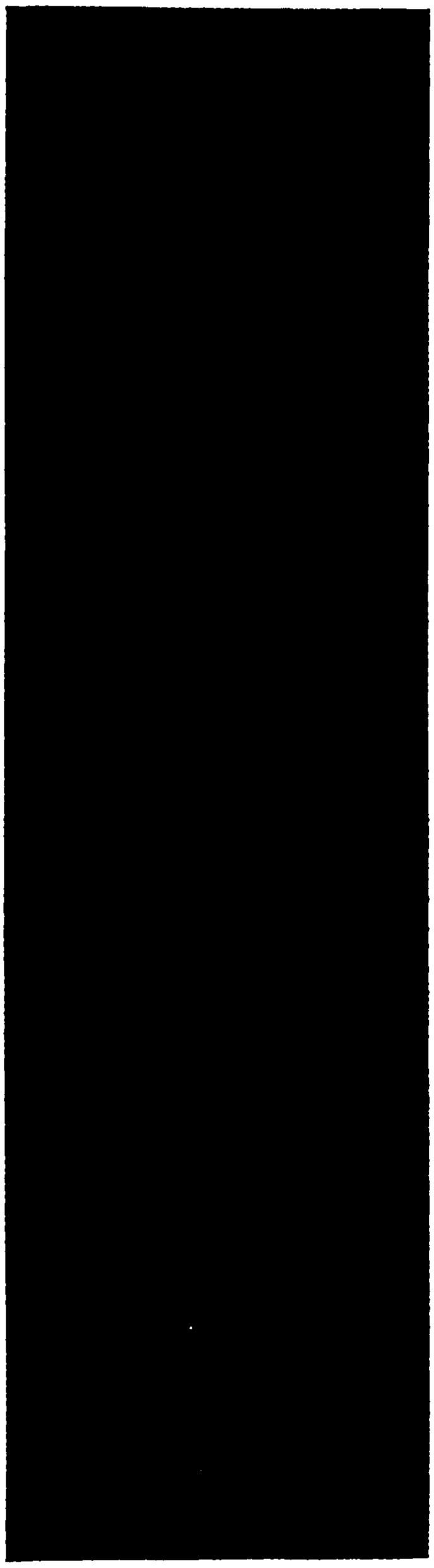
KO - Key Objective
KPI - Key Performance Indicator
CCTV - Closed Circuit Television

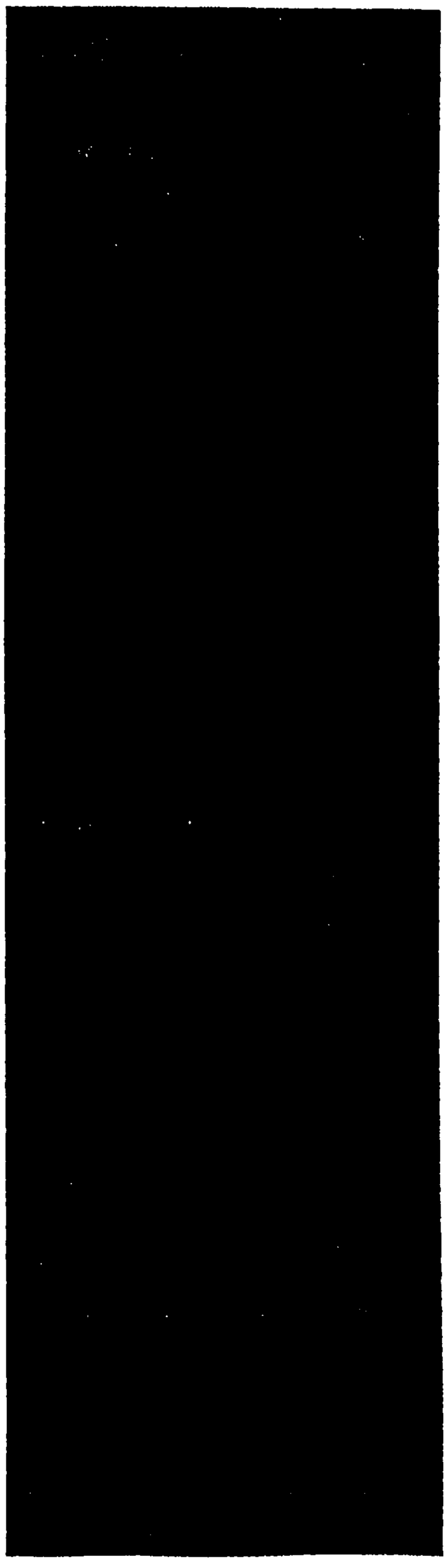
NYPA

North Yorkshire Police Authority

OBJECTIVES, TARGETS & PERFORMANCE INDICATORS

Community Policing





PERFORMANCE INDICATORS

Number of neighbourhood watch schemes covered by 'Ringmaster' computer system.

Number of households covered by these schemes.

Percentage of households covered by these schemes.

Number of Neighbourhood Special Constables.

Number of other 'watch' schemes eg vehicle watch, horse watch, etc.

The number of Special Constables.

PARTNERSHIP INITIATIVES

The Police Authority sees part of its role as providing an effective link between the Police and the community that it serves. Therefore, partnership is very important . Indeed, the partnership between the Police Authority and the Police, evidence of which is contained in this Plan, is regarded as the starting point for the effective policing of North Yorkshire.

The partnership with the community takes many forms. In some cases individuals become directly involved

- as special constables
- as lay visitors
- as neighbourhood watch coordinators
- as members of a Community and Police group

Others are involved in less direct but equally important ways - participating in 'watch' schemes (neighbourhood watch, pub watch, farm watch, etc.). There are many examples of innovative and exciting initiatives in North Yorkshire - for example the training of off-licensees and pub doorstaff.

North Yorkshire Police Force continues to work in partnership with statutory and voluntary agencies such as schools, the Probation Service and Social Services. Drug action teams have been established in partnership with Health Trusts; neighbourhood watch conferences are organised in urban York while community safety initiatives are under active development in rural parts of the County - for example the Hambleton and Richmondshire Partnership Against Crime (HARPAC). Closed circuit television camera schemes (CCTV) continue to be developed in partnership with district councils throughout North Yorkshire.

The Police Authority has, during 1995, completely reviewed both its Lay Visiting Scheme (under which visits are made to police cells in order to ensure that the rights of detainees are properly observed) and its arrangements for consultation with the public.

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North Yorkshire Police Authority

PARTNERSHIP INITIATIVES

The Lay Visiting Scheme, which has previously operated only in York, Harrogate and Scarborough, will, during 1996 be expanded across the whole of North Yorkshire. This will be accompanied by an accelerated move to recruit members of the public to act as lay visitors. The initial reaction of the public to advance notice of this proposal has been extremely encouraging.

The Police Authority has also fully reviewed its arrangements for consultation with the public. Revised arrangements for its Community and Police groups will be brought into effect early in 1996. Meetings are to be open to the public and resources will be made available to support the work of the groups. The groups are an essential link between the Police, the Authority and the community that they serve - this is particularly important given the vast geographical area covered by North Yorkshire Police. The role of these groups, in consultation on the contents of the annual Policing Plan, is critical. There is one Community and Police group for each of the seven police divisional areas and details of contact points for each group are set out later in this plan.

Each divisional Community and Police group has a two tier structure. The first tier has a strategic role and forms the link with the Police Authority. The second tier is made up of a number of local or special interest groups.

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North Yorkshire Police Authority

BUDGET 1996/97

The Revenue Budget for 1996/97 has been determined at £ 69.374m

To develop a Policing Plan it has been necessary to allocate the total revenue budget to the appropriate service areas. This has been done by allocating expenditure on the costs of police and civilian support staff in each division or department (see page 18).

This is a resourced Plan and not yet a costed Policing Plan. Financial information will be developed during 1996 which will enable the costs of each separate service area to be identified.

