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BUSINESS SYSTEMS PURPOSE, ANALYSIS

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Doctor of Philosophy

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LIST OF CONTENTS

Summary	10
Acknowledgements	11-12
Chapter One – Introduction -	13
1.1. The BSPA Thesis Objectives	14
1.2. The Philosophical Dimension of the IS Failures	15
1.3. Designing a Critical Systems Methodology	16
Chapter Two - Literature Review -	19
2.1. Chapter Two Introduction	20
2.2. Business Systems and Purpose Definition	20
2.2.1. The History of the Generic Business Purpose since the 1950's	22
2.2.2. Teleology Reinstated	30
2.2.3. Organisational Ideology and Business Purpose	32
2.2.4. Ideology - Power - Dominant Stakeholder	39
2.2.5. The Relationship between Organisational Purpose, Organisational Mission and Organisational Social Responsibility	41
2.2.6. The Relationship between Situational Factors and Purpose	46
2.2.7. The Nature of the Business System defined	49
2.3. Analysis Paradigms and Organisational Behaviour	51
2.3.1. In the Service of the Technical Interest	53
2.3.1.1 Business Purpose and Information Engineering	54
2.3.1.2. The 7-Ss model	60
2.3.1.3. The Viable System Methodology	63
2.3.2. In the Service of the Practical Interest	69
2.3.2.1. Soft System Methodology	69
2.3.3. In the Service of the Emancipatory Interest	81
2.3.3.1. The System of Systems Methodologies	89
2.3.3.2. Critical Systems Heuristics	92
2.3.3.3. Total Systems Intervention	96
2.4. Overall Conclusions	114
Chapter Three - Formulating the Strategy for a Solution -	120
3.1. The Business System's Social Environment and the Political Metaphor	121
3.2. A Conceptual Solution to the IS Development Failures	122
3.3. Developing the Ideological Steady States Range Concept	130
3.4. The Strategy for the Development of an Intrinsically Motivated Organisational Information System	135
3.4.1. The Relationship between SSR and OOEN	138
3.5. Establishing the Validity Criteria for an Intrinsically motivated Organisational Information System	142

3.6. Conclusion	145
Chapter Four - BSPA Solution -	148
4.1. Our Research Bias Expressed - A Connecting Summary and Chapter Four Introduction-	149
4.2. BSPA Philosophy	153
4.2.1. The Stakeholder Concept and the Role of the Organisational Ideology	153
4.2.2. The Role of the Analyst	155
4.3. BSPA Principles	156
4.4. BSPA on Problematic and Solution	161
4.5. The Specific SSR and the Management Cohesion Index - Outside View -	164
4.6. BSPA Inside View	175
4.7. Methodology Terms	179
4.8. General Methodological steps	179
4.9. Chapter Four Summary	181
Chapter Five - BSPA MODEL - OUTSIDE VIEW - - The Functional Approach -	183
5.1. BSPA Model Principles	184
5.2. Outside View	185
5.2.1. Mission Statement Analysis	188
5.2.1.1. System Five Mission Statement Analysis	189
5.2.1.2. System Five's Specific SSR	210
5.2.1.3. Management Cohesion Index	220
5.2.1.4. System Five's Extended SSR	230
5.2.1.5. Line of Duty and Managerial Freedom	234
5.2.1.6. Provisional Problem Classification	237
5.3. Summary of the Outside View	241
Chapter Six - BSPA MODEL - INSIDE VIEW - - The Emancipatory Approach -	244
6.1. Inside View	245
6.2. Official Organisational Hierarchy versus the Unofficial Organisation	250
6.3. The Concepts of Value Chain and General Systems Theory	252
6.4. Perceived Organisational Chart and the Value Chain	262
6.5. Material and Informational Flow	269
6.6. Organisational Time Assets and the Value Chain	276
6.7. BSPA Value Chain	277
6.8. BSPA Value Chain and Control Overall	280
6.9. Inside View Steps and Supporting Documentation	285
6.9.1. Step 0	285
6.9.2. Step 1	287
6.9.3. Step 2	288
6.9.4. Step 3	290
6.9.4.1. Drawing the BSPA Value Chain	296
6.9.5. Step 4	297
6.9.6. BSPA Power Value Chain	301
6.9.7. Connecting Summary	305
6.9.8. Step 5	305

6.9.9. Idealised Design	308
6.9.10. Idealised Planning	309
6.10. Summary of the Methodology	311
Chapter Seven - BSPA Evaluation -	321
7.1. Chapter Seven Introduction	322
7.2. The Conceptual Solution's Strategy Applied on the Business System	323
7.3. BSPA Evaluation in terms of the Validity Criteria	328
7.4. BSPA Specific Advantages	331
7.5. BSPA Disadvantages and Possible Criticism	333
7.6. Measures of Success	335
7.7. BSPA Positioning	339
7.7.1. The BSPA's Critical Systems Philosophy vs. The Soft Systems Philosophy	342
7.8. Further Research	354
7.9. Conclusion	355
Glossary of Terms	357
Appendix A1	372
Bibliography and Articles	380
Bibliography	381
Articles	387
	390
	392
	393
	394
	395
	396
	397
	398
	399
	400

LIST OF TABLES

Chapter Two - Literature Review -	68
Table 2.-1.: Mechanistic Systems vs. Organic vs. Purposeful Systems	68
Chapter Three - Formulating the Strategy for a Solution -	143
Table 3.-1.: Conceptual Solution's Validity Criteria	143
Table 3.-2.: Formulating the Strategy for a Solution	146
Chapter Four - BSPA Solution -	164
Table 4.-1.: Problem Types Table	164
Table 4.-2.: BSPA Steps - Outside View	175
Table 4.-3.: BSPA Homomorphic Model – Factors	178
Table 4.-4.: BSPA Steps	181
Chapter Five - BSPA MODEL - OUTSIDE VIEW - - The Functional Approach -	190
Table 5.-1.: Current Strategic Domain Table	190
Table 5.-2.: Current Strategic Domain Table - Stake-holder X	192
Table 5.-3.: Current Structure Type Table	200
Table 5.-4.: Current Processes Type Table	201
Table 5.-5.: System Five Current Mission Matrix	204
Table 5.-6.: System Five Ideal Mission Matrix	206
Table 5.-7.: System Five Industry Outlook	209
Table 5.-8.: Organisational History Table	217
Table 5.-9.: Management Ideological Cohesion Score Table	228
Table 5.-10: Line of Duty Table	236
Chapter Six - BSPA MODEL - INSIDE VIEW - - The Emancipatory Approach -	256
Table 6.-1.: System Five's Value-Chain Primary Activities Table	256
Table 6.-2.: System Five's Value-Chain Support Activities Table	259
Table 6.-3.: I-P-O-T	286
Table 6.-4.: System Five - Second Line of Command Table	287
Table 6.-5.: System Five - First & Second Line of Command Activities/ Tasks Table	290
Table 6.-6.: First and Second Line - Communications Links Table	291

Table 6.-7.: Material Communication Links - First and Second Line of Command	293
Table 6.-8.: Information Communication Links - First and Second Line of Command	295
Table 6.-9.: Report Communication Links - First and Second Line of Command	295
Table 6.-10.: Nodes Power Base Table	300
Table 6.-11.: System Five's Value System	301
Table 6.-12.: Reward Node Table	302
Table 6.-13.: Reward Filter Table	303
Table 6.-14.: Unofficial Organisational Links	306
Table 6.-15.: System Five Problem-Type Table	307
Table 6.-16.: Actors Profile	308
Table 6.-17.: BSPA Methodology Steps - Summary	312

Chapter Seven - BSPA Evaluation -

Table 7.-1.: BSPA Methodological Solution Table	325
Table 7.-2.: Conceptual Solution's Validity Criteria Table	328

LIST OF DIAGRAMS

Diagram 2.1.: The Evolution of Organisational Purposefulness/Purposiveness	29
Diagram 2.2.: The Ashridge Mission Model	44
Diagram 2.3.: Information Engineering Pyramid	56
Diagram 2.4.: Information Engineering Encyclopaedia	59
Diagram 2.5.: The 7-S Framework	62
Diagram 2.6.: VSM	64
Diagram 2.7.: Cybernetic Measure of Performance	66
Diagram 2.8.: The Shift in Systemicity Between Systems Engineering and the SSM	70
Diagram 2.9.: Soft Systems Methodology	72
Diagram 2.10.: IS/ISDM	80
Diagram 2.11.: SoSM	90
Diagram 2.12.: SoSM - Methodologies Categorisation	91
Diagram 2.13.: CSH's Categories	93
Diagram 2.14.: TSI-1991 & TSI-1995	105
Diagram 2.15.: Overview of the Critical Review Mode	107
Diagram 2.16.: CST Thread	110
Diagram 2.17.: Methodological Approaches as Proper Subsets of the Critical Systems Approach	117
Chapter Three - Formulating the Strategy for a Solution -	
Diagram 3.1.: Organisational Steady States Range (SSR)	136
Diagram 3.2.: The SSR and the OOEN in a Double-Loop Relationship	140
Chapter Four - BSPA Solution -	
Diagram 4.1.: SSR's Synthesis	167
Diagram 4.2.: SSR - The Basic Concept	168
Diagram 4.3.: System Five's SSR - The Specific Concept	168
Diagram 4.4.: System Five's SSR vs. Mng. A	172
Diagram 4.5.: System Five's SSR vs. Mng. B	172
Diagram 4.6.: System Five's SSR vs. Mng. C	172
Diagram 4.7.: Three-dimensional Porterian Value Chain	176

Chapter Five - BSPA MODEL - OUTSIDE VIEW - - The Functional Approach -

Diagram 5.-1.:	System Five's SSR vs. Mng. A - Management Cohesion Index	223
Diagram 5.-2.:	System Five's SSR vs. Mng. B - Management Cohesion Index	223
Diagram 5.-3.:	System Five's SSR vs. Mng. C - Management Cohesion Index	223
Diagram 5.-4.:	System Five's SSR vs. Mng. D's Marginal SSR -a	224
Diagram 5.-5.:	System Five's SSR vs. Mng. D's Marginal SSR -b	226
Diagram 5.-6.:	The Extended SSR	233
Diagram 5.-7.:	Provisional Problem Type Classification – Cohesion Index $\geq 3/4$	239
Diagram 5.-8.:	Provisional Problem Type Classification – Cohesion Index $\leq 3/4$ and $\geq 1/4$	240

Chapter Six - BSPA MODEL - INSIDE VIEW - - The Emancipatory Approach -

Diagram 6.-1.:	Organisational Power/Hierarchy	247
Diagram 6.-2.:	Inside View's Organisational Level Inquiry	249
Diagram 6.-3.:	Activities Core and Elaborate Definitions	258
Diagram 6.-4.:	Official Organisation Chart	263
Diagram 6.-5.:	Perceived Category Management Organisational Structure	264
Diagram 6.-6.:	BSPA Symbols - Organisational Modelling	266
Diagram 6.-7.:	BSPA Symbols – Activities/Tasks Modelling	268
Diagram 6.-8.:	BSPA Symbols - Types of Communication Modelling	270
Diagram 6.-9.:	BSPA Symbols - Information Modelling	273
Diagram 6.-10.:	BSPA Symbols - Reward Loop Modelling	275
Diagram 6.-11.:	BSPA Value Chain	278
Diagram 6.-12.:	BSPA Symbols - Outside Stake-holder Business Organisation & Outside Stake-holder Entity	279
Diagram 6.-13.:	Control Overlap Depicted on the BSPA Value Chain	281
Diagram 6.-14.:	Conflicting Motivational Forces	284
Diagram 6.-15.:	BSPA Inquiry & Learning System	285
Diagram 6.-16.:	BSPA Power Value Chain	304
Diagram 6.-17.:	The BSPA Methodology in Summary_1	318
Diagram 6.-18.:	The BSPA Methodology and the IE Pyramid in Summary_2	319
Diagram 6.-19.:	The BSPA Methodology in Summary_3	320

Chapter Seven - BSPA Evaluation -

Diagram 7.-1.:	Universal Pragmatics	344
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Appendix - A1 -

Diagram A1.-1.:	Functional Organisation	373
Diagram A1.-2.:	Territorial Organisation	374
Diagram A1.-3.:	Product Organisation Grouping	375
Diagram A1.-4.:	Customer Departmentation	376
Diagram A1.-5.:	Market Oriented Organisation	376

Diagram A1.-6.: Service Departmentation	377
Diagram A1.-7.: Matrix Organisation in Engineering	378
Diagram A1.-8.: Project Organisation in Engineering	378
Diagram A1.-9.: Strategic Business Unit Organisation	379