Capital Planning

A 5 year capital plan exists to implement:–

BUILDING IMPROVEMENT PROJECTS

- POLICE HOUSING
- FIRE PRECAUTIONS
- DISABLED ACCESS
- ENERGY CONSERVATION

COMPUTER TECHNOLOGIES

- CUSTODY AREAS IN POLICE STATIONS
- ADMINISTRATIVE SUPPORT UNITS
- FINANCIAL MANAGEMENT/ ACCOUNTING
- COMMUNICATIONS

REPLACEMENT PROGRAMME

- MOTOR VEHICLES
- OPERATIONAL EQUIPMENT

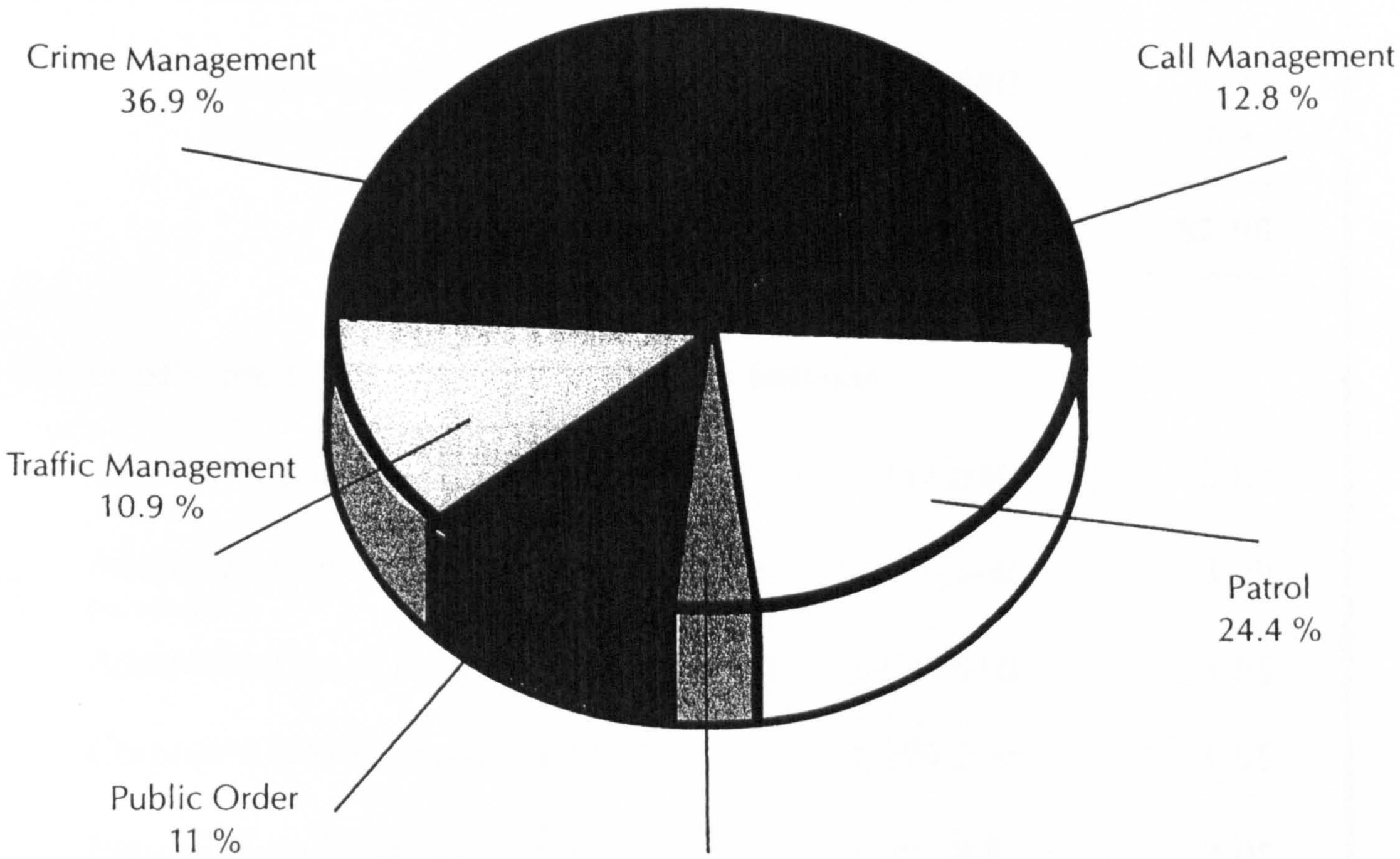
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North Yorkshire Police Authority

BUDGET 1996/97

During 1996/97 it is expected that money allocated to operational policing will be spent in the proportions illustrated by the pie chart. These proportions have been calculated as a result of a survey of the activities of operational police officers conducted in September 1995.

Expenditure



Based on average police and support staff pay

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North Yorkshire Police Authority

ALLOCATION OF 1996/97 BUDGET

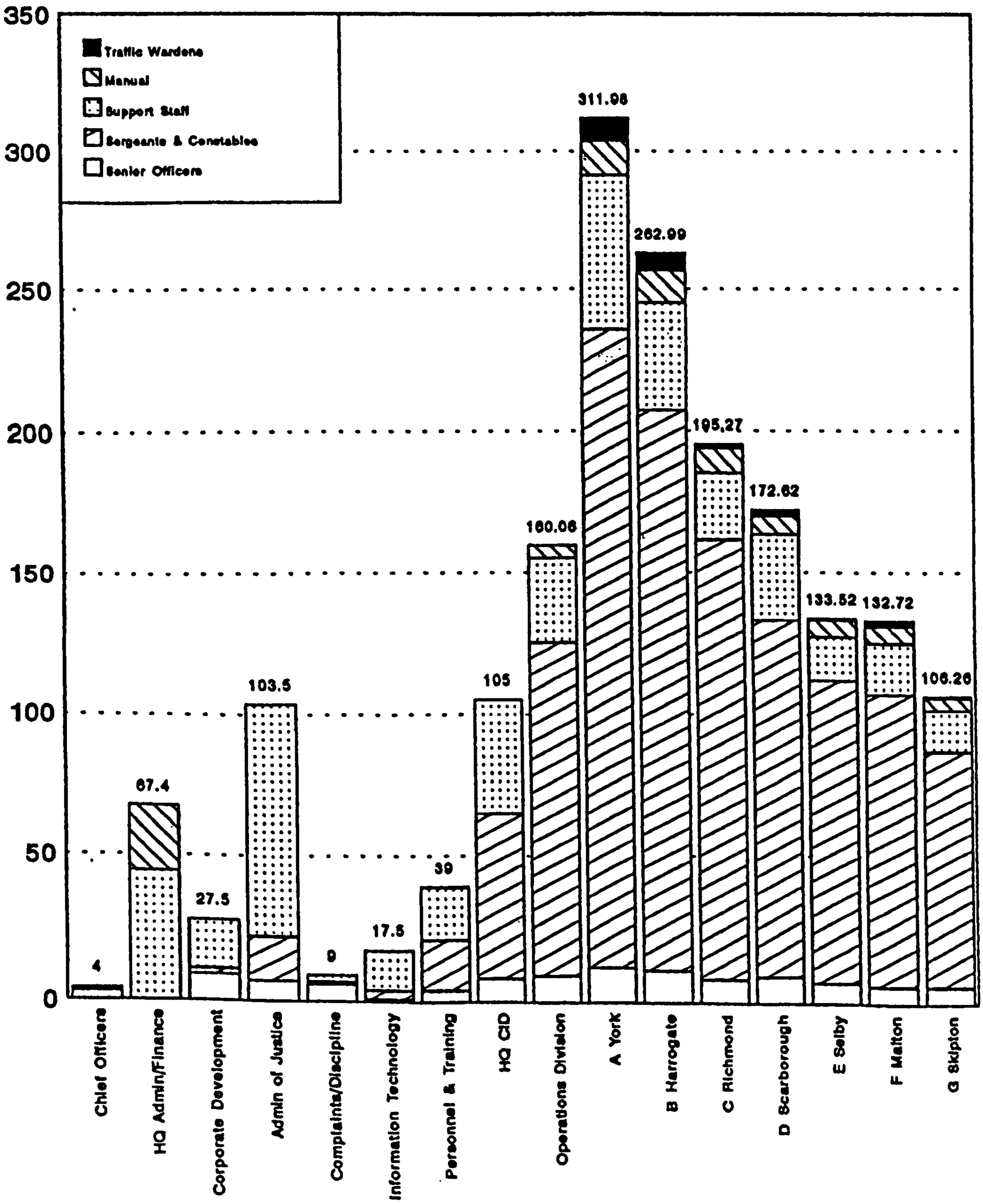
(AS AT FEBRUARY 1996)

		£	%
Money allocated to service delivery			
Divisions:	York	11,945,000	17.48
	Harrogate	9,669,440	14.15
	Richmond	7,612,550	11.14
	Scarborough	6,280,000	9.19
	Selby	5,172,980	7.57
	Malton	4,817,640	7.05
	Skipton	3,949,780	5.78
	Operations Division	6,286,840	9.20
	Criminal Investigation Department (HQ)	4,387,120	6.42
		60,121,350	**87.98**
Money allocated to Headquarters Support Services			
	Chief Officers	457,850	0.67
	Administration and Finance (including I.T.)	2,111,560	3.09
	Administration of Justice	2,630,910	3.85
	Corporate Development Unit	1,059,200	1.55
	Personnel and Training	1,400,870	2.05
	Complaints and Discipline	553,510	0.81
Total Force Revenue Expenditure		**68,335,250**	**100.00**

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North Yorkshire Police Authority

STRENGTH & DISTRIBUTION OF NORTH YORKSHIRE POLICE



REPORTING BACK AND REVIEW

It is of vital importance that this Plan remains an active document throughout its life and that it not only drives police activity but is also seen to do so.

As part of the Force Performance Management system, a comprehensive monitoring regime has been designed which allows for elements of the Plan to be discussed at all levels of the Force and presented to community representatives. As part of this process, the Plan will be formally monitored, by the Police Authority, at the end of every quarter and key information arising from that monitoring will be published in the Authority's newsletter.

When reporting to the Police Authority, the Chief Constable will present detailed information on the performance indicators which have been listed in Section 2 of the Plan in order to demonstrate the actual performance of the Force in relation to the targets which have been set. The Chief Constable will also report on any circumstances which have caused him to deviate substantially from the Plan and which are likely to result in elements of the Plan not being achieved.

At the end of the year, the Police Authority will publish, as part of its Annual Report, all of the results which have been achieved by the Force in relation to the targets which have been set.

The results of this monitoring process will influence the drafting of next year's Plan.

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North Yorkshire Police Authority

SOME USEFUL TELEPHONE NUMBERS

POLICE HEADQUARTERS
01609 783131

and ask for
- the Force Information Room
- the Personnel and Training Department
- the Complaints and Discipline Department
- the Administration of Justice Department
- the Administration Department
- the Information Technology Department
- the Corporate Development Department
- the Finance Department
- the Estates Department
- Vehicle Fleet Management

POLICE DIVISIONAL HEADQUARTERS

A Division - York

Chief Superintendent Keith Cullen
Fulford Road York YO1 4BY
Tel No. (01904) 631321

B Division - Harrogate

Superintendent Anthony McDermott
North Park Road Harrogate HG1 5PJ
Tel No. (01423) 505541

C Division - Richmond

Chief Superintendent Brian Ellis
l'Anson Road Richmond DL10 4ND
Tel No. (01748) 823055

D Division - Scarborough

Superintendent Tom Fox
Northway Scarborough YO12 7AD
Tel No. (01723) 500300

E Division - Selby

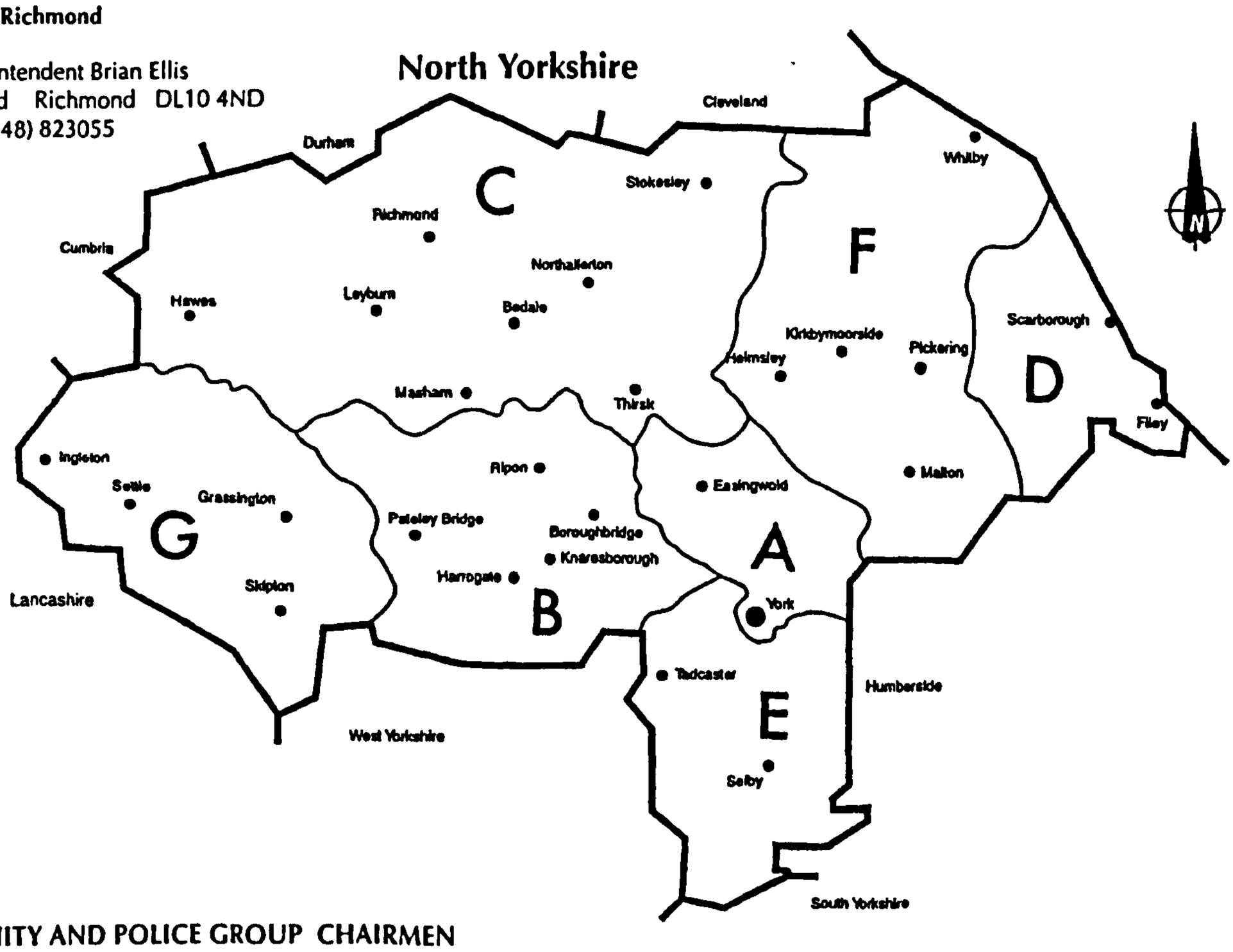
Superintendent Jim Kilmartin
Portholme Road Selby YO8 0QQ
Tel No. (01757) 702596

F Division - Malton

Superintendent Keith Bowskill
Old Malton Road Malton YO17 0EY
Tel No. (01653) 692424

G Division - Skipton

Superintendent Ron Underhill
Otley Road Skipton BD23 1EZ
Tel No. (01756)793377



COMMUNITY AND POLICE GROUP CHAIRMEN

A DIVISION
Councillor Mrs S. Galloway 01904 794111

B DIVISION
Mr R. K. Dalzell 01423 530941

C DIVISION
Dr R. Peterson 01642 711708

D DIVISION
Mr S.G Garson 01723 863551

E DIVISION
Miss C. Campbell 01937 834580

F DIVISION
County Councillor Miss J.M Kenyon 01947 603651

G DIVISION
County Councillor M. Heseltine 01748 811843

Clerk to the Police Authority **01609 780780, Ext. 2659**

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North Yorkshire Police Authority

MEMBERS OF THE POLICE AUTHORITY



Clair Campbell
Tel: 01937 834580



Ewan Christian
Tel: 01765 658551



Dennis Collins
Tel: 01423 873291



Jim Fender
Tel: 01423 883230



Mick Haigh
Tel: 01723 500700



Angela Harris
Tel: 01748 822469



Michael Heseltine
Tel: 01748 811843



Linda Humphreys
Tel: 01423 340209



Jane Kenyon
Tel: 01947 603651



Ford Longman
Tel: 01653 628402



Geoff Lynch
Tel: 01977 674522



Dave Merrett
Tel: 01904 643405



Richard Peterson
Tel: 01642 711708



Denis Pedder
Tel: 01723 891053



Jane Ryan
Tel: 01642 778355



Graeme Robertson
Tel: 01904 706393



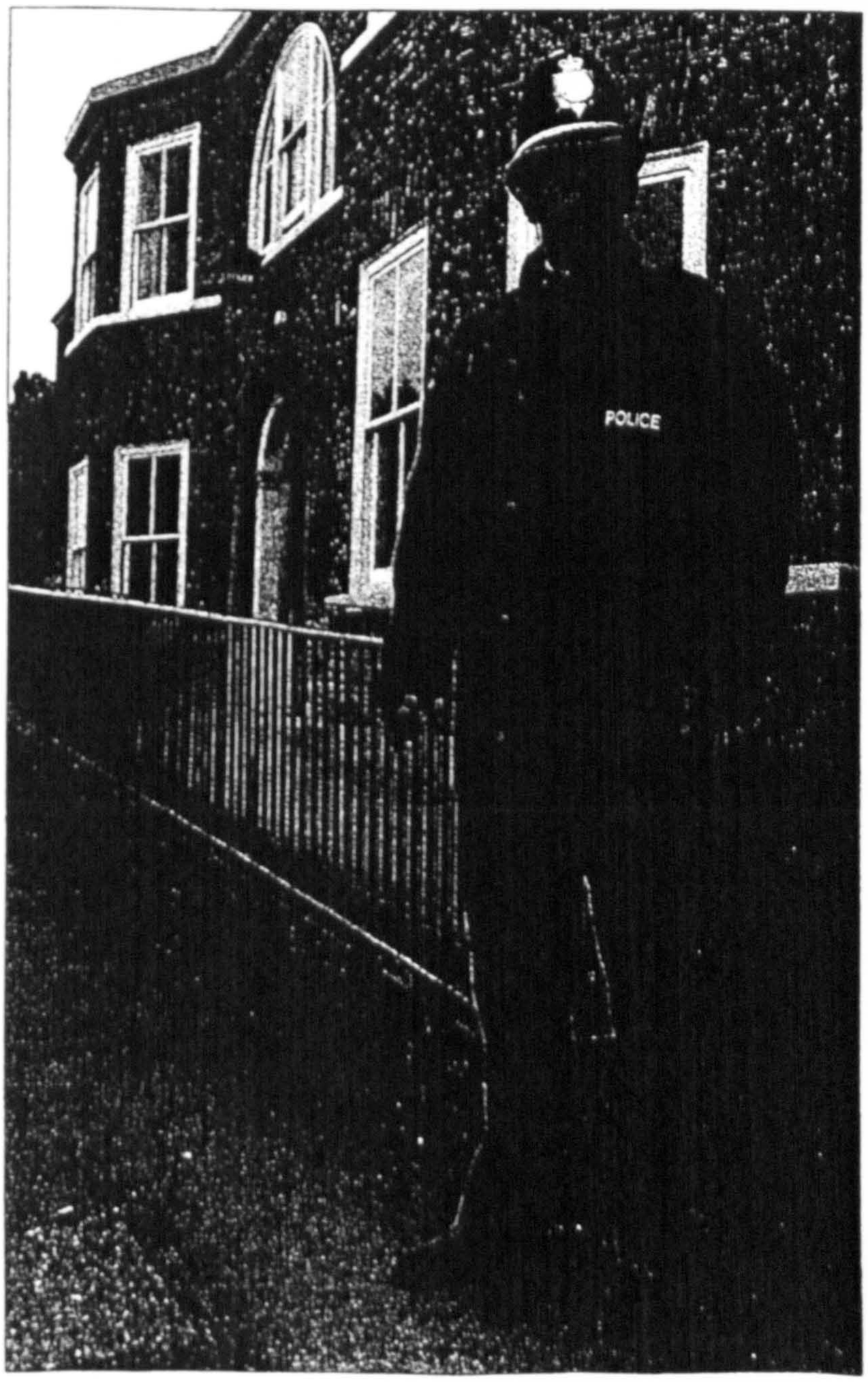
Peter Vaughan
Tel: 01904 768663

Members of the Police Authority

APPENDIX THREE

North Yorkshire Police - Focusing on Crime Strategy

FOCUSING ON CRIME



The North Yorkshire Police

Approach to Tackling Crime

The North Yorkshire Police Commitment

North Yorkshire Police are committed to making a difference to the quality of life in North Yorkshire

In partnership with the people of North Yorkshire, we will provide a caring, responsive and professional policing service to all our communities.