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SUMMARY

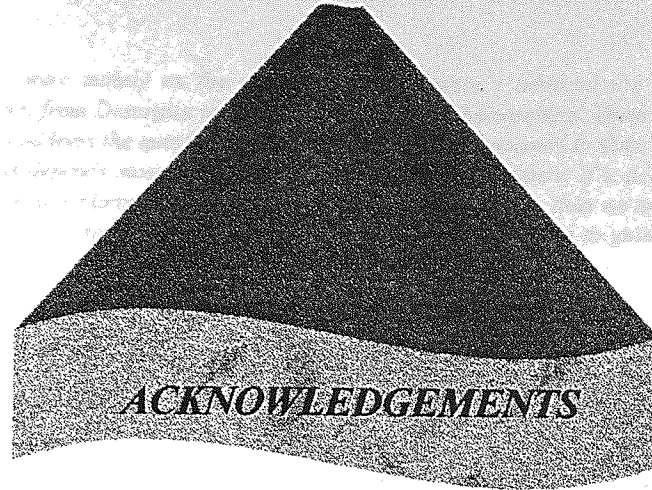
This thesis deals with the problematic of the business systems systemic purpose definition. The definition of the systemic purpose, which is regarded as the utmost expression of the system's purposefulness, is to be achieved by ensuring the participation of all the stakeholders, if possible, who affect or they are affected by the business system's operations. The nature of participation, defined as a process of the stakeholders' perceptual exchanges, is deemed to be problematic in itself due to the influence exerted upon it by organisational power, coercion and *false consciousness*. The main focus of the thesis then is to make aware and provide the stakeholders with an explicit philosophical pedestal and a set of principles upon which a *meta-*epistemological framework for the enquiry of the business system's purposeful behaviour is developed. In addition, the thesis focuses on the development of a methodology that can be used by the stakeholders to achieve self-knowledge through the critical and systemic examination of their normative presuppositions, about the business system, at both the sociological as well as the psychological levels concurrently and the subsequent development of an organisational intrinsically motivated information system. According to the critical systems philosophy and principles, developed in this thesis, normative presuppositions define the stakeholders' perceptions about the purposeful behaviour of the business system they perceived as having a material, an informational and/or an emancipatory stake (*human interest*) in. The methodology will provide Information Systems that demonstrably improve coordination of organisational activities by enabling the development and maintenance of a single/multifaceted view of purpose throughout organisations.

The stakeholders critical examination and definition of the business systems systemic purpose is oriented towards the critical examination of those organisational aspects which are defined or they should be defined by the business system's purpose(s) itself. These being the organisational strategic positioning, the organisational structure, functions and information systems' design which should be defined by the stakeholders through *discourse* leading to a *coercion-free consensus* that is based on the force of the *better argument*.

Therefore, a *critical systems methodology* is developed under the concept of *complementarism* covering the whole process of the stakeholders perceptual exchanges that takes places for the definition of the business system's systemic purpose(s). The process covers the critical examination of the existing systemic purpose and the explicit or implicit organisational strategic positioning and planning; the identification of the sources of organisational power and conflict upon the organisation's functions and processes; as well as the organisation's information systems design.

An assessment of the feasibility and the measures of the success of the methodology, based on theoretical terms only, indicate that the methodology should be both useful and implementable. The claim that the "Business Systems Purpose, Analysis" (BSPA), is a Critical Systems methodology, seems to be justifiable in theoretical terms.

KEY WORDS: CRITICAL SYSTEMS THINKING, COMPLEMENTARISM, BUSINESS SYSTEMS, POWER, COERCION, FALSE CONSCIOUSNESS, INTRINSICALLY MOTIVATED INFORMATION SYSTEMS



I am indebted to my supervisor, (DR) John Edwards, who devoted much of his time offering invaluable advice and guidance for the completion of this project. His interventions gave meaning to the cybernetic term metasystemic intervention and to the management term management by objectives.

*I would like to thank my wife **Maria** for her love and devotion and for her enormous psychological support all these years that we had to miss every single weekend, and every single holiday.*

*I would like to thank my parents **Georgios** and **Sophia** who provided me with the opportunity to be educated in the country I love, England, and supported me with their love and the necessary means during my long academic studies.*

*I would like to devote this Ph.D. thesis to **God** and to **Virgin Mary** Who provided me with life and help for the completion of this work. For this reason, as a token of my gratitude, I include in my thesis **Virgin Mary's** icon with young **Jesus**.*

"my earliest speculations...were mainly on the writers of the centuries I admired the most, the seventeenth and the eighteenth. The major writers, from Descartes to Kant, were all systems researchers. Their major problem was not how to build systems models, but to address the question of the existence of God. It seemed to them (as it still does to me), that the nature of the human systems depends most of all on whether a perfect being exists. If it does, then our main attention, as system researchers should be how planning relates to its existence. If it does not, then we not only have a lot of explaining to do in terms of our values, but also we have to find a whole set of god-less values to guide us" (Churchman, taken from de Raadt, 1997).



Θεοτόκος Οδύνηνια. Ήγισθησθαι εικασθαι του 12ου-13ου αι.

"...those who are praised as having most closely followed Plato,...and who are said to have manifested the greatest acuteness in understanding him, do entertain such an idea of God as to admit that in Him are to found the cause of existence, the ultimate reason for understanding, and the end in reference to which the whole of life is to be regulated." (Augustine, taken from de Raadt, 1997).

- Chapter One -
INTRODUCTION

1.1. The BSPA Thesis Objectives

Information Systems (IS) methodologies historically seem not to adequately incorporate ideas of organisation purpose into their methodological paradigms. In the main by making simple assumptions that amount to ignoring purpose or taking it for granted.

In this thesis we argue that the causes of the IS development methodologies' failure to come to terms with the organisational reality are the following three reasons:

- 1) Failure to analyse thoroughly the most important aspect of the organisation, namely its systemic purpose.**
- 2) Failure to analyse organisational power relations and conflict that are critical in terms of the organisational action in the real world that is expressed in business strategy.**
- 3) Failure to come to terms with the emergent systemic attributes of a business organisation such as its special nature and its dominant position in our civilisation.**

So we will develop a methodology that explicitly incorporates consideration of business purpose by changing the focus of IS development from data/information transaction to interpersonal transaction support that effectively provides and implements organisation purpose.

The resulting methodology will provide Information Systems that demonstrably improve coordination of organisational activities by enabling the development and maintenance of a single/multifaceted view of purpose throughout organisations. Namely, Information Systems that will produce meaningful knowledge to the extent that it makes its users (business system's stakeholders) reflect and thus inquire about their purpose(s), in relation to the business system and the other (perceived) stakeholders, by reflecting both on the sources of motivation and/or deception that are contained in their purpose(s) and also on the sources of collective motivation and/or deception that are contained in the business purpose(s) itself.

The initial conception was to produce an Information Systems methodology dealing adequately with the above problematic. But the special nature of the business organisations, namely the fact that they are both designed and Human Activity Systems, the proposed methodology had to be rather a problem solving methodology, but not lose sight of its original intention to become an information systems methodology as well. The above goal was possible due to the fact that a natural relationship exists between a business systems problem solving methodology and the information systems methodologies, with the latter being a subset of the first.

1.2. The Philosophical Dimension of the IS Failures

Max Weber has tried to interpret the world-historical process of modernisation as a process of progressive “rationalisation” namely a progressive increase of “rationality”, in accordance with the Enlightenment tradition for which history appeared to be a progress toward Reason. Wellmer (1991) argues that in its narrowest sense Weber defines rationality as the most efficient choice of means in the name of predefined, and unquestionable, ends. This type of rationality though led (as it still does) to deep changes in man’s social actions and interactions. The characteristic of these changes is the departure from the “communal” to the “associative” forms of man’s social action.

“One could distinguish three different aspects in Weber’s conception of rationality: purposive, formal, and discursive rationality. In its narrowest sense, rationality for Weber means Zweckrationalitat, purposive rationality, i.e., the type of rationality exhibited in the choice of the most efficient means for realising predefined goals; “rationalisation” in this sense is therefore tied up with the increase of economic or administrative efficiency. In an extended sense that concept of rationality signifies the imposition of a coherent and systematic order upon the chaotic manifold of different situations, beliefs, experiences, alternatives of actions, etc. In this sense the concept of rationalisation is tied up with the formalisation and universalisation of law in modern bourgeois society, with the extension of bureaucratic forms of organisation and even with the systematic reorganisation of something like musical material: it signifies an increase in coherence, systematic order, calculability, control, and systematic planning. With respect to the modes of action and interaction ‘rationalisation’ signifies a transition from ‘communal’ to ‘associative’ forms of social action. While communal social action is oriented toward traditional norms and personal characteristics, associative social action is oriented toward impersonal, enacted, and general norms, and dominated by instrumental or strategic considerations –either in the context of bureaucratic organisations or in the context of market relationships.” (Wellmer, taken from Bernstein, 1991).

Weber argues though that this particular *rationalisation* process produced serious *side effects*, defined as the *discontents* of modernity, for man’s freedom. Weber’s diagnosis was confirmed, by the critical philosophers Max Horkheimer, Theodor Adorno and Habermas himself, as being representative of the contemporary *Western* society’s modes of action.

“The triumph of Reason brought with it not a Realm of Freedom but the domination of impersonal economic forces and bureaucratically organised administrations, not the Kingdom of God on Earth [Protestant Vocational Ethic] but an “iron cage” in which were henceforth condemned to live. In the Dialectic of Enlightenment, written in the darkness of the early 1940s, Max Horkheimer and Theodor Adorno acknowledged the force of Weber diagnosis. Critical theory became resignative; it could at most unmask the unreason at the heart of what passed for

reason, without offering any positive account of its own. In his theory of Communicative Action, Jurgen Habermas argues that the dead end in which critical theory thus found itself is by no means unavoidable. Because Weber construed rationalisation in terms of the spread of Zweckrationalitat, he was unable, according to Habermas, adequately to grasp the selectivity of capitalist modernisation; and because they followed him in this respect, Horkheimer and Adorno were led to deny any trace of reason to the structures and institutions of modern life. In opposition to the dialectic of enlightenment standpoint, Habermas argues that the discontents of modernity are rooted not in rationalisation as such but in the failure to develop and institutionalise in a balanced way all the different dimensions of reason opened to the modern understanding of the world." (McCarthy, taken from Bernstein, 1991).

Therefore, the modernity's selective process of societal rationalisation led to the triumph of functional and instrumental reasons in our contemporary Western society, that promote practical utility and functional relations and knowledge of what is or what happens and not why respectively. The discontents of modernity are made apparent in the de-coupling of system (bureaucratically organised administrations) from lifeworld (the cultural imperative systems or worldviews) and the subsequent colonisation of the lifeworld by the economic subsystem. This evolution of modernity that upholds reason and believes that rationality can be used to promote and perfect human life, in our contemporary times has led to the domination of man's life by impersonal economic forces. This led to the subsequent reification of man's life, namely the identification of man's consciousness with the means and fruits of production, and to the fragmented forms of life (loss of unity) that are dominated by power relationships, coercion and false consciousness that appears in the form of propaganda, misinformation, unethical advertising, etc.

The discontents of modernity in our contemporary society are produced and sustained by the business system, which is the dominant institution. Business systems are defined in this thesis as special nature systems meaning that they are both designed and social systems at the same time. This implies that the analysis and the design of these systems carries the heavy responsibility of finding ways to infuse and institutionalise in the systems themselves those structures that will allow for the development and institutionalisation of all the different dimensions of reason as Habermas argues. This implies that the analyst's attention has to shift from the decisionist and monological transcendental analysis paradigms, that advocate the bisecting of means from ends and the objective identification of the system's boundary respectively, in regard to the business systems' analysis and design. The analysts attention has to shift then towards the *quasi-transcendental* (Ulrich, 1983) approach of communicative action (Habermas, 1989), that accepts the probability of deception in any form of knowledge. This approach stands in contrast to the objectivist approaches, and advocates those forms of social action that are based on the coerced-free exchange of the stakeholders value arguments respectively. All the above concepts are elaborated in chapter two.

This shift demands for the *critical systems* enquiry of the dominant institution's ideology and purpose in the contemporary society, namely the business system. In other words the critical systems enquiry of the business system should aim at passing the system's instrumental purpose(s) to the scrutiny of *practical reason* (Ulrich, 1983), namely the reason that helps us to determine what ought to be or to be done, expressed through *coercion-free discourse* (Habermas, 1984) situations. In these particular situations the *force of the better argument* (Habermas, 1984) demands for the linking of the stakeholders' actions to their *knowledge constitutive interests* that Habermas (1984) defines as the types of man's motivation for acquiring knowledge about the natural and social worlds as well as about himself. This linking is performed always within a particular *instrumental* design, and a particular business and social environment. The linking is produced through a process that feeds on human interests, namely the interests to work, communication and emancipation, and produces worldviews and systemic purpose. This process we call *ideology*.