North Yorkshire Police Value People

We Believe In:

Respecting the rights of all people and dealing with them as individuals.
Being open and honest. Equal opportunities for all

Law Enforcement:

We recognise that we must enforce the law for the benefit of everybody, with fairness, courtesy and impartiality

Our Service To The Public:

We aim to provide high quality services. We know we will be judged on our ability to deliver the [illegible]

[illegible] Response

We aim to [illegible] a reliable, responsive 24 - hour personal service to all members of the public

2. *Crime*

In Partnership with the Community, We aim to Detect, Prevent and Reduce crime

3. Public Reassurance And Tranquillity

We aim to provide a visible police response to deter anti-social behaviour [illegible] a safer and better quality of life

4. Traffic

We aim to reduce death and [illegible] on the road and enforcing the law fairly and sensitively

5. Community Policing

We aim to work with the community to harness and develop the energy and goodwill of people for the benefit of the community

The Chief Constable on Crime

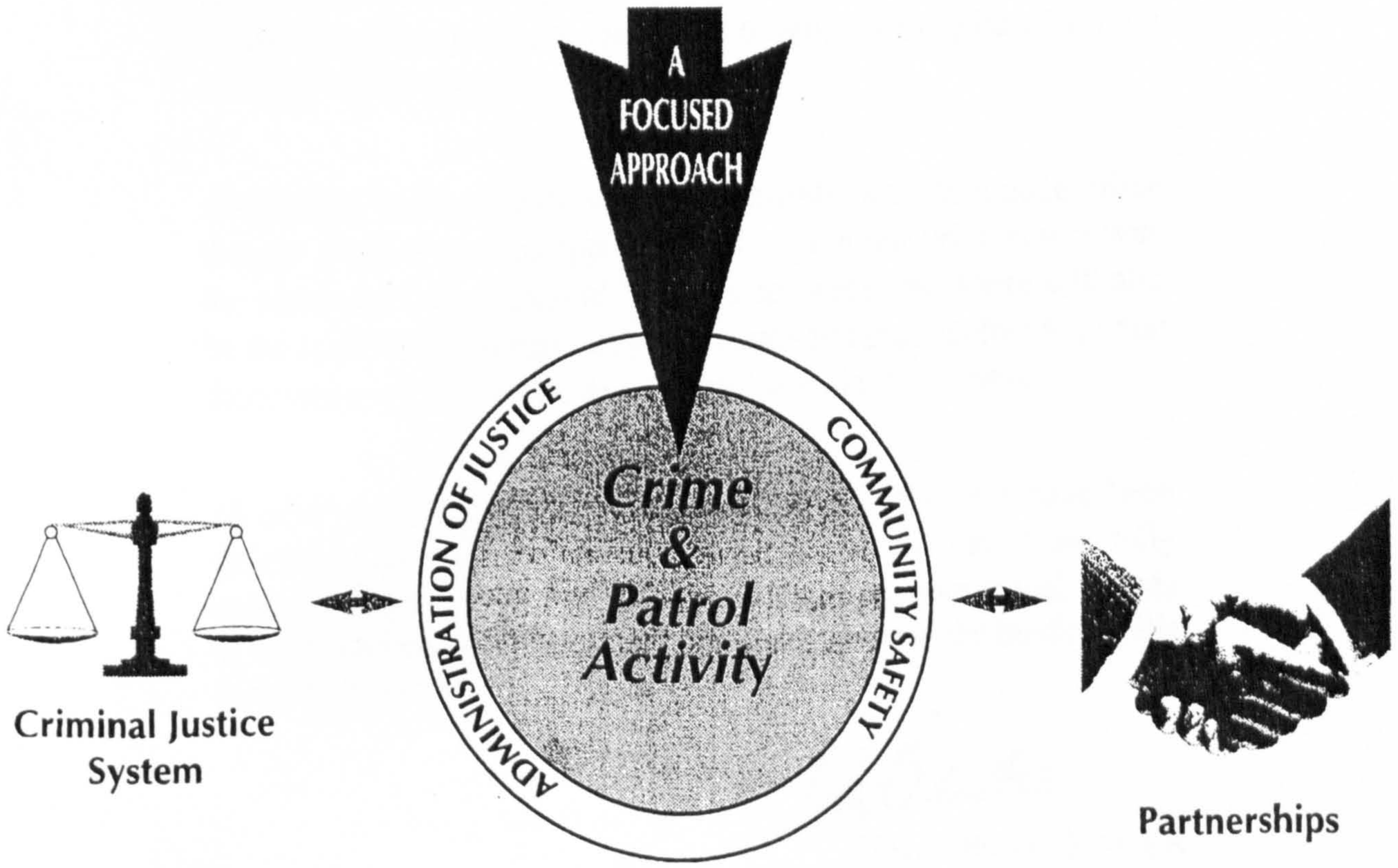


Crime has the potential to significantly damage the quality of life for our communities in North Yorkshire. As a force, we are committed to making a difference to that quality of life and through this document, 'Focusing on Crime', we seek to improve our ability to tackle crime.

Tackling crime has always been and remains a key priority for all members of our force. However, increasing demands on our service require us to focus even more closely upon just how we deal with crime. This document details areas of work that need to be undertaken to improve our approach to tackling crime.

Importantly, it must be recognised that 'Focusing on Crime' is only part of the answer. Whilst this document will move us towards improved delivery of service in relation to crime I seek to arrive at a point, in the near future, whereby we provide a:

'Focused Approach to Crime and Patrol'



In linking 'Crime & Patrol' the requirement for all of our activities to be focused recognises the interdependency of the way in which we tackle crime and carry out patrol functions. These two areas of operational policing must be considered together in order to maximise our effectiveness.

Just as critical is the recognition that our ability to link with partnership approaches through a ***"Community Safety Strategy"*** and with the wider criminal justice system through an ***"Administration of Justice Strategy"*** is essential in providing an integrated policing approach.

With regards to crime our purpose remains unaltered from the North Yorkshire Police Commitment which states:

"In Partnership With The Community We Aim to Detect, Prevent and Reduce Crime"

In seeking to provide a strategic framework as to how this will be achieved, a 'Statement of Intent' has been developed. This will focus the action required to improve our ability to tackle crime

It is fundamental that we must be able to identify what problems exist. This will be achieved by ensuring the integration of all available information associated with crime and targeting activity based on the intelligence that emerges.

Solving the problems will, wherever possible, seek to reduce crime through prevention. This approach will require our involvement with the community in a range of 'partnership' initiatives. There will also be the requirement to rigorously investigate and place before the court those repeat offenders who account for the majority of crime.

All of the areas for 'project action' within this document have been developed against an extensive consultative process. I am fully committed to ensuring that they quickly turn into operational activity to tackle crime more effectively and thereby improve the quality of life in our communities.

David Burke QPM, BA

Statement of Intent

"In Partnership With The Community, We Aim to Detect, Prevent and Reduce Crime"

Tackling crime will be a key priority of all members of the Force. This will be achieved :-

- through an integrated crime management approach that focuses pro-activity through intelligence and scientific support.

- focusing on crime reduction through the community safety strategy in partnership with other agencies.

- by the rigorous investigation and placement before the court of those involved in crime.



"Through an Integrated Crime Management Approach that Focuses Pro-activity through Intelligence and Scientific Support"

Information management, which offers the facility to dynamically manage all policing functions on a division, is crucial to focused policing activity. The functions that are necessary to identify problems and their solutions can be found within the concept of a Management Services Unit (M.S.U.).

Whilst M.S.U.'s provide the co-ordination point for the management of all operational policing services, their role in relation to crime must ensure the integration of:-

- Crime Reception
- Crime Analysis
- Crime Screening
- Intelligence
- Scene Management and Attendance
- Media Relations
- Investigations
- Crime Prevention
- Victim Care
- Specialist Crime Support

The focused policing activity emerging from M.S.U.'s must be targeted and co-ordinated to facilitate everyday operational briefing:-

- On a Divisional Basis,

and

- On a Forcewide Basis.

"Integrated Crime Management Approach"

Project Action	Quality Assurance Group
1. Review and develop information management systems for the receipt, recording & screening of crime.	Operational Commanders Crime Managers
2. Identify and develop a Forcewide criteria for crime scene management and attendance.	Crime Managers
3. Establish a corporate standard of service for victims of crime.	Crime Managers
4. Deliver a Forcewide approach to Crime Pattern & Criminal Analysis.	Crime Managers

"Pro-activity through Intelligence"

5. Review the Force Intelligence System.	Crime Managers
6. Review and develop operational targeting systems for focused activity (a) Divisionally, and (b) Forcewide.	Operational Commanders Crime Manager
7. Review and develop the cultivation and use of Informants.	Crime Managers
8. Increase the awareness of all operational officers in the use of informants.	Operational Commanders

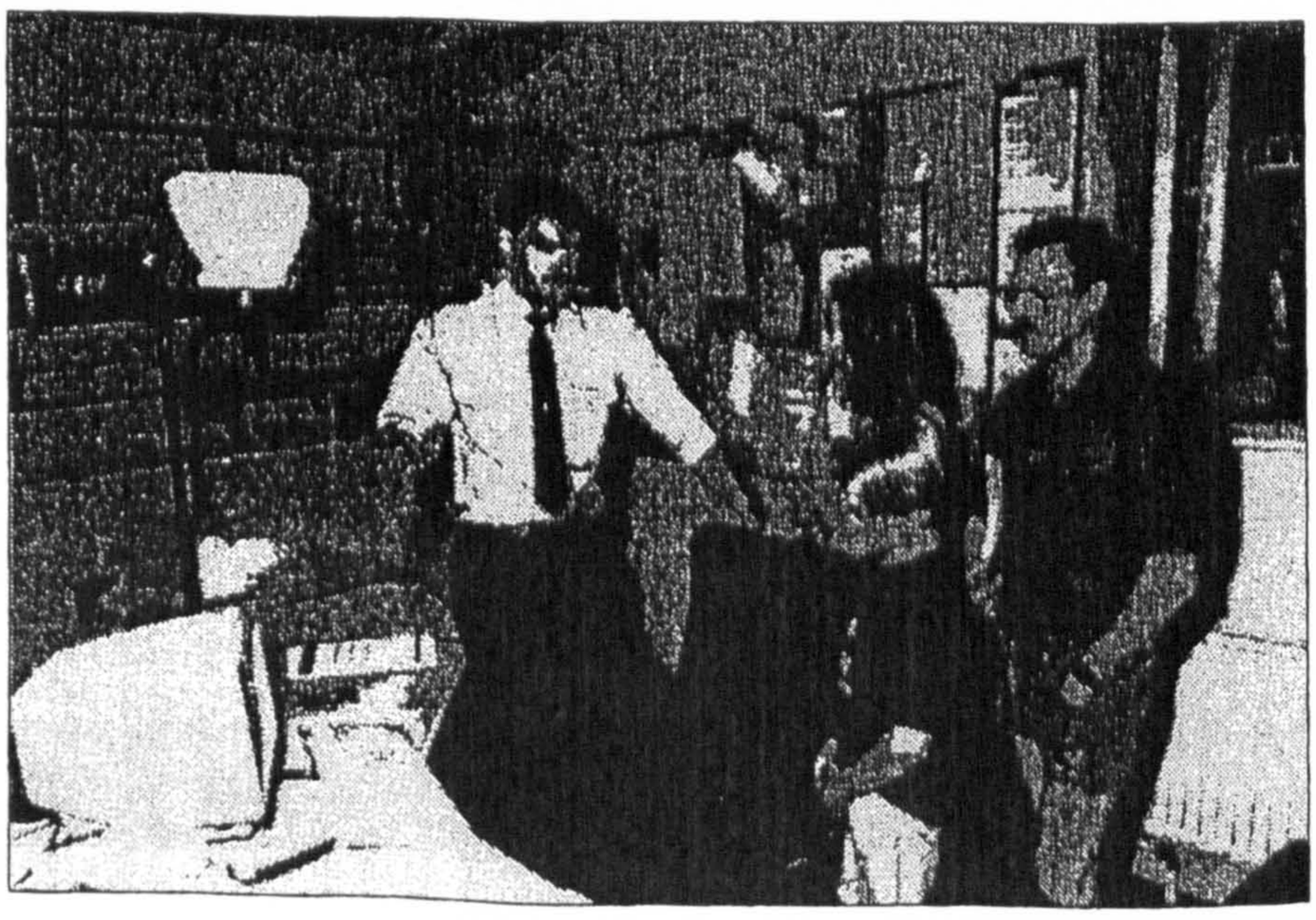
"Focusing on Crime Reduction Through The Community Safety Strategy in Partnership With Other Agencies"

Reducing crime and the effect it has on the community is the principle aim of our approach to crime.

The partnership approach to tackling drug issues, as detailed in the North Yorkshire Police Drug Strategy, is integral to the Community Safety Strategy.

Co-ordinating our activities through partnership approaches is crucial in maximising our effectiveness.

These partnership approaches position crime reduction beyond the police through a North Yorkshire County Community Safety Strategy which we will actively support.



"Community Safety"

Project Action	Quality Assurance Group
9. *Support and assist in the development of a partnership approach to crime reduction and diversion activities in line with a North Yorkshire County Community Safety Strategy.*	**Operational Commander Crime Managers**



"By The Rigorous Investigation and Placement Before The Court of Those Involved in Crime"

Rigorous investigation of crime must be undertaken to place offenders before the Court with appropriate evidence which has been obtained with integrity.

The provision of such investigations must appropriately utilise the skills of **ALL** officers in a focused manner.

The team approach to policing our Force through Local Area Policing (L.A.P.) requires detective skills to be integrated at L.A.P. level.

Focused teams of detective officers, operating in support of L.A.P. areas must have a clear role utilising their skills as investigators, interviewers and intelligence gatherers.

Administration of Justice support in the processing of offender files to a common standard must consider, as a priority, the requirements of operational officers.



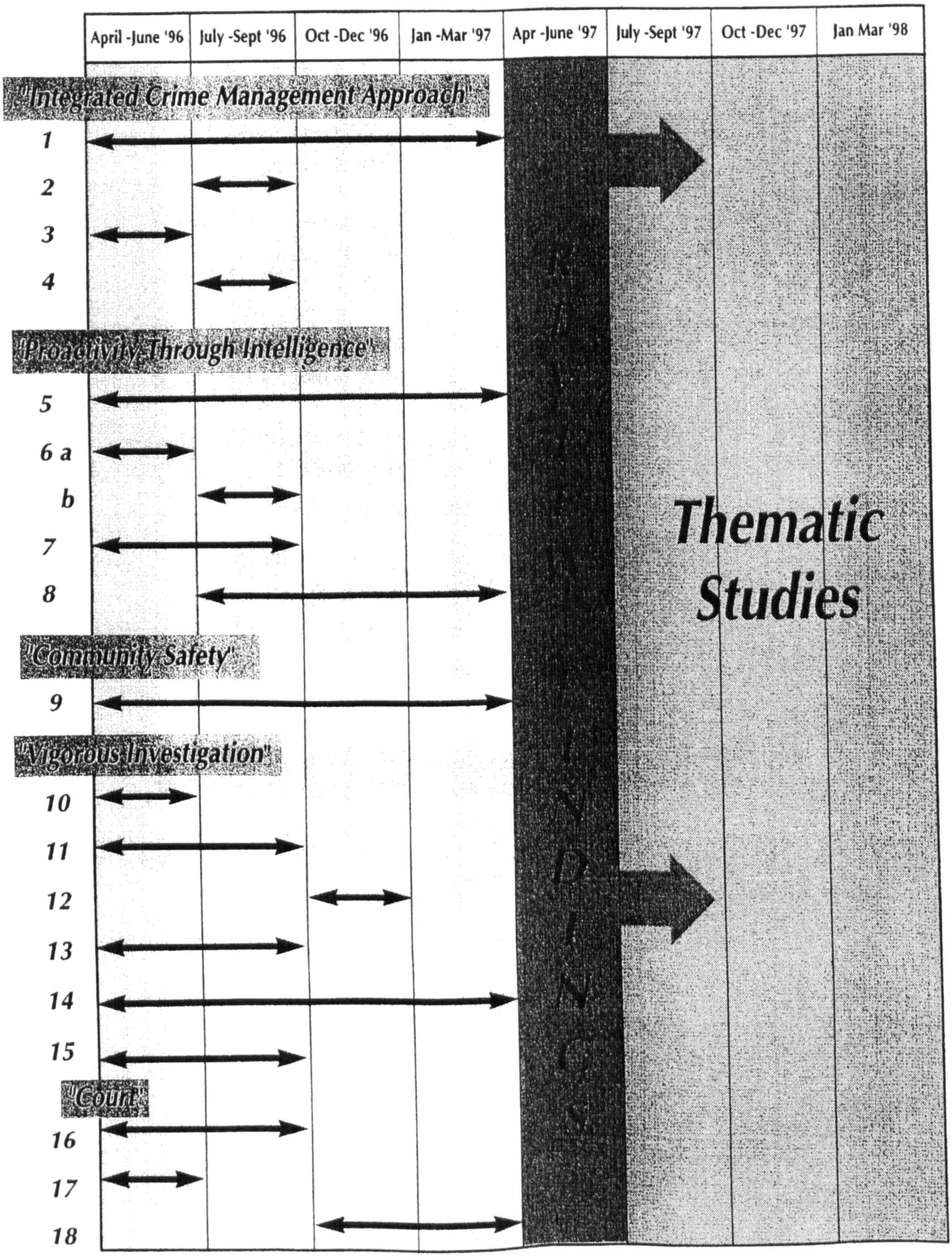
"Rigorous Investigation"

Project Action	Quality Assurance Group
10. *Review and define the role and function of "Head of CID".*	Operational Commanders
11. *Review and define the role and function of "Crime Managers".*	Operational Commanders Crime Managers
12. *Review and define the role and function of "Senior Investigating Officer".*	Operational Commanders Crime Managers
13. *Review and define the role and function of "Divisional Detectives".*	Operational Commanders Crime Managers
14. *Define and develop core investigative and monitoring skills amongst **ALL** operational staff.*	Operational Commanders Crime Managers
15. *Develop the awareness of the availability and use of specialist crime support in all aspects of investigation.*	Operational Managers Crime Managers

"Court"

16. *Develop common standards and best practice between A.S.U.'s.*	Crime Managers
17. *Develop and improve lines of communication between A.S.U.'s and operational officers.*	Operational Commanders
18. *Identify and develop methods of integration between Administration of Justice and CPS to link closer to operational requirements.*	Operational Commanders Crime Managers

Project Action Programme - Commencing 1st April 1996



APPENDIX FOUR

North Yorkshire Police - Finger Print Bureau Structured Question Set

North Yorkshire Police - Finger Print Bureau

Structured Questions for Stakeholder Interview Programme

Q1. Assuming that you are aware of the existence of the Finger Print Bureau, what if any use have you made of the services offered by the Bureau recently?