The ideologically produced business purpose(s), namely *what an organisation exists to do* (Campbell, 1997) limits the range of *strategic choices* [the commercial –*instrumental rational*- namely *strategic domain*, *strategic positioning* and the type of *competitive advantage* (Porter, 1985)] that need evaluating (*information semiotics: syntactic, semantics and pragmatics*). In addition it limits the range of *structure* (organisational design), *process (value chain)* and *information flow semiotics* in the name of organisational *autopoiesis*, namely the system's ability to sustain its identity in an *organisationally closed* and *structurally open* manner. All these concepts are elaborated in chapter two.

Therefore a critical systems analysis paradigm, as a notional system, should facilitate the business system stakeholders' (including the analyst's) *communicative actions to reaching understanding* (Habermas, 1984), instead of only *consensual action* (Habermas, 1984), in regard to the business system's purpose(s) thus providing support for the stakeholders' interpersonal transactions. The stakeholders' effort to reach understanding through *communicative action* (Habermas, 1984) should concentrate on the search for the identification of the stakeholders' rationality limits, namely their ideological limits. The stakeholders that are made aware of their rationality's limits and causes, at a particular point in time in a particular situation, are equipped with the ability to overcome them until they reach other limits through *discourse* that is made meaningful under the *force of the better argument*. This continuous process of the stakeholders rationality's limits self-examination should be institutionalised in the form of an *intrinsically motivated* (Ulrich, 1983) Organisational Information System that will facilitate communicative action and would record at the same time the *sources of deception* (Ulrich, 1983) for further learning and understanding in different historical situations. This is a very important issue that current Information Systems fail to address. The critical systems analysis paradigm, as a notional system, is elaborated in chapter three.

The role of the analyst in this process is to facilitate and help institutionalise this continuous process in the contemporary business systems. This way the analyst then may effect change in a business system by facilitating the development and institutionalisation, in a balanced way, of all the different dimensions of reason thus implanting the 'genes' for human emancipation through an ever-lasting process that progresses towards that ideal.

1.3. Designing a Critical Systems Methodology

The BSPA methodology, being the product of this thesis, can be characterised mainly as a *problem solving methodology*, adhering to the principles of the Critical Systems Thinking field, that produces Information Systems that are relevant to a particular purpose(s). The BSPA, elaborated in chapters four, five and six, focuses on the critical analysis of business systems. The BSPA's critical analysis concentrates on the analysis of systemic, existential-like problematic areas, expressed in the business systems' systemic purpose and strategic positioning, prior to analysing the organisational structure and functions as well as the organisation's information systems. But with BSPA we do not intend to focus our attention at the abstract level of organisational systemic purpose only. Based on the *teleological* concept, namely the philosophical doctrine that advocates that developments happen as a result of the ends served, we aim at facilitating the process where the stakeholders will define ideally organisational purposefulness and the organisational strategic positioning in a *coercion-free* (Habermas, 1984) manner. The definition of systemic purpose in the manner discussed above so take place prior to the design of organisational structure functions and information systems development which are themselves covered fully by the methodology or linked to it.

BSPA then can be defined as a Critical Systems methodology (discussed in chapter seven). In addition, it can be defined as a total business systems intervention methodology [we borrow the "Total Intervention" words from Flood's and Jackson's Total Systems Intervention methodology (1991)] in the sense that it deals with the managerial, social, psychological, organisational, cybernetic, economic, strategic, and informational aspects of a business system at the level of their interaction; the level of the systemic purpose formation. All this is achieved within one coherent critical systems framework.

- Chapter Two -
**LITERATURE
REVIEW**

2.1. Chapter Two Introduction

The literature review is divided in two sub-parts. In the first sub-part (section 2.2.) we search for evidence in regard to the business system's purposive/purposeful behaviour. We start-off our search by making explicit our bias regarding the nature of the business organisation. This bias is expressed through a provisional business systems definition that identifies business systems as human activity systems which "*express some purposeful human activity, activity that could be found in the real world*" (Checkland, 1989). Therefore, in the first sub-part we search for evidence regarding the business system's purposeful behaviour in the real world and the way that that behaviour manifests itself through the workings of a human activity system.

In the second sub-part (section 2.3.) we examine the analysis paradigms, methods or methodologies that people have already made use of to intervene in the business organisation in the light of the service that they offer to the analysis of the business purpose(s).

2.2. Business Systems and Purpose Definition

Before we proceed with the analysis of a business system we will have to define the term purpose. "Purpose is the most philosophical part of mission. It provides an explanation of why the organisation exists; or to put it in another way, for whose benefit is all the effort being exerted." (Campbell and Tawadey, 1989).

In addition we have to define provisionally, namely to express our bias, the business system as follows:

A business system is a human activity system, which facilitates economic transactions ideally, in a less costly manner than the market, or in other words it is a bureaucracy¹. Business systems are dominant in society and they have been partially institutionalised. They exhibit human attributes such as the need for direction and purposefulness, as well as the need to remain viable (preserve their identity – used with the cybernetic meaning). In order to achieve their purpose(s), they employ a structure while their operations are expressed, meaning their behaviour is made apparent, through their functions. The purpose(s) of these systems are formulated through a process of interaction among different purposeful stakeholders having an explicit or implicit stake in the organisation's operations. These stakeholders could reside within the official boundary of the organisation, or beyond.

The above provisional definition implies the importance of organisational purpose. In *organisational cybernetics* (Beer, 1979) the importance of purpose is made apparent as the determinant force of *freedom*. As a matter of fact Beer defines freedom "*as a computable function of purpose as perceived [by a stakeholder]*"

¹ A *bureaucracy* form of organisation according to Weber exhibits the following characteristics: 1) a *division of labour* based on functional specialisation 2) a well-defined *hierarchy* 3) a *system of rules* covering the rights and duties of positional incumbents, 4) a *system of procedures* for dealing with work situations 5) an *impersonality* in interpersonal relations, and 6) a *system of promotion and selection* for employment based on technical competence. (Weber, 1947).

(Beer, 1979). In addition *organisational cohesiveness* and *synergy* according to *organisational cybernetics*, namely organisational performance that exceeds the sum of its parts, are functions of *systemic purpose* as well. In *organisational cybernetics* the determinist nature of systemic purpose is made apparent but its importance is confined to the concept of *viability*, which can be achieved through the organisational ability to be adaptive to its environment. The confinement of the organisational purpose within the concept of *viability*, namely an organisation's ability to maintain a separate identity, only seems to be rather restrictive though. Beer argues that organisational survival is essential, but the purpose of a *dominant institution* in society should not be only to be *viable* but to create a value system, which will promote and support the quality of life itself. One might argue though that Beer equates the organisation's systemic purposefulness with the sole purpose of the organisation itself to survive in its environment despite the fact that the people who constitute the organisation itself may have many purposes for both themselves and the organisation. This argument implies two separate purposeful entities, the organisation, which appears to be a distinct "logical" entity pursuing its own purposes, and the people that pursue theirs. But the organisational purposefulness can not be separated from the people who make it up. The organisational purposefulness is not an abstract entity but the result of the tangible interactions between the purposeful units (people) that make up the organisation in the first place. If we accept the argument that the business systems exhibit, in their totality, human-like characteristics then we can argue that *viability* is a precondition, but when more or less it has been satisfied then it becomes of secondary importance. When we humans have satisfied our *basic need* for survival, according to Maslow (1970), we engage in activities that aim to satisfy higher needs. In other words *viability* as a purpose for a business system appears to be basic and in a sense instinctual. It is rather interesting to point out that *viability* as a purpose is of primary importance in the beginning of the life of a business system. If a particular business system happens to establish its presence in society then it can free the necessary energy for the attainment of higher goals. One might argue though that the pursuit of systemic viability is never satisfied. This is true in absolute terms only! Maslow, does not advocate that in order to move up on the *hierarchy of needs*² (Maslow, 1970), we have to satisfy absolutely our needs in the previous stages. To create a work of art, *motivated* from our *self-actualisation needs*, it does not mean that we have ensured our food-requirements forever a priori. By advocating that the organisation's purposefulness should be directed towards higher goals other than *viability* we are entering the field of the organisation's social responsibility, dealt with in section 2.3.1.3.

In regard to the organisation's social responsibility a *cybernetic* person might argue that the *cybernetic* organisation discharges its social responsibility by obeying the *organisational cybernetic laws of viability*. This seems to be a convincing argument but one might wonder that 'isn't in the duties of the *cybernetic* organisation to create a *cybernetic* society as well?'. In *cybernetic* terms the sole *systemic* purpose of the business system is constant and classic in the sense that it remains the same over time. If we reject the concept of *viability* as the sole *systemic* purpose then we are led to believe that *systemic* purpose would not be constant but rather circumstantial depending as was mentioned above on the outcome of the interaction struggle between

² Maslow's *hierarchy of needs* takes as its starting point the 'physiological needs' and it progresses towards the "safety needs", the "belongingness and love needs", the "self-esteem" needs, towards finally the "self-actualisation" needs.

the different stakeholders. As a matter of fact one could argue that the individual purposes of some stakeholders interacting for the formulation of the organisation's purpose(s) might lead to the very destruction of the organisation as well; e.g., the *environmentalist* who wants to shut down a nuclear plant. This implies that it seems highly unlikely that the purpose(s) would be stable for very long periods of time due to the fact that the content as well as the context of the stakeholders' interaction will tend to change over time. New stakeholders enter the interaction game and others will drop out. Beer's "*Viable System Methodology*" (VSM) (Beer, 1979), dealt with in section 2.3.1.3., seems to neglect the content as well as the context of the stakeholders' interactions that take place between purposeful stakeholders. Flood and Jackson (1991) in their critique of VSM argue that VSM produces an *improvised picture* (model) of the organisation. They argue that it overlooks the *organisational culture, politics and power* being the determinant forces of the *systemic purpose* in the first place. According to Flood and Jackson the whole focus of VSM is on *efficiently pursuing predetermined ends*.

"It is true that the cybernetic model is one-sided in this respect, emphasising the pursuit of known goals rather than the way goals are arrived at. Descriptions of VSM make no explicit mention of negotiation forums or participation to take account of individual viewpoints.." (Flood and Jackson, 1991).

Flood and Jackson introduce very important elements in the stakeholders' interaction for the definition of systemic purpose. In terms of the stakeholders' interaction content they introduce the element of *power* while in terms of the stakeholders' interaction context they introduce the element of the *individual* (stakeholder) *viewpoints*, namely the individual's subjective *worldview*.

If we subscribe to Flood's and Jackson's arguments we have to assume that the purposeful behaviour of the contemporary organisation should be the result of an organisational power game where the systemic purpose would be the result of the stakeholders' power balance.

Therefore in our search for evidence in regard to Flood and Jackson's claims we turn our focus on the evolution of the *generic business purpose* since the 1950's. The history of the *generic business system evolution* has been analysed by Mintzberg (see diagram 2.-1.) in terms of the attacks that the dominant *classical-economic theory of profit maximisation* has been subjected to since the 1950's.

2.2.1. The History of the Generic Business Purpose since the 1950's

In order then to understand the contemporary business system purposeful behaviour we focus our attention on the evolution of the generic business purpose since the 1950's, that in this thesis is regarded as the start of the contemporary business systems era. The history of the generic business system evolution has been analysed by Mintzberg (1983 - see diagram 2.-1.) in terms of the attacks that the dominant classical-economic theory of profit maximisation was subjected to since the 1950's. These stages are defined as follows:

a) *The Reign of the Profit-Maximisers*: The old classical theory advocates that the sole business purpose is confined to the pursuit of *maximisation of profit* solely. There is *one actor* (stakeholder), namely the *owner*, and *one goal* (meaning purpose, namely a reason to exist) that of *maximisation of profits*. The first attack upon the theory was a philosophical one concentrating on three questions the following:

“First, is profit the goal that is maximised? Why profit? Why not some other goal?” (Mintzberg, 1983).

b) *The Profit-Maximisers ethics under scrutiny*: The second attack on the classical economic theory concentrated on the feasibility of profit maximisation as well as on its ethical dimension. Papandreu (1952) argues that the intended maximisers’ bounded rationality (Davis and Olson, 1984) makes the concept of profit maximisation non-feasible.

“In the absence of knowledge concerning entrepreneurial horizon and expectations the profit maximisation construction becomes an empirically irrelevant tautology” (Papandreu, 1952).

c) *The Peak-Co-ordinator* concept under scrutiny: Papandreu introduced the idea of the “*Peak Co-ordinator*”, as the recipient of the above influences and the *integrating force* of those influences towards the goal of profit maximisation.

Other business academics and practitioners have examined the concept of the Peak Co-ordinator as well. In the classical organisation theory the Peak-Co-ordinator is described as a reflective animal, as a systematic planner who plans, co-ordinates, and motivates. Drucker (1952), describes the Peak-Co-ordinator, who he calls “chief executive”, as follows:

“The chief executive thinks through the business the company is in. He develops and sets over-all objectives. He communicates the objectives and the decisions to his management people....He co-ordinates the product business within the company and the various functional managers.” (Drucker, 1952).

d) *The Bargaining Process*: The main problem with Papandreu’s contribution was the impractical task of the *Peak Co-ordinator* in reconciling demands made on him by different authorities concurrently. Papandreu (1952) argues that in that case the *Peak Co-ordinator* would not be in a position to reconcile the different demands because he would not be in a position “to formulate a consistent preference system” and thus achieve his goal, namely *maximise profit*.

Simon (1964) attacked the notion of *profit maximisation* by arguing that the demands made on the *Peak Co-ordinator* do not have to be reconciled. Simon viewed the whole *profit maximisation* process as a “linear

programming “problem where every demand by external stakeholders becomes a *constraint*. In other words the notion of profit maximisation seemed to be losing ground, while the concept of the Peak Co-ordinator remained. The recognition of constraints regarding profit maximisation led us to the explicit formulation of the concept of bounded rationality. Simon (1964) advocated the bisecting of organisational goals into means and ends. Ends formulation remained the privilege of the Peak-Co-ordinator while means were allocated to the lower hierarchical levels in an *MBO* (Management by Objectives) manner. March and Simon (1968) elaborated on Barnard’s (1938) “equilibrium theory”, advocating that the organisation in order to function properly should gain the co-operation of its members by stimulating motivation.

“with incentives such as pay and working conditions, and by stimulating positive actions (that is, by motivating them). The common goals which Barnard calls purpose, will frequently differ from the goals of the individual members. What is important is that people accept that helping the organisation achieve its goals will help them achieve theirs.” (Clutterbuck and Crainer, 1990).

e) *The Political Arena*: Georgiou (1975) argued that organisations are purely *political arenas*, having no goals but being

“arbitrary focuses of interests, marketplaces whose structures and processes are the outcomes of the complex accommodations made by the actors [stakeholders] exchanging a variety of incentives and pursuing a diversity of goals” (Georgiou, 1975).

Georgiou made the point that the organisation adheres basically to the concept of the *bargaining* or *political arenas* implying that *spot contractual relationships* are the norm. In addition Georgiou makes the point that organisational analysts have failed in their analysis of the organisation because they concentrated on explaining the *holon* (the integrated whole) and not its parts. He argues that overemphasis on the holon led to the depersonalisation of the organisation. *“The whole is regarded not as the product of interaction between the parts, but as determining them”* (Georgiou, 1975). Georgiou goes on to define organisational purposefulness as *“an arbitrary defined focus of interest”* where the organisation is defined as a *purely political arena* facilitating *spot contractual relations*. The organisation according to Georgiou is a *“marketplace in which incentives are exchanged”*. The idea that the organisations have no goals (namely purposes) comes into sharp contrast with the *cybernetic* organisational principles. If we accept the assumption that organisations have no goals or purposes then we should accept the assumption that there is no cohesiveness among the operational units (*cohesiveness* in *cybernetics* is defined as a function of organisational purpose). Thus we can claim that in that case no bureaucracies exist but only markets, namely institutions that bring together the buyers (demanders) and sellers (suppliers) of a particular good or service, provided that the legal system could ensure that the transaction costs (legal costs that are produced from disputes) in the market formation would be lower than those of the bureaucracy formation. Cohesiveness in a bureaucratic organisation reduces transaction costs. According to Georgiou then no business systems must exist in the real world. One might argue though that

there is a resolution of this paradox, namely Georgiou's argument that all organisations are *marketplaces*, by arguing that the organisation exists (only) to be a particular type of the market formation. This argument can not be accepted either because it implies that there are no markets but only organisations that exist to simulate the markets. The organisation is certainly a product of its parts but if we concentrate only on the parts we will miss the emergent attributes exhibited by the *holon*. The most important attribute is the organisation's purposeful behaviour itself. Basically Georgiou, with his arguments in favour of the depersonalisation of the business organisations, makes an implicit attack against the *functionalist*³ *systems science* that advocates the imposition of the whole upon the parts (this matter is dealt with in detail in chapter four). Georgiou makes the case of the stakeholders' exchanges but his argument that the result of their interactions produces no organisational goals can not stand. The catalyst to the process of the organisation's goal formation that Georgiou overlooks is the exercise of power by the stakeholders to bring to bear on the organisation their own material and informational interests.

In addition, Georgiou seems to overlook the point that the *institutionalisation* of the organisation has led to the creation of the *organisational character* (Selznick (1957) that is expressed in a consistent behaviour pattern vis-à-vis its environment. The organisational character can be defined as an emergent attribute of the whole that is expressed, according to Selznick (1957), with the organisation's formal rules and procedures and in the consistency of its behaviour over time. Georgiou's metaphor is representative mostly of organisations in crisis which are most likely to perish, or at least are about to undergo a substantial change of identity. Georgiou's organisational metaphor corresponds to Mintzberg's definition of the *political organisation*. Mintzberg's (1983) so called "*complete form*" definition of the *political organisation*, namely the *political arena*, is characterised by intense, pervasive, and brief conflict. In this organisation authority and ideology coincide totally with political power. The organisation is very unstable and unable to pursue any goals.

Chaos theorists (Stacey, 1996) will define the organisations that Georgiou describes as been in a state of *bounded instability far-from equilibrium*. In this particular state the high degree of *instability* breaks the connections between the system's *inputs* and *outputs* or in more general terms the connections between *cause* and *effect* thus making the organisation's behaviour appear as being an *arbitrary focus of interests*. An organisation in this state, according to Mintzberg, can not survive for long except if it is protected by a regulatory body.

"In essence, the complete political arena is less a coherent organisation than a free-for-all of individuals. As such, it is probably the form of political organisation least commonly found in practice, or at least the most unstable when it does appear...But since few organisations can

³ "The objectivist understanding of rational planning in contemporary systems science" (Ulrich, 1983).- "Habermas characterises as 'objectivistic' and attitude 'that naively correlates theoretical propositions with matters of fact'(1971a:307)" (Ulrich, 1983).

sustain intense political activity for long, that kind of conflict must eventually moderate itself (unless it kills the organisation first)." (Mintzberg, 1983).

f) *The Revitalisation of the Profit-Maximisers*: Finally in the '80s we witnessed the revitalisation of the old classical economic theory, somewhat modified though but still advocating the maximisation of profit. The modification corresponds to the replacement of the "sole owner" of the enterprise with multiple owners, namely the *shareholders*. Friedman, constructs his arguments on the basis of the capitalist principle of *self-interest*⁴. McConnell and Brue (1990) make a distinction between *self-interest* in its pure form and *selfishness* as follows:

"It is worth noting that the pursuit of economic self-interest should not be confused with selfishness. The stockbroker who receives corporate dividends may contribute a portion to the United Way or leave bequests to grandchildren. Similarly, a local church official will carefully compare price and quality among various brands in buying new pews for the church." (McConnel and Brue, 1990).

But there is a 'thin line' separating *self-interest* from selfishness. Antony's (1960) perception of the *self-interest* is descriptive of the *selfishness* of the *self-interest*. Antony's arguments raise serious doubts about whether the self-interest can actually steer the economy when it comes into sharp contrast with the concepts of co-ordination and synergy of the economic agents, in an effort to minimise society's transaction costs. We will not concern ourselves with the concept of the capitalist self-interest which is flawed in its conception, but we will concentrate mostly on another aspect of Friedman's theory which claims that organisations should be defined narrowly as economic instruments with the sole obligation of maximising profits for their owners. Friedman's ideas about the instrumental nature of the organisations are not novel. They run back to the ideas dominating the age of organisational formation, in the contemporary Western world. Athos and Pascale (1986) argue that the development of the contemporary Western organisations was influenced by the Roman Empire and the Catholic Church being the dominant institutions until the 16th century. The unchallenged position of the Catholic Church between the 14th and 16th centuries, when the Roman Empire was long gone, led to internal corruption and organisational rigidity thus creating a leadership vacuum in society which the development of the sovereign nation-states came to fill. Political power (the power of the state) was differentiated by the theocratic power of the Catholic Church. The Catholic Church became the custodian of man's spiritual needs and the state the custodian of his secular material needs. The cleavage between church and the state has since influenced the way Westerners view the business organisations today. The "Protestant Vocational Ethic" (Habermas, 1989), being the origin of capitalism itself, amounts to Luther's effort to reunite the secular with the spiritual. Luther's Vocational Ethic that man can discharge his obligation to God by being a productive individual soon became amoral because the economic imperatives were differentiated from the

ethical ones. In contrast the Chinese and the Japanese institutions did not evolve in the Western way. Athos and Pascale argue that Western organisational theory itself was influenced by the cleavage between the spiritual and secular spheres of man's life.

“Not unexpectedly, Western organisational theory evolved to legitimise this duality as a natural state of affairs. Machiavelli in the sixteenth century was one of the first to consider management as a function separate from moral law. He advanced an amoral theory for governing organisations.” (Athos and Pascale, 1986).

Athos and Pascale go on to say that in the *Industrial Revolution* the split became even more distinct. In the age of mass production where skills became of secondary importance humans became just another input of production. These ideas when the big organisation came to emerge and the West was leading the world came to be diffused in a global scale, thus becoming the principles of management internationally but not in Japan and China. In contrast Eastern organisations paid more attention to the spiritual needs thus recognising their social obligations earlier than the Western organisations.

Therefore, Friedman's theory advocating the amoral stance of the organisations is flawed for two reasons:

- 1) Because it pays to be socially responsive and
- 2) That it is very simplistic to argue that you can actually separate an economic decision from its social consequences.

According to Herzberg (1972) a business organisation which neglects the *“human needs”*, namely as he argues those of *creation* and *self-esteem*, and concentrates only on the satisfaction of *biological* needs will definitely fail to take full advantage of its labour force capabilities. People will tend to become selfish bureaucrats, namely people that concentrate on the letter of the law, and whose sole purpose will be to work only for the money.

Therefore Mintzberg's analysis of the contemporary business purpose leads us to the conclusion that profit maximisation is not feasible in the real world while its pursuit does not provide the society with a service. In addition, Mintzberg's analysis leads us to the examination of the relationship between the business systems' human activity system workings and its instrumental design [structure and function] in the light of its purposeful behaviour. For the discussion we concentrate on the relationship between business purpose and the organisation's structure and functions.

⁴ “In short capitalism presumes *self-interest* as the fundamental modus operandi for the various economic units as they express their free choices. The motive of self-interest gives direction and consistency to what might otherwise be an extremely chaotic economy” (McConnel and Brue, 1990).

The history of the evolution of the *American Corporation*, researched by Johnson and Kaplan (1987), provides us with evidence that demonstrate the existence of a relationship between the business system's purposeful behaviour and its instrumental design as a one of mutual interaction after the birth of the business system. The discussion next moves on to use of Aristotle's teleological concept that seeks its reinstatement in organisational thinking as a critical concept in regard to the business system's purposeful behaviour and organisational design explicated in the next section.