Q2. If you have made use of the Bureau's services, what is your opinion of the service received in terms of quality and delivery?

Q3. Do you have any views concerning the professional capabilities of the Bureau?

Q4. What knowledge do you have of the services being offered by the Bureau?

Q5. Of what value is the Bureau to North Yorkshire Police?

Q6. If the Bureau did not exist, how would North Yorkshire Police cope in terms of the services needed to tackle crime effectively?

Q7. How can the value of the Bureau to North Yorkshire Police be measured?

Q8. What performance measures are there actually in place through which to measure the effectiveness of the Bureau?

Q9. What, if any, are the major shortcomings of the Bureau?

Q10. Is the Bureau effectively managed in terms of its contribution to crime detection and reduction in North Yorkshire Police?

Q11. Is the Bureau adequately resourced in terms of technology, space, location and professional staff if it is to make effective contribution to crime management in North Yorkshire Police?

Q12. Are current managerial structures and processes of the Bureau adequate in terms of coping with future requirements?

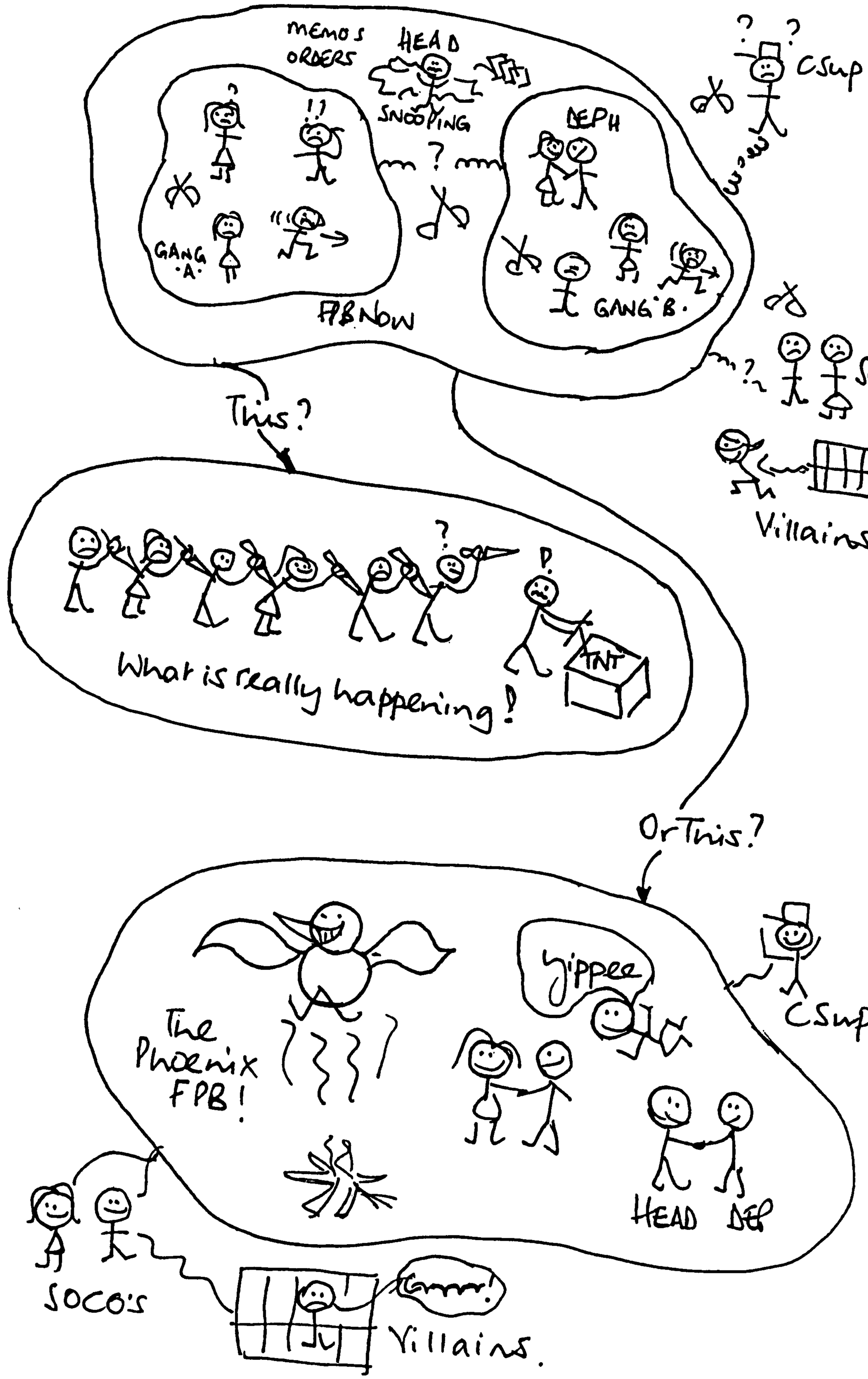
Q13. Is the role of the Bureau well defined and understood by clients and staff of the Bureau?

Q14. What are the major difficulties currently facing the Bureau?

Q15. Is there anything else that you wish to add?

APPENDIX FIVE

North Yorkshire Police - Finger Print Bureau Group Rich Picture


MEMOS
ORDERS
HEAD
SNOOPING
?
!!
GANG A.
FBNOW
DEPH
GANG B.
? ?
CSup
Socos
Villains
This?
What is really happening!
TNT
Or This?
The Phoenix FPB!
Yippee
CSup
SOCO's
HEAD
DEP
Villains.

APPENDIX SIX

West Yorkshire Police - Occupational Health Unit Structured Interview Question Set

West Yorkshire Police – Occupational Health Unit

Structured Questions for Stakeholder Interview Programme

Q1. Assuming that you are aware of the existence of the OHU, what use of the OHU have you made during the last two years?

Q2. If you have made any use of the OHU during the last two years, what is your opinion of the service you received in terms of the expertise of the OHU staff?

Q3. What knowledge do you have with respect to the services which are on offer from the OHU?

Q4. What is your understanding of the current role of the OHU within WYP?

Q5. How does the OHU make WYP personnel aware of their role and the services they offer?

Q6. If the services offered by the OHU were not available to you, where would you obtain such services and how much would you be prepared to pay for them?

Q7. What value is there to WYP in having such a facility as the OHU?

Q8. Is it necessary for the OHU to treat **all information** provided by clients as confidential?

Q9. How, and by whom, should the OHU be managed?

Q10. How can the performance of the OHU be assessed?

Q11. Should the OHU be involved in such matters as operational policing, officer security, welfare, job design and ergonomics etc.? If yes, how?

Q12. At what stage, if any, should the OHU be consulted with respect to health related issues within WYP?

Q13. What connection should there be between the OHU and Health and Safety at Work?

Q14. How should WYP place value on the services offered by the OHU?

Q15. Should OHU Management have routine reporting access to ACPO, or should there be a different but recognisable reporting line to ACPO?

Q16. The OHU has been described as a 'refuge for old lags and those trying to get early retirement on health grounds'. What is your reaction to that statement?

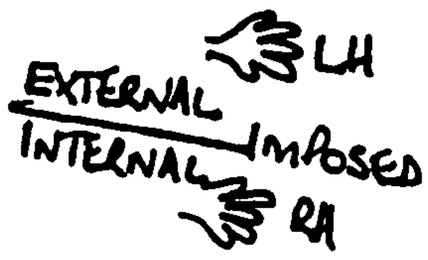
Q17. Should WYP recognise the expertise of the OHU staff in any special way? If yes, how?

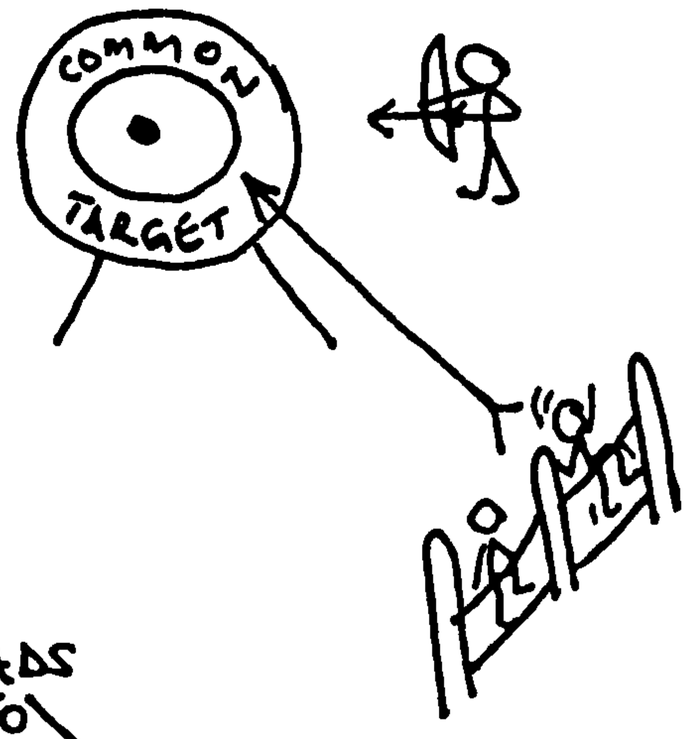
Q18. Are there any personal observations you wish to make with respect to the OHU?