**The Evolution of Organisational Purposefulness/Purposiveness
Post-war Paradigms - Mintzberg, 1983**

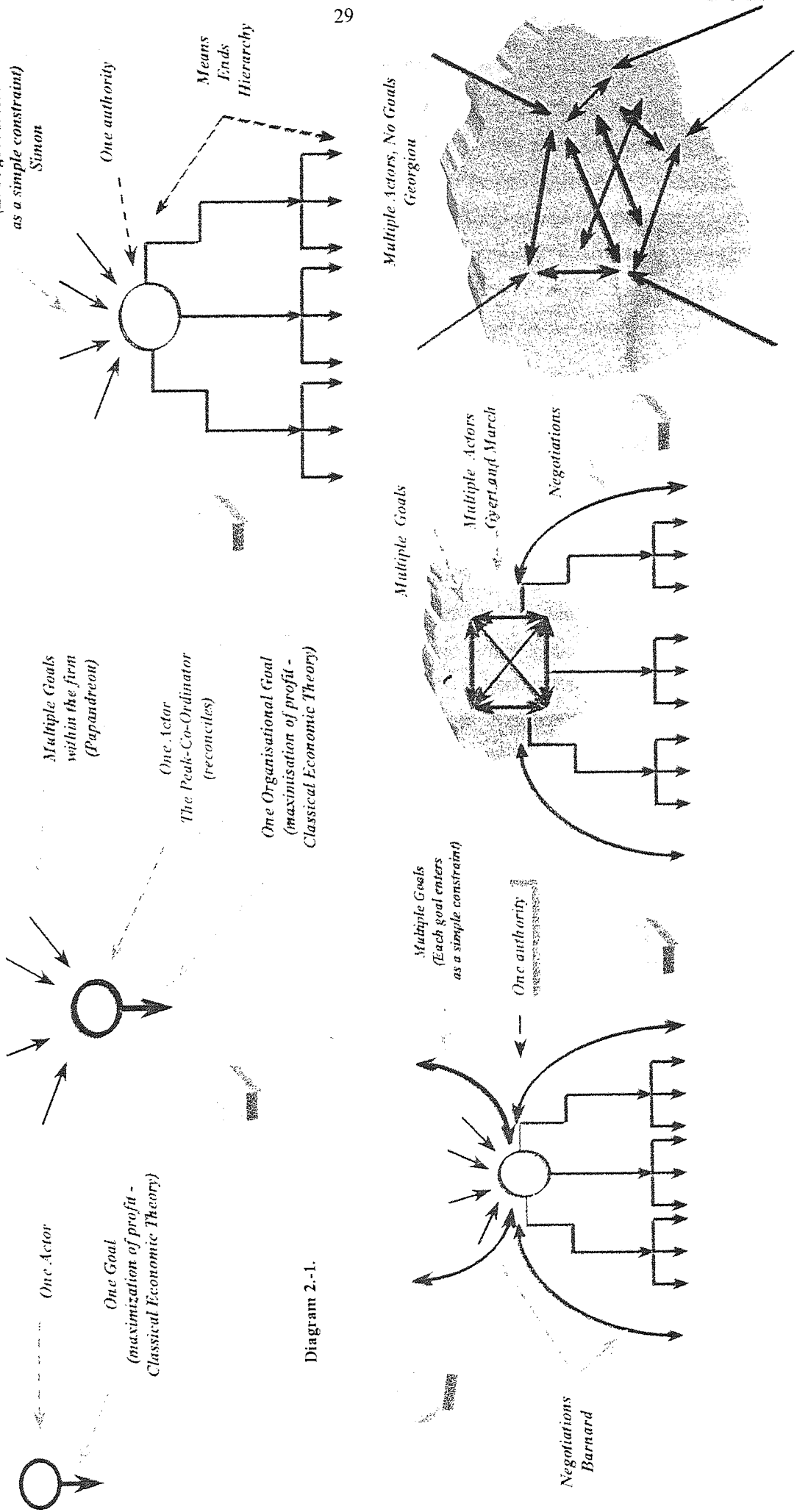


Diagram 2.-1.

2.2.2. Teleology Reinstated

Checkland (1989) argues that Aristotle's concept of *teleology* where "*objects in the world fulfilled their inner nature of purpose* [meaning why the objects existed in the first place – teleology is the answer to the existential-type problems]", was overthrown by the Scientific Revolution of the 17th century. In Newton's mechanical view of the universe teleology seems to be an inappropriate concept. But, according to Checkland (1989), the history of biology is basically the reinstatement of purpose as "a respectable intellectual concept". Biologists though avoid attributing the metaphysical connotations, implied by teleology, to physical phenomena. Instead they name behaviour that seems to fulfil a purpose as "teleonomic".

Medawar and Medawar (1977) describe teleonomy as the "'genteelism' derived from teleology". But the concept of teleonomy has not fully replaced teleology in the eyes of the biologists. Ludwig von Bertalanffy (1987), the man who proposed the concept of "General System Theory", argues that one of his motivations behind the formulation of his theory was the concept of teleology itself.

"In the biological, behavioural and sociological fields, there exist predominant problems which were neglected in classical science or rather which did not enter into its considerations. If we look at a living organism, we observe an amazing order, organisation, maintenance in continuous change, and apparent teleology. Similar, in human behaviour goal-seeking and purposiveness cannot be overlooked, even if we accept a strictly behaviourist standpoint."
(Ludwig von Bertalanffy, 1987).

The difference between teleonomy and teleology is rather superficial, made by biologists in order to avoid attacks regarding the metaphysical connotations embedded into the concept of teleology. In addition with the concept of teleonomy the biologists try to overcome vitalist⁵ connotations as well as questions about the purpose of life itself. It is easy to be labelled as a vitalist when you are talking about or analysing the purpose of biological performance. The same does not apply though when we are analysing the purpose of a human activity system (why does the system exist?) such as a business system, because its existence and purpose can not be attributed to the purposeful behaviour of metaphysical forces. Human activity systems, are "less tangible systems than natural and designed systems" (Checkland, 1989). Checkland argues that HASs can be observed as whole entities (holons) being the result of a particular purpose or mission in teleonomic terms but when their behaviour is oriented towards a particular purpose in the real world then it becomes teleological.

Ulrich (1983) elevates human purposefulness to the level of Kant's *transcendental dimensions* of *space* and *time*. Actually he defines "*human intentionality*", as one of the necessary, mapping dimensions determining human perception. But he explicitly avoids defining purpose as a *transcendental concept*, namely being *a priori* which precedes experience to make it possible. Instead he defines purpose as a '*heuristic ideality*', thus

⁵ "*Vitalists* believed that life involved something beyond the physical." (Checkland, 1989).

avoiding being accused of “*hypostatisation*”⁶ in regard to the *universality* of purpose. If Ulrich had accepted the *universality* of purpose then he would have been called to cancel-out the definition given to his “*heuristics*”, being in itself an “*objectivist illusion*”. Ulrich’s heuristics is a search for knowledge without a knowing subject but most important of all without axioms serving the purpose of prior truths upon which critical reflection should focus. This position comes into sharp contrast with Kant’s *transcendent* philosophy.

“The term ‘heuristic ideality’ replaces the Kantian term ‘transcendental ideality’ because the pragmatic dimension of purpose is not said to be universally applicable or necessary in any absolute sense.) This definition effectively answers any possible objection as to an alleged ‘teleological fallacy’ in ascribing purposes to social systems” (Ulrich, 1983).

Before that definition though Ulrich talks about *purposive* behaviour as the definition of *value-laden* judgements implying the impossibility of separating *means* from *ends*.

“ Defining ‘purpose’ as a mapping dimension analogous to ‘space’ and ‘time’ is thus not to ‘introduce’ value judgements into social mapping but rather to include in our basis of experience the value judgements that are always there, as constituent elements of both social reality and our maps of it.” (Ulrich, 1983, my underlining).

If purpose is not supposed to be a transcendental ideality but rather a heuristic one not universally applicable then this leaves open the possibility, even remotely, that means and ends could be separated. If we accept the position that purpose is not applicable in some cases at least then we leave open the possibility of dissecting *means* and *ends* as the Weberian scientific approach and the concept of “*Decisionism*”⁷ advocates. The claim of value-free theory or observation goes against Habermas’ critique of Popper which advocates that no knowledge can be value-free [*pragmatic model*] because it originates from human’s interests; a position which Ulrich seems to adopt.

“In the pragmatic model the strict separation between the function of the expert and the politician is replaced by a critical interaction. The interaction not only strips the ideological supported exercise of power of an unreliable basis of legitimisation but makes it accessible as a whole to scientifically informed discussion, thereby substantially changing it. Despite the technocratic view, experts have not become sovereign over politicians subjected to the demands of the facts left with purely fictitious power of decision. Nor, despite the implications of the decisionist model, does the politician retain and preserve outside the necessary rationalised

⁶ “*Hypostatisation*”: Generally, indicating that something underlines other things and acts as a support” (Flood, 1990).

⁷ “According to this model [*Decisionist Model*], the values or norms guiding practical action cannot be justified with reason, i.e., through rational discourse and reflection; they represent, rather, subjective ‘decisions’ prior to rational activity.” (Ulrich, 1983, my underlining).

areas of practice in which practical problems are decided upon as ever by acts of will. Rather, reciprocal communications seems possible and necessary, through which scientific experts advise the decision-makers and politicians consult scientists in accordance with practical needs. The dialectical or 'pragmatistic' model thus requires a model of rational discourse between experts and political agencies, a model that can guarantee an adequate translation of practical needs into technical questions, and of technical answers into practical decisions. The basic requirement for such discourse is that it be public; a second necessary requirement is that it be 'free from oppression,' that is, not subject to external sources of systematic distortion." (Ulrich, 1983, my underlining).

The pragmatistic model leads us to the critical systems (critical systems thinking) examination of *political ends*, which are left unquestioned in the *decisionist model* and to the *critical* examination of the relationship between the "experts" and the politicians.

The above discussion is indicative of the importance of business purpose as a *critical systems* concept for being the determining force of organisation structure, functions and the type and content of the transactions between organisational stakeholders or organisational subsystems. In this thesis we define the business system as special nature systems, namely as a *designed system* (Checkland, 1989) that exhibits purposeful/purposive behaviour which originates from a particular HAS that they encapsulate. This statement of course implies that for these special types of systems purposefulness amounts to a "transcendental ideality" in the eyes of its designers or its stakeholders.

2.2.3. Organisational Ideology and Business Purpose

Lodge and Vogel (1987) define ideology as the collection of ideas connecting the society's values, which in this case coincide with the relative universal ideals found in nearly every society. According to Lodge and Vogel, for example "*justice, economy, self-fulfilment or self-respect*", vary with the "*relevant context*". The *relevant context* is defined as the collection of phenomena, facts, events, insights, institutions, and forces that affect society from within or without. Therefore they define ideology as follows:

"Ideology connects the two: values and relevant context. Ideology gives values institutional vitality; it makes them live in a particular place at a particular time" (Lodge and Vogel, 1987).

Lodge and Vogel argue that their definition of ideology is quite different than the definition given by Marx that ideology originates from the interests of the *ruling class* aiming to obscure truth in order to preserve its domination in society. They argue that though ideology can be used as a propaganda weapon they perceive it as rather an analytical tool in the Weberian tradition where ideology is viewed as a tool used for studying the historical evolution of societies and individualism. The distinction made from the Marxist definition of ideology is *epistemological*. Lodge and Vogel, though they give reasons for the economic roots of the ideology

phenomenon as part of the contextual factors shaping ideology, namely “recession, growth, levels of income, and income distribution, productivity, trade balances, employment rates, and inflation”, they concentrate on the epistemological use of ideology only. This distinction stems from the Weberian tradition of *hermeneutic theory* rather than the *critical hermeneutics*⁸ theory that the Marxist theory promotes. For the purposes of this thesis we will adopt Lodge’s and Vogel’s definition of ideology but our epistemological paradigm would be that of *critical hermeneutics*.

Eagleton (1994) argues that ideologies can also be viewed in a more positive light and he cites the use of the term ‘*socialist ideology*’ given by Lenin himself. In the *positive sense*, according to Eagleton, ideology coincides with the *positive sense of class-consciousness*.

“But ideologies can also be viewed in a more positive light, as when Marxists like Lenin speak approvingly of ‘socialist ideology’. Ideology means here a set of beliefs which coheres and inspires a specific group or class in the pursuit of political interests judged to be desirable. It is then often in effect synonymous with the positive sense of ‘class consciousness’ - a dubious equation, in fact, since one could speak of those aspects of ‘class consciousness which are in this sense ideological, and those which are not. Ideology might still be viewed here as ideas importantly shaped by an underlying motivation, and functional in achieving certain goals; it is just that these goals and motivations are now approved, as they were not in the case of a class regarded as unjustly oppressive. One can use the term ideology to signify a certain elevation of the pragmatic or instrumental over a theoretical concern for the truth of ideas ‘in themselves’, while not necessarily holding this to be a negative judgement” (Eagleton, 1994).

Therefore, in this thesis we will adopt Lodge and Vogel’s definition, namely the positive side of the ideology that amounts to the process connecting values and relevant context, without inhibiting ourselves from being critical instead of descriptive in epistemological terms. This means that the outcome of the ideological process might have two facets: a positive (*class-consciousness*) as well as a negative one [political and/or coercive one(s)]. This argument might seem self-contradictory but it is not because it leaves open the possibility to be self-critical with our ideology as well. If we adopt the Marxist view upholding the negative side of ideology (except if that ideology is socialist according to Marx) then we elevate our own position and our own ideology to an uncritical ground. Contrary to the temptation of adopting a non self-critical stand we adopt the *positive side* of any ideology we encounter in order to compare it with our own. That will provide us with room to re-evaluate our own ideological biases in the light of other ideologies in a never ending learning process thus avoiding the positivist trap of being uncritical of our own ideology and critical of others only. This learning process encapsulates the exchange of critical statements based on the consciousness of our initial ideological biases.

⁸ “Hermeneutics expanded into criticism [*Critical Hermeneutics*] takes the form of critique of systematically distorted communication.” (Flood, 1990, attributed to Habermas).

So far we have referred to ideology in general societal terms. At this point we will refer to the *corporate ideology*, namely to the dominant institution's ideology in society. Mintzberg (1983) defines *corporate ideology* as the process, which produces *organisational synergy* and glues the individual to the organisation's mission even when that mission seems to be trivial. Athos and Pascale (1986) in their research on Japanese organisations argue that the *Zen* (the *Buddhists* religion) influence is obvious. As an example they refer to Matsushita Corporation, where the *Zen* influence is epitomised under the concept of "*Spiritual Values*". Mayo (1945) argues that the organisation's existence depends on its ability to "*objectively*" induce and change the states of mind of its employees namely worldviews, or rather shared realities regarding the business purpose. In other words organisational ideology is the process that produces the stakeholders' worldviews and subsequently defines the interaction of their purposefulness expressed collectively in the organisation's purpose itself. In the next section we examine the relationship between the dominant stakeholder's ideology and the phenomenon of organisational power.

2.2.4. Ideology - Power - Dominant Stakeholder

The nature of power according to Lukes (1974) (quoted in Oliga 1990) can be identified in the "*three-dimensional*" view the following:

"(I) social forces and institutional practices as sources of bias mobilisation (ii) control over political agenda through ideological process of preference shaping and selective perception and articulation of what count as social problems and conflicts (iii) latent conflicts representing a 'contradiction between the interests of those exercising power and the 'real' interests of those they exclude" (Oliga, 1990).

The reduction of the power concept to its behavioural aspects, namely, to the examination of power only through its ability to achieve things is uncritical. In addition, the effort to shift the concept of *power* from the "*capacity-conditions-outcome*" (Hindes, 1982), expressed by Lukes (1974) to the availability of "*means-action*" concept, advocated by Hindes is uncritical as well.

Hindes argues that the *capacity-condition-outcome* model takes for granted that the *outcome* will be secured once the *capacity* is there. He argues in favour of the separation of means from the capacity because such an approach misses the importance of the *power's* points of application. But the focus on *power's* points of application does not have to amount to a deconstruction of the capacity from the exercise of power in the first place. To the contrary there can be no such separation because the means and the tactics at the point of application undertaken by the stakeholders would be conditioned by the capacity available to them. For example a small nation with feeble military capacity would be deprived from adopting the tactic of a destructive war against a nation with nuclear capability. Its best means would be diplomacy and not war. It is true that the adoption of specific means or tactics is of great importance at the power's point of the application but the means can not exceed the capacity to exercise power in the first place. If we accept the view that we have to

concentrate only at the point of application of the power then we treat power itself as inevitable. In addition, by depersonalising power from the interests of the stakeholders and their capacity to exercise power then we lose the ability to ever question power itself. One should not forget that at the point of application it is people who apply the power itself, consciously or unconsciously. It is the same people who should be enlightened or who should be made aware about the origins of their power thus becoming responsible in regard to its exercise. If people accept that power in their hands is just a commodity coming from 'nowhere' then they lose the ability to be critical about it.

Foucault (1980, translated by Gordon) argues that power is diffused in all aspects of *lifeworld* (Habermas, 1984), the society's cultural imperatives or worldviews that reflect systems of power in the first place. According to Foucault then *power* defines *knowledge* in the first place. In regard to ideology Foucault argues that truth is circumstantial (thus relative) due to the relation of power and knowledge.

"The important thing here, I believe, is that truth isn't outside power, or lacking power: contrary to a myth whose history and functions would repay further study, truth isn't the reward of free spirits, the child of protracted solitude, nor the privilege of those who have succeeded in liberating themselves. Truth is a thing of this world: it is produced only by virtue of multiple forms of power. Each society has its regime of truth, its 'general politics' of truth: that is, the types of discourse which it accepts and makes function true; the mechanisms and instances which enable one to distinguish true and false statements, the means by which each is sanctioned; the techniques and procedures accorded value in the acquisition of truth; the status of those who are charged with saying what counts as true..... 'Truth' is to be understood as a system of ordered procedures for the production, regulation, distribution, circulation and operation of statements. 'Truth' is linked in a circular relation with systems of power which produce and sustain it, and to effects of power which it induces and which extend it. A 'regime' of truth..... The essential political problem for the intellectual is not to criticise the ideological contents supposedly linked to science, or to ensure that his own scientific practice is accompanied by a correct ideology, but that of ascertaining the possibility of constituting a new politics of truth. It's not a matter of emancipating truth from every system of power (which would be a chimera, for truth is already power) but of detaching the power of truth from the forms of hegemony, social economic and cultural, within which it operates at the present time." (Foucault, translated by Gordon, 1980).

The above statement implies there can be no transcendental validation of *truth* and thus no critical disposition is meaningful. Foucault's ideas are very close to Nietzsche's concept of the "*will to power*". Nietzsche (1968) argues the following about *truth*:

"What then is truth? A mobile army of metaphors, metonyms, and anthropomorphisms...truths are illusions about which one has forgotten that this is what they are" (Nietzsche, 1968).

Habermas (1994) agrees with Foucault that power is diffused but that does not imply that no transcendental concepts of truth exist. In Foucault's statement above there is an obvious contradiction. The "new politics of power" that he advocates namely the detachment of the power and truth from circumstantial and situational conditions, namely the forms of hegemony, basically cancels-out his claim that power-knowledge and truth are the result of those conditions. How can you and why can you detach some of the outcomes of the power-knowledge-truth mechanism from the mechanism, with the use of the mechanism itself? McCarthy argues, in the introduction of Habermas's book titled "*The Philosophical Discourse of Modernity*", the following about Habermas's objections to Foucault's *Genealogy*⁹ method:

"Habermas's disagreement with Foucault certainly does not amount to a blanket rejection of this critical perspective on power-knowledge configurations. It is the 'totalization' of critique that he objects to, the transformation of the critique reason by reason - which from Kant to Marx had taken on the sociohistorical form of a critique of ideology - into a critique of reason tout court in the name of a 'rhetorically affirmed other of reason.' On his view, the real problem is too little rather than too much enlightenment, a deficiency rather than an excess of reason. And he supports this view with a double-edged critique of Foucault's 'totalization,' one edge applying to the transcendental-historiographic aspect of genealogy, the other to its social-theoretical aspect. Briefly he argues that Foucault cannot escape the 'performative contradiction' involved in using the tools of reason to criticise reason; this has a serious consequence of landing his genealogical investigations in a situation embarrassingly similar to that of the 'sciences of man' he so tellingly criticised." (McCarthy: Habermas, 1994).

Habermas (1994) poses three questions that the *genealogical historiographer* can be subjected to, the following:

"Foucault gets entangled in aporias¹⁰ as soon as he is supposed to explain what the genealogical historiographer himself does and how that performance is to be understood. That is to say, his putative objectivity of knowledge is itself put in question (1) by the involuntary presentism of a historiography that remains hermeneutically stuck in its starting situation; (2) by the unavoidable relativism of an analysis related to the present that can understand itself only as a context-dependent practical enterprise; (3) by the arbitrary partisanship of a criticism that cannot account for its normative foundations." (Habermas, 1994).

⁹ "*Genealogy* is analysis of the development of humanity as a series of interpretations (arising from discursive and nondiscursive relations) emerging from a relationship between power and knowledge. It is the task of genealogy to record this." (Flood, 1990).

¹⁰ "*Aporia*: A term from ancient philosophy denoting a problem which is difficult to solve owing to some CONTRADICTION either in the object itself or in the concept of it. Aristotle defined it as 'equality between contrary deductions.' It has enjoyed a revival in post-HEGELIAN thought because it registers the objectivity of contradiction without the implication of a prospective dialectical 'overcoming.'" (Osborne, taken from Payne, 1997).

From the above statement we can argue that Foucault tries to deal with *cultural relativism* (Freeman and Gilbert, 1988) by implying a meta-theory that transcends the circumstantial and situational conditions of the present. The forms of hegemony that he tries to detach truth from are already power according to his definition. In addition the concept of truth, being totally dependent on power, provides him with a static social model which can not explain social change adequately. Habermas argues the following regarding this subject matter.

“Foucault presupposes in his descriptions institutionally sediment disciplines, power practices, technologies of truth and of domination, but he cannot explain how there can be derived from a social condition of uninterrupted struggle the aggregate state of the network of power, however momentary one conceives it as being.” (Habermas, 1994).

Despite the critique of Foucault’s genealogy and his theory of power-knowledge-truth we can adopt his position that power is diffused but we will reject his *hermeneutic* thus uncritical position. As Midgley (1995) argues not only does *power-knowledge* “make us” but we make “power-knowledge” as well.

“Foucaultian critique is dependent on the possibility of revealing the power-knowledge formations that have ‘made’ us. It is easy, when considering this idea, to lose the sense in which we, as individuals and as groups, ‘make’ power-knowledge. We need to maintain the notion of the subject intervening in power-knowledge formations in order to preserve the idea of critical action. The starting point for developing my own philosophical position, then, is the relationship between the subject, which acts on power-knowledge formations, and the power-knowledge formations which frame the identity of the subject...Both self and society therefore end up on the same side of the dynamic, creating and being created by power-knowledge. However we should not be tempted to regard subject-knowledge dynamics as ‘observable’ in Popper’s (1959) sense of independent observation, where the observer is assumed to play no part in constructing the observed. We are ourselves part of the dynamics: every subject is an identified subject, and every power-knowledge formation is also identified as such. Introducing the concept of ‘identification’ makes it clear that ‘pure’ critique, divorced from any context of action, is an illusion.” (Midgley, 1995).

Habermas’s knowledge-constitutive interests, namely the *technical interest* in controlling and predicting the social world, the *practical interest* in communicating with other people and the *emancipatory interest* from false ideas are rooted in action. They can provide the answers to the questions why the power-knowledge process, being circular according to Midgley, exists in the first place; thus they can be used as the basis of the critique of the process itself. But before we proceed with this position we will make a brief reference to ideology, which in this thesis amounts to Midgley’s power-knowledge process.

In the question what is a *critical theory of ideology*, Oliga (1990) summarising the views of Warren (1984) argues the following:

"First, ideology acts to conceal the essential aspects of sociopolitical reality. Second, such concealment is not accidental (in the sense of errors) but relates systematically to some set of social, psychological, and cognitive interests within a determinate historical context. Third, because ideologies relate systematically to interests and historical realities, they can be criticised so as to provide knowledge about those interests and realities" (Oliga, 1990).

Warren's critical approach is a description of the negative side of ideology. Therborn (1980), quoted in Oliga (1990), defines the *process of ideological identification* as a *dialectic process* of "*subjection-qualification*". Therborn argues that ideologies address the individual through *discourse*. In this process the subjection that the individual is exposed to amounts to a "*social force*" expressing a value system while at the same time the individual *qualifies* to this particular social force through role-playing. The *subjection-qualification* process aims to condition the individuals into perceiving "*what exists and what does not exist*", into making the distinctions between 'good' and 'bad' thus "*structuring and normalising the individual's desires, preferences and values*", and defining the horizon of his future expectations. Therborn defines the modes of ideological interpellation as the "*is-ought-can*" trio. ↵

But in reality the subjection-qualification process does not always succeed. The failure to "socialise" the individual into an ideological prototype in the case where the sophistication of the ideological mechanism used is inadequate or because the ideological prototype promoted comes into blatant violation of Man's basic needs. Capitalism's socialisation process can be characterised as peculiar in the sense that though it seeks human "socialisation" by appealing to Man's material needs, a simple but powerful approach, at the same time, the socialisation is undermined by Capitalism's emphasis on individuality. In Western societies, the result of this peculiarity has led to the rise of those social conditions where conflict over material resources, between a number of different interests (stakeholders) is the norm and not the exception in the Western organisations. This conflict is not of the same type as the Marxist "class-conflict". After the "productivity revolution" (Drucker, 1993), Drucker argues that Western societies became affluent. Social affluence in conjunction with the creation of the welfare-state turned the Marxist class-conflict in a clash of interests between groups that seek to maximise their utility functions in terms of material gains or to force the corporation to accept its social responsibilities. In other words Drucker argues that class-conflict in its original Marxist conception has disappeared in our days due to the Western world's material affluence. According to Habermas though class-conflict has not disappeared but it has been concealed under the cloak of affluence. Drucker argues that the rise and the expansion of the concept of Capitalism can not be attributed to the Protestant Vocational ethic but was due to the radical changes occurring in Europe around 1700 regarding the meaning of knowledge. Knowledge according to Drucker became a practical tool in the service of technical interest thus leading to the dominance of Capitalism.