APPENDIX SEVEN

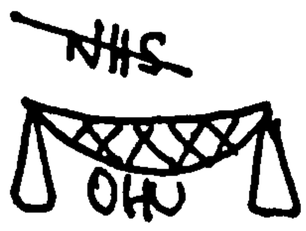
West Yorkshire Police - Occupational Health Unit Group Rich Pictures


MY BUNNY
HIS BUNNY
HOLLY BUNNY
BOBBY BUNNY
TOKED


LH
EXTERNAL
IMPOSED
INTERNAL
RA


COMMON
TARGET

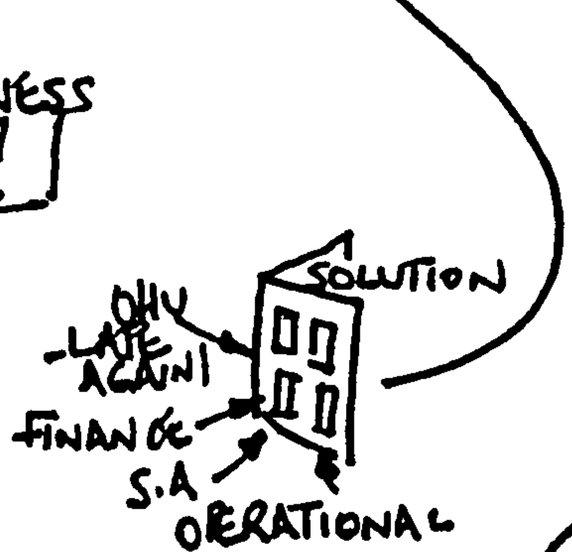

NHS


NHS
OHU

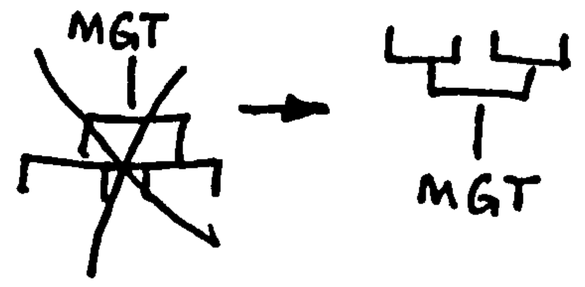

COMMS
SYSTEMS

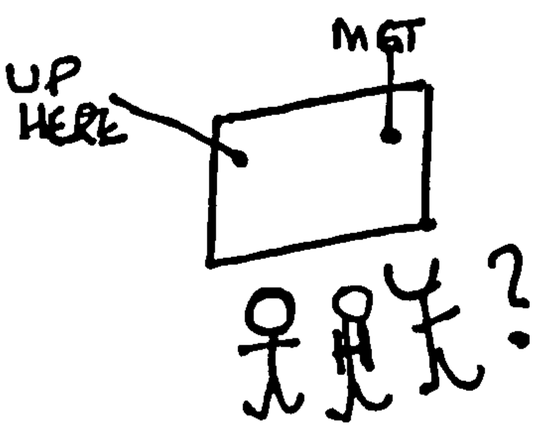



FITNESS
JOB
JOB
SELECTION


LEADS
TO
SOLUTION
OHU
LATE
ACCNT
FINANCE
S.A
OPERATIONAL


WELCOME


MGT
MGT

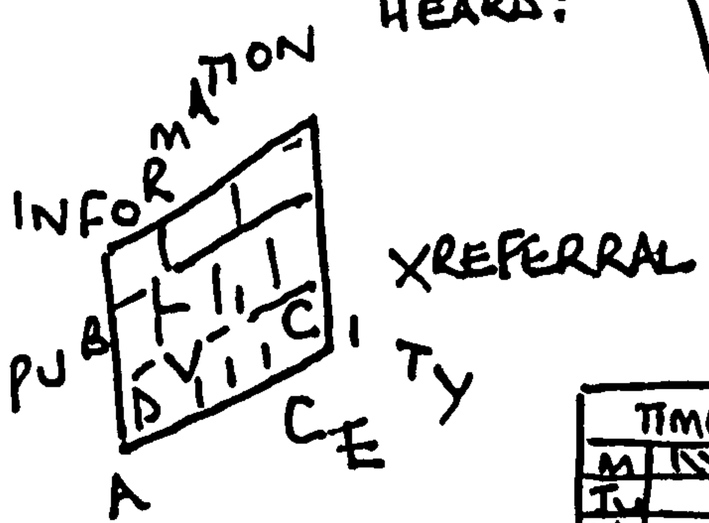

MGT
UP
HERE
?

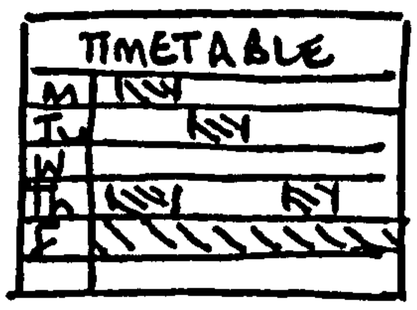

ADVICE
GRR!!
IGNORE
GRR!!

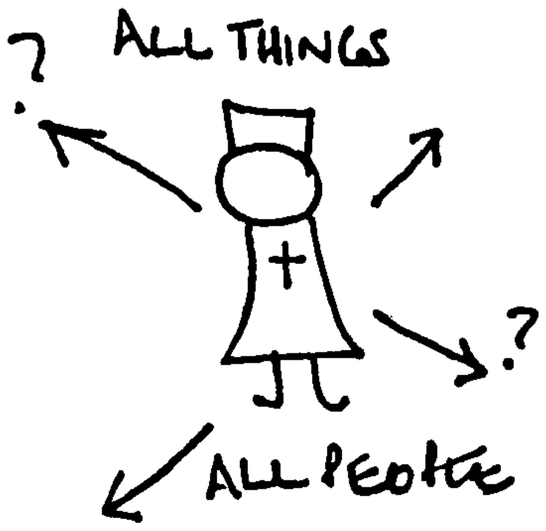

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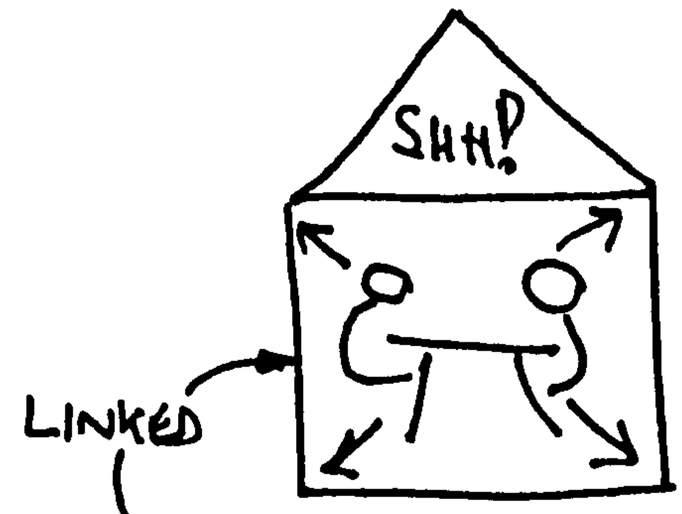

HAVE
YOU
HEARD?

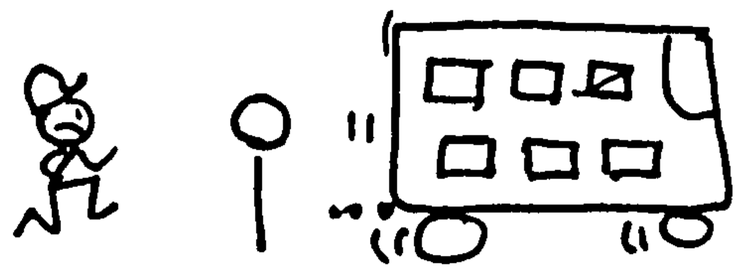

MGT
OHU
TRI...
STAFF

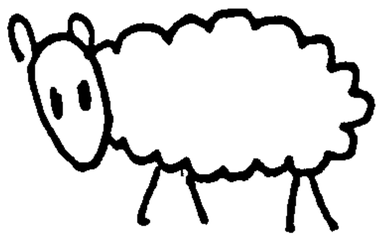

INFORMATION
REFERRAL
PUB
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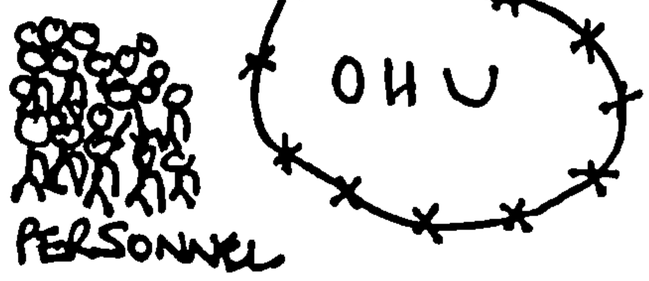

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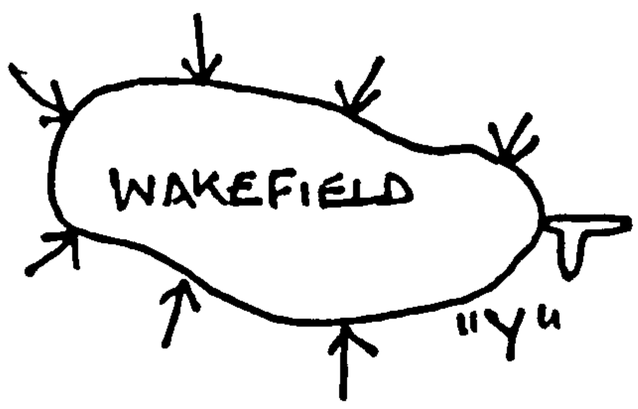

?
ALL THINGS
?
ALL PEOPLE


SHH!
LINKED
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20
20
?






OHU
PERSONNEL


WAKEFIELD
"Y"


REPORTS
INK
STATISTICS

COMMUNICATION

REGULATIONS

CULTURE

?