"None of the technical schools of the eighteenth century aimed at producing new knowledge - nor did the Encyclopaedia. None even talked of the application of science to tools, processes and products, that is, to technology...These are the essentials of what we have come to call the 'Industrial Revolution', i.e. the transformation by technology of society and civilisation worldwide. It is this change in the meaning of knowledge which then made modern Capitalism inevitable and dominant." (Drucker, 1993).

Drucker accepts basically Marx's *historical materialism*, by explaining the rise of Capitalism as the result of the changes occurred in Man's working practices. But he regards *knowledge* as an entity, independent of the social environment and the *dominant class* as well. As a matter of fact in a *positivist* tone, he implicitly claims that knowledge and its application shaped society in the first place. But one has to seriously ask if scientific knowledge would have been applied to improve work-practices, if the dominant institution, namely the church had not gone along with it. If the Protestant Church, which had nearly absolute power over Man's soul salvation, argued against the application of knowledge as 'evil', the very application would have great difficulty to become reality. It is no accident that the Industrial Revolution started in England being a predominantly Protestant county.

The only detachment of knowledge from interest is possible in the case of self-reflection or rather self-knowledge. Habermas in regard to the relationship between knowledge and interest argues the following:

"It is true that at this level it is always illusory to suppose autonomy, free of presuppositions, in which knowing first grasps reality theoretically, only to be taken subsequently into the service of interest alien to it. But the mind can always reflect back upon the interest structure that joins subject and object: this is reserved as self reflection. If the latter cannot cancel out interest, it can to a certain extent make up for it." (Habermas, 1989, my underlining).

If we accept the independence of knowledge from interest as is advocated by Drucker then we will have to conclude that the phenomenon of the Industrial Revolution was the result of the first Capitalist's self-reflection; an assumption which seems to be highly unlikely!

Based on the subjection-qualification process, power then can be defined, in Foucaultian terms, as being a *non-discursive subjugator*, or a *discursive formation of knowledge*. In regard to social relations, for example, power can be defined as a political or an economic subjugator. Since *power* originates from *material and informational possessions* and since one of the ideological process' purposes is to preserve those material and informational possessions then it can be argued that in this way ideology is the reflection of the situational power structures and vice-versa. Foucault (Gordon, 1980) in his description, and in the evolution of the concept of the "*intellectual*" Man, argues that the *intellectual* of our days is the "*expert*" and not the "*jurist*", as he used to be, defined basically by his *class* and his *work*:

"It seems to me that what must now be taken into account in the intellectual is not the 'bearer of universal values'. Rather, it is the person occupying a specific position - but whose specificity is linked, in a society like ours, to the general functioning of the apparatus of truth. In other words, the intellectual has a three-fold specificity: that of his class position (whether as petty-bourgeois in the service of capitalism or 'organic' intellectual of the proletariat); that of his conditions of life and work, linked to his condition as an intellectual (his field of research, his place in a laboratory, the political and economic demands to which he submits or against which he rebels, in the university, the hospital, etc.); lastly, the specificity of politics of truth in our societies." (Foucault: Gordon, 1980).

All the above "*specificities*" are the result of man's working conditions, corresponding to his *material* and *informational interests*. Again in Foucault's writing about power we identify traces of Marx's historical materialism (*specificity of conditions of work*) and Habermas's *communicative action*¹¹ (*specificities of class and truth*). In addition we identify traces of Habermas' knowledge constitutive interests in Foucault's *specificities*.

Habermas defines three types of knowledge attached to the human interests. *Technical knowledge, communicative knowledge and self-knowledge* correspond to humans' technical, practical and emancipatory interests. Habermas defines the nature of human interests as being *transcendental*, or at least *relative-universal*, being the result of the human species' biological evolution. He implicitly accepts Marx's position that human consciousness is formulated in the light of Man's productive forces, which for Habermas include *technical and communicative knowledge*.

"The specific viewpoints from which, with transcendental necessity, we apprehend reality ground three categories of possible knowledge: information that expands our power of technical control; interpretations that make possible the orientation of action within common traditions; and analyses that free consciousness from its dependence on hypostatized powers. These viewpoints originate in the interest structure of a species that is linked in its roots to definite means of social organisation: work, language and power. The human species secures its existence in systems of social labour and self-assertion through violence, through tradition-bound social life in ordinary-language communication, and with the aid of ego identities that at every level of individuation reconsolidate the consciousness of the individual in relation to the norms of the group. Accordingly the interests constitutive of knowledge are linked to the functions of ego that

¹¹ "*Communicative action* is central to HABERMAS's claim that interpersonal understanding is dependent on norms of truth, sincerity, justice and freedom. Whether acknowledged or not, uncoerced agreement requires that dialog partners have equal chances to deploy SPEECH ACTS, and utterances are comprehensible, true, appropriate, and sincerely spoken. Communicative action is illocutionary speech where validity claims are open to public scrutiny, making possible an ideal consensus based solely on the force of the better argument. This emancipatory dimension of language, however, is counterfactual –it is recovered through philosophical critique rather than empirical observation. Hence it is also known as the "ideal speech situation." (Payne, 1997).

adapts itself to its external conditions through learning processes, is initiated into the communication system of the social life-world by means of self-formative processes, and constructs and identity in the conflict between instinctual aims and social constraints. In turn these achievements become part of the productive forces accumulated by society, the cultural tradition through which society interprets itself, and the legitimations that a society accepts and criticises. My third thesis is thus that knowledge-constitutive interests take form in the medium of work, language, and power. (Habermas, 1989, my underlining).

From the above discussion we can conclude that ideology's material and informational inputs and ideology itself is directly related to man's knowledge constitutive interests thus with the dominant stakeholder purposefulness, and organisational power. Any reference to organisational purpose would have to address the above relationship.

2.2.5. The Relationship between Organisational Purpose, Organisational Mission and Organisational Social Responsibility

Campbell and Tawadey (1989) argue that organisational purpose, which they define as the most philosophical part of mission, is, or at least should be, something more than the reflection of a compromise between the stakeholders; it should rise above the stakeholders' interests. They argue that in our age it is simplistic to "dedicate" the organisation either to its owners or its shareholders (stockholders). A "multi-constituency" mission developed by many organisations based on the *enlightened self-interest* of the organisational stakeholders that fulfil their needs through the organisation can not be regarded as very satisfactory either. Campbell and Tawadey argue that organisations with a strong sense of mission develop missions that rise above the mere interests of the stakeholders. For example the mission of *Marks and Spencer* shops is to "raise the standards for the working man and woman". "Body Shop's mission is to manufacture cosmetics that are 'friendly' to the environment and it is against *animal testing*."

"Defining purpose in an inspirational way is, we believe, important to the creation of an inspirational mission. It does not mean that the stakeholders are unimportant. The company still needs to define its relationships with each stakeholder." (Campbell and Tawadey, 1992).

Campbell and Tawadey argue that an inspirational mission, which basically amounts to an ideal, draws the stakeholders together and provides the employees with a sense of mission of their own. The Body Shop's mission statement printed on their commercial paper bags (made out of recycled paper) is the best example of an inspirational mission being the result of a mission defined in an inspirational way. In the Body Shop's case the "why are we in this type of business" rephrased as "Why we are Different" seems to be the most essential part of the mission itself. The "What" and "Where" in the Body Shop's mission statement are answers to the *commercial rationale*, namely strategy, of the organisation. The "Who", in the Body Shop's completes the *what*

and the *why* and it makes an implicit reference to the policies and *behaviour standards* that guide the company's operations. The Body Shop statement is the following:

Who

We are a British cosmetics company selling our own naturally-based skin and hair care products.

What

We offer products that cleanse, polish and protect the skin and hair.

Where

We trade in 20 languages in 40 countries.

Why We Are Different.

WE RESPECT THE ENVIRONMENT Reuse - Refill - Recycle

WE ARE AGAINST ANIMAL TESTING FOR COSMETICS Cruel - Unnecessary - Misleading

WE HAVE A NON-EXPLOITATIVE APPROACH TO TRADE Equality - Employment - Trade not Aid

WE MEET THE REAL NEEDS OF REAL PEOPLE No idealised Images - No Extravagant Claims

WE CAMPAIGN FOR ISSUES WE BELIEVE IN" (Body Shop, Commercial paper bag, November, 1995).

It is true that organisations should be ideal-seeking entities, but the formulation of an ideal can not be detached totally from the influence of the stakeholders and especially from the dominant stakeholder. The ideal-seeking mission can aid the recruitment of new stakeholders, namely employees or investors, etc. But it takes for granted an organisational culture (a shared reality produced by ideology itself) which would have allowed (in the sense of being perceived as logical) for certain organisational priorities and would have allowed for the definition of mission that already exists. The case of the Body Shop makes apparent the attachment and not the detachment of the organisation's purpose to the dominant stakeholder. The worldview of its owner, namely Anita Roddick's ideology, being an environmentalist, is reflected in the business mission. A philosophy which was tested in the market and proved very successful indeed! In addition, according to Campbell and Tawadey purpose being the most philosophical element of mission, is only one of the four elements of mission itself. The other three are "*strategy*" (*the commercial rationale*); "*Company values* (*what senior management believes in*); and "*standards of behaviour* (*the policies and behaviour patterns that guide the company's operations*)". Campbell and Tawadey define strategy as follows:

"Strategy is the commercial logic of the business. It is one of the logics that link behaviour and decision to purpose. To define strategy, management must define the business domain in which the company is going to compete. It must also provide some rationale that identifies the

competitive advantage or distinctive competence that will enable the company to hold a special position in the chosen business domain."

This definition of strategy implies that strategy should not be left to emerge but to be the result of a conscious planning effort by the management team. This definition is compatible with the Porterian school of strategic thinking which treats strategy as a "position" and not as a "pattern". In addition, the above definition is compatible with the Porterian view (1981) that strategic planning should identify the strategic domain (*what business are we in or we should be in?*) and the strategic positioning (*what is the type of competitive advantage we are seeking?*). Therefore Campbell's and Tawadey's definition of strategy as the "commercial rationale" falls within the domain of the Porterian school of strategic thinking.

Campbell and Tawadey define "standards and behaviours" as instructions "about how managers and employees should behave". The definition of the standards and behaviours as guiding policies may produce misunderstandings as to their intended meaning. Campbell and Tawadey distinguish between standards and behaviours which amount to general guidelines or more specific instructions regarding the managers' and the employees' behaviour. These guidelines and instructions are not thought to guide the organisation in strategic terms but they are policies rather aiming at the *tactical* (at the level where strategies are implemented through action plans), or the *operational level* (at the day-to-day level where detailed implementation of the tactical plans takes place) of the organisation's operations. These policies are used either at the tactical or the operational levels depending on how broad or specific they are. Campbell and Tawadey give the examples of Marks and Spencer's "visible management policy" and the Body Shop's recycle policy as follows.

"Behaviour standards are instructions about how managers and employees should behave. We are talking about things like Marks and Spencer's standards of visible management. Managers must be seen in the stores and management attention to the business must be visible through communication, open meetings, or whatever mechanism makes sense. Visible management and collegiate co-operation are both broad behaviour instructions that can affect much of management behaviour. They are also clearly linked to the specific retailing and executive search strategies that these two companies follow. But behaviour standards can also be more detailed and on seemingly less relevant issues, so long as the behaviour has symbolic value. The Body Shop's behaviour standard of having two waste paper baskets, one for recyclable paper and one for other items, is an example of this. It demonstrates to everyone every day that The Body Shop environmental issues seriously.... The symbolic value of this behaviour standard is substantial. Behaviour standards are therefore part of the organisation's ways of doing business. They are things that managers have come to feel are important to the effective running of the business. They are the ten commandments of the business." (Campbell and Tawadey, 1989).