ACCESSIBILITY

ENVIRONMENT

UNBIASED

OBJECTIVE

WIN↔WIN

ORG | INDIV

CLARITY?

ADVICE INFLUENCE

CONFIDENTIALITY

JUMPING

ROLES AND RESPONSIBILITIES

WONDERFUL FREE SERVICE

?

BAD NEWS

WELCOME

WOOF WOOF

1 TON ACID

BLAME

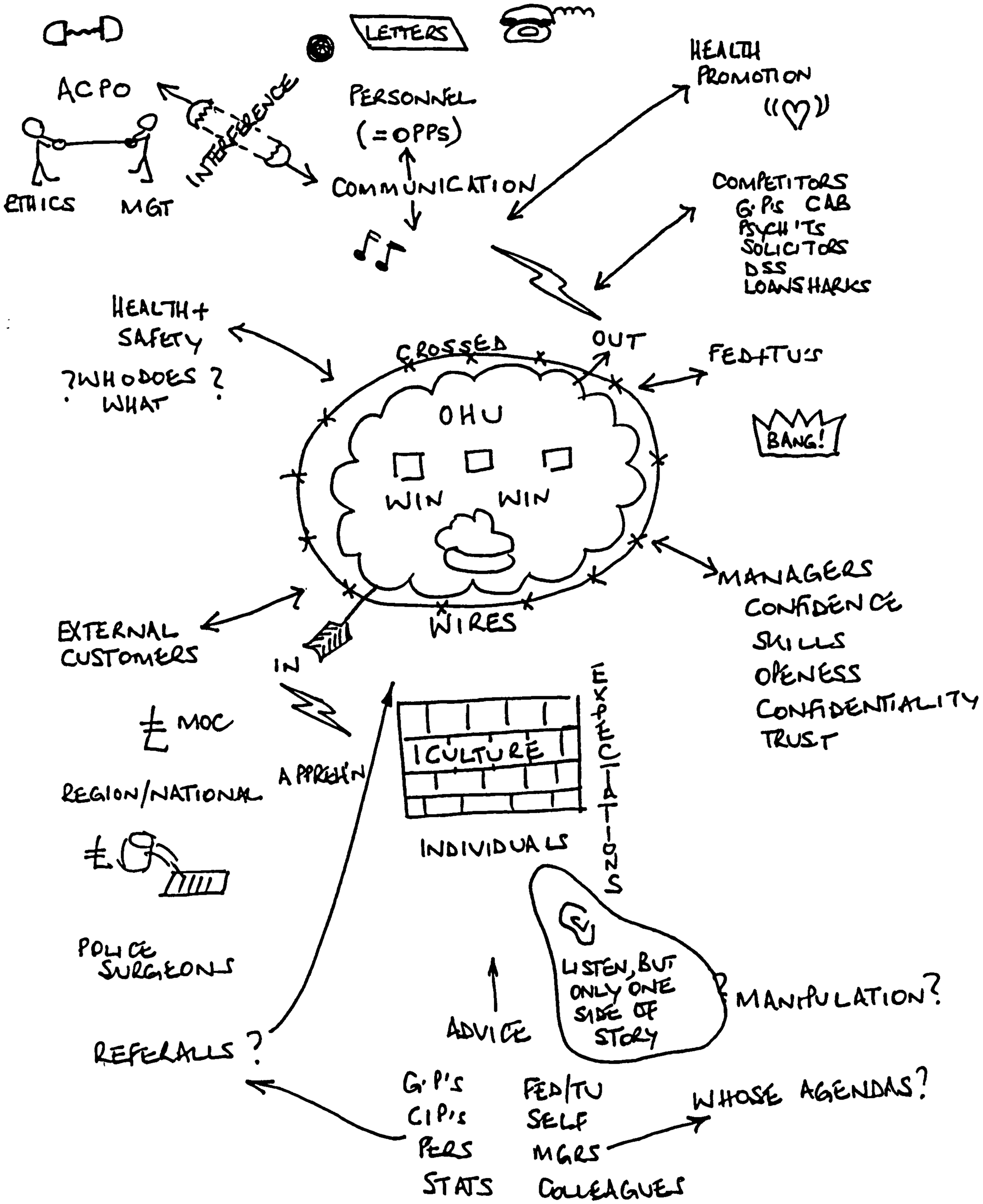
CULTURE

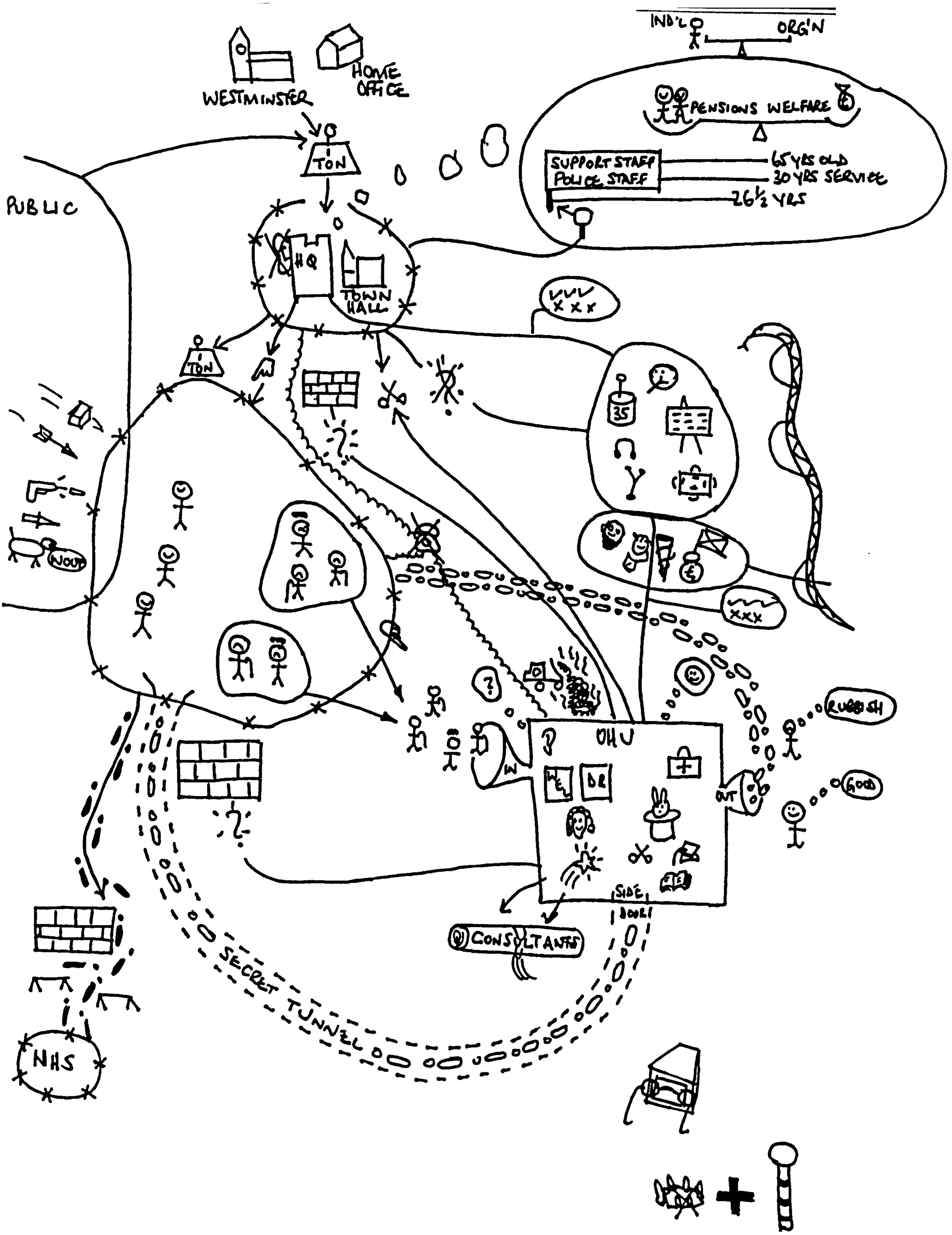
EXPECTATIONS

LIFESTYLE

ACHIEVEMENTS

SUCCESS (MEASURED)


LETTERS
ACPO
ETHICS
MGT
INTERFERENCE
PERSONNEL
(=OPPS)
COMMUNICATION
HEALTH
PROMOTION
((♡))
COMPETITORS
G·Ps CAB
PSYCH'TS
SOLICITORS
DSS
LOANSHARKS
HEALTH+
SAFETY
?WHO DOES ?
WHAT
CROSSED
OUT
FED-FTU's
OHU
WIN
WIN
BANG!
WIRES
MANAGERS
CONFIDENCE
SKILLS
OPENESS
CONFIDENTIALITY
TRUST
EXTERNAL
CUSTOMERS
IN
£ MOC
REGION/NATIONAL
£
POLICE
SURGEONS
REFERALLS ?
APPREH'N
CULTURE
EXPECTATIONS
INDIVIDUALS
ADVICE
LISTEN, BUT
ONLY ONE
SIDE OF
STORY
MANIPULATION?
G·P's
CP's
PERS
STATS
FED/TU
SELF
MGRS
COLLEAGUES
WHOSE AGENDAS?


IND'L
ORG'N
PENSIONS WELFARE
SUPPORT STAFF
POLICE STAFF
65 YRS OLD
30 YRS SERVICE
26½ YRS
PUBLIC
WESTMINSTER
HOME OFFICE
TON
HQ
TOWN HALL
35
XXX
OHU
HE
DE
OUT
SIDE DOOR
SECRET TUNNEL
CONSULTANTS
NHS

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