All the above components (strategy, values, standards of behaviour, and purpose) are defined by Campbell and Tawadey as the *Ashridge Mission Model*, as follows, in diagram 2.-2.:

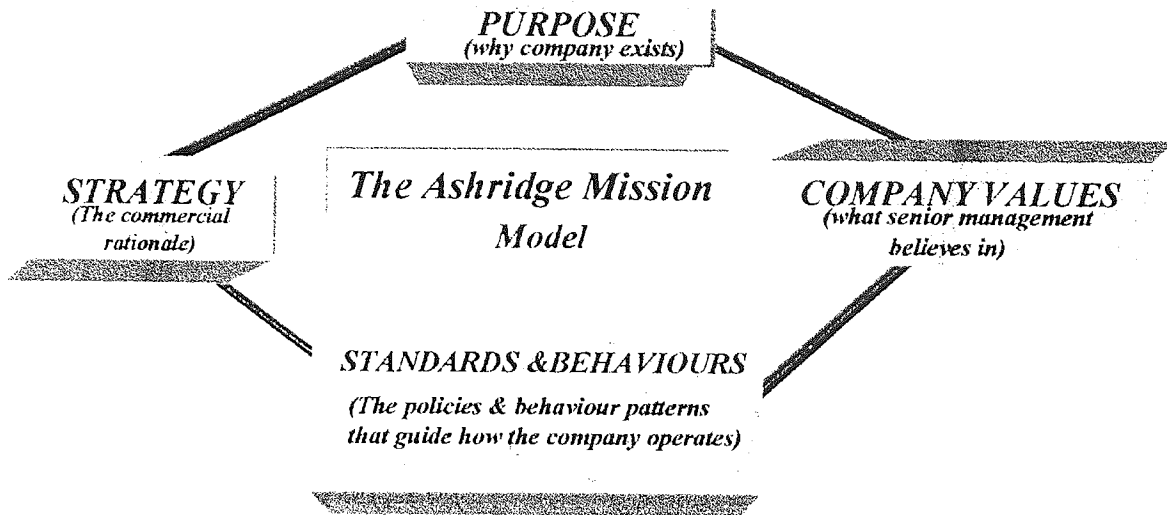


Diagram 2.-2.

Purpose is the product of the other three elements that are the domains of the stakeholders and especially the domain of the dominant stakeholder. One should not forget the role of *organisational marketing* as well, in regard to *corporate image building* (Olins, 1989). In this thesis we will search beyond the surface in discovering the origins of purpose formulation. Basically the argument is that you can not have a strong purpose if you do not have a strong value system attached to the strategic and the policy elements of mission. In case this happens then we can argue that the corporation either is in crisis or is in the business of manipulating its environment. The preferential position of the dominant stakeholder in the formation of the business purpose leads us to the question of how the dominant stakeholder can be made responsible as well as to the question regarding the type of its responsibility. In the previous sections we rejected the notion of profit maximisation as socially irresponsible. That of course does not mean that we reject profit as well. To the contrary, profit amounts to the necessary precondition for the survival of the organisation but it cannot be its sole purpose. Without profits the organisation would be unable to fulfil its social obligations in the first place. As a matter of fact, studies conducted, proved that the most profitable organisations were the most socially responsible as well (Smith, 1990). Things start to go wrong when consumer sovereignty is weakened in the interests of the corporation, as was argued in the previous sections. Therefore, the corporation's first social objective is to pursue this objective. The erosion of consumer sovereignty will eventually lead to the erosion of the organisation's ethics towards its employees, its suppliers and to the rest of its stakeholders. This definition as the organisation's main social objective is not putting the interests of the consumers above the rest of the stakeholders. Instead it regards the consumers as the immediate recipients of the organisation's outputs. The notion of consumers in this definition does not describe consumers as economic but rather as social agents entitled not only to a good product at a fair price but entitled to products that will preserve and enhance their

quality of life. The quality of life is enhanced with actions that protect the environment and promote social life as well as support the development of a *good society* (Maslow, 1970).

But ethical standards in society, as the preservation of the *consumer sovereignty*, should apply equally to everybody in society though. Those who govern should not be allowed to bend the rules in the name of the interests of one stakeholder. The phenomenon of *Casuistry* (Drucker, 1981), where the rulers are subjected to different standards than the ruled, should be disregarded even when it is 'justified' in the name of 'higher' ethical laws. Drucker argues that casuistry was the first attempt to make the rulers socially responsible to the people governed by them. Casuistry was a Calvinist concept that was taken over by the *Catholic theologians* of the "*Counter-Reformation*" movement, who developed it into a political concept. Drucker goes on to argue that a contemporary *business casuistry* example was *Lockheed's* effort to keep alive the L-1011 passenger jet by paying extortion money to the Japanese in order to save 25,000 jobs at home. Though the L-1011 passenger jet was losing money for the company and though the stock market demanded for the scrapping of the project altogether, Lockheed decided to engineer an order by the Japanese All-Nippon Airways. The purpose was to avoid putting on the unemployment line 25,000 people, despite losing money, in a high unemployment area.

"To a casuist, paying the extortion money was a duty and social responsibility to which the self-interest of the company, its shareholders and its executives had to be subordinated. It was the discharge of social responsibility of the 'ruler' to keep alive the jobs of 25000 people at a time [1972-73] when jobs in the aircraft industry in southern California were scarce indeed." (Drucker, 1981).

The casuist(s), in the Lockheed case, performed illegal business transactions to protect the interests of one stakeholder (the workers) to the detriment of other stakeholders. Drucker quotes only the stakeholders, which can be regarded as the influencers (namely the executives and the shareholders). One might wonder if the passengers' interests (passive stakeholder) for example were subordinated by the casuist(s) actions as well to the interests of the workers as well? The whole point is not the loss of the 25,000 jobs that amounts to a tragedy for a community, but the fact that the concept of casuistry can be abused too easily. In addition it can be used as a tool for the justification of unethical practices in the name of an engineered "higher social reason". What the casuist(s) did in the Lockheed example in favour of the workers, it could be done against them as well by other casuists in other circumstances. Therefore in this thesis consumer sovereignty will be regarded as the ultimate responsibility of the business system. In addition, casuistry would be treated as socially irresponsible because no matter the intentions of the casuists the application of different or selective standards in favour of one or more stakeholders is rather irresponsible to the rest.

Business responsibility can not be described as *duty-based* in the *Kantian* sense where the duty of the organisation should be to safeguard *consumer sovereignty*. But it can not be described in *utilitarian terms* either in the sense of *maximising the profits* of a particular stakeholder(s). It should be a combination of the two. The

philosophical term for their combination is described by the term of *rule-utilitarianism*. In other words, the business system is self-constrained from striving for *profit-maximisation* (as it perceives it) by believing that *consumer sovereignty* should be paramount since this is in the interest of the organisation and society as well. In other words the organisation should be a profit seeking entity in the light of the self-enlightenment interest. This approach covers both the organisational instrumental as well as the social interests, and it is compatible with the business organisations' special nature.

2.2.6. The Relationship between Situational Factors and Purpose

In this section we will examine the major situational factors influencing the choice of systemic purpose and subsequently the design of the organisational structure and function. Mintzberg and Quinn (1991) distinguish four major categories of situational factors namely the organisation's Age and Size, its Technical System, its Environment, and its Power. In their analysis they argue that the contemporary organisational structure is a reflection of the *industrial age* while they argue as well that larger organisational size leads to more formalised structures and to more specialisation of labour. In terms of the *technical system*, they argue that the more its complexity the more sophisticated the professional and the administrative staff would be. In regard to the organisational environment they argue that environmental complexity and diversification leads the organisation to decentralise while extreme hostility, originating from the environment, leads to centralisation. And finally, in terms of power they argued that the more the external control of the organisation the more the system would be *centralised*. In addition, Mintzberg and Quinn argue that divisions among the external stakeholders (stakeholders which are not employees of a particular business system) will give rise to politics within the organisation because internal stakeholders will seek to form alliances with external ones and vice-versa.

Mintzberg's and Quinn's research findings lead us to the conclusion that the analysis of the systemic purpose, being the product of many situational factors, demands for the analysis of the above factors. Therefore, on the basis of the *teleological* paradigm, we can argue that radical changes regarding all the situational factors are needed in case the organisational purpose becomes subject to change in the first place.

At this point two very important questions arise. First, who is to decide that the systemic purpose has changed?; and who is to decide how and what changes should be performed? The obvious answer to this very important question is that since the organisation's content is a HAS then the HAS itself has to decide. This answer becomes rather simplistic if we take into consideration humans' general conservatism in the face of 'radical' change and secondly the barriers to change originating from the organisational structures and functions themselves. Peters (taken from Mintzberg and Quinn 1991) in his definition of *strategy as a pattern* implies that the general normative environment is rather *conservative* in regard to strategic change implying, contrary to his position, that strategy as a position runs the risk of being conservative itself. De Bono (1970)

talks about the *autopoietic*¹² nature of our cognitive efforts in regard to the subject of new ideas generation. De Bono claims that new ideas fell victim to *historical mental structures* that we have been taught by the education system and the normative environment in general. These mental structures according to De Bono are used for the categorisation and interpretation of the data entering our senses.

Mitchell (1982), discusses two major approaches to organisational change, namely the Structural or the Procedural one and the Process approach. The *structural* approach demands for “social-structure” changes, namely changes mostly regarding the division of labour and the lines of communication or changes in the use and the application of technology. The philosophical origins of the structural approach are traced back, according to Mitchell, to the *classical theory of employment* that emphasises functional efficiency and effectiveness at the macro-economic level. In the structural approach “the primary question is not whether the employees will like some change but whether it will work”. In other words the structural approach can be characterised as top-down, functionalist, and expert-driven. The process approach, in contrast to the structural approach, avoids radical change and instead concentrates on improving the human factor.

“Instead of introducing a new machine (a technological suggestion), a process approach might attempt to make a job more interesting and challenging. Instead of firing or transferring quarrelling people (a structure technique), a process approach might suggest some sensitivity training” (Mitchell, 1982).

The theoretical roots of the *process approach* originate from the *human-relationships* approach stressing *job satisfaction*, and *psychological growth* through work.

The position of this thesis is that radical change, being a blend of the two above approaches, in the form of structural change, should be top-down only in the case that it is not expert-driven or managerialist but it is based on democratically participative management. For example, the Prime minister is entitled to perform top-down planning only if he/she is democratically elected and his/her actions are subject to democratic control and evaluation.

Finally another organisational factor that in our opinion falls within the domain of situational factors is the organisational culture. Organisational culture is defined as the set of common perceptions or the system of shared meanings held between the organisational stakeholders. Basically it is a version of *shared realities* (common held beliefs between different stakeholders) but the difference lies in the fact that *organisational culture* is attributed to the inside stakeholders of the organisation, namely its employees. Commonness expressed by the ‘inside’ stakeholders (employees) in defining and perceiving the organisation’s operations within its environment is the result of the organisation’s ideological process. One might ask then what is the

¹² “The word derives from the Greek: *poio* means ‘to make’. So an autopoietic system makes itself –continuously. What business is it in? It is in the business of preserving its own identity.” (Beer, 1979).

relationship of organisational culture to systemic purpose? Mintzberg (1983) defines the roots of *organisational ideology*, which in this thesis coincides with the definition of *organisational culture*, as follows:

“The roots of ideology are planted when a group of individuals band together around a leader and through a sense of mission found a vigorous organisation, or invigorate an existing one. The ideology then develops over time through the establishment of traditions. Finally, the existing ideology is reinforced when new members enter the organisation and identify with its system of beliefs” (Mintzberg, 1983).

The identification of the new members with the existing system of belief is done through the so called “*socialisation process*” where according to Handy (1986) the organisation seeks to influence the individual to adopt and qualify with the organisation’s shared system of beliefs, namely its organisational culture. Handy (1986) argues that in order to join organisations with strong cultures you have to join them psychologically as well as physiologically.

“Strong organisations tend to have strong cultures which dominate and permeate the structure and the systems. To work in them you have to join them, psychologically as well as physically. Although organisations do not always consciously set out to condition the newcomer, there are tried and tested ways of teaching him or her the ropes and rules of the place. Every organisation will, deliberately or not, use some combination of them (although they may well disguise it by talk of ‘getting one’s hands dirty’ starting at the bottom’ or experiencing the sharp end of the business’).” (Handy, 1986).

We can argue then from the above that organisational cultures as well as organisational structures owe their existence to a historical consensus struck between the inside stakeholders, and correspond to a business purpose which was formulated in the past. Cultural resistance to change occurs because organisational cultures are different aspects of shared beliefs, habits, traditions and a norm of a particular HAS. One very important aspect of the organisational culture is the organisational character that is defined by Selznick (1957) as the manifestation of the *organisation’s institutionalisation*.

“In studying character we are interested in the distinctive competence or inadequacy that an organisation has acquired. In doing so, we look beyond the formal aspects to examine the commitments that have been accepted in the course of adaptation to internal and external pressures...Commitments to ways of acting and responding are built into the organisation. When integrated, these commitments define the ‘character; of the organisation.” (Selznick, 1957).

Dyer (1984) argues that changing the organisational culture is basically the same thing as changing the organisational character.

“Changing an organisation’s culture is considerably more dramatic than modifying parts of the system. From a systems point of view, the focus of change usually is the improvement of certain system outputs through modifications in subsystem condition. But at the deepest level, a cultural change requires alteration of the basic assumptions of the organisation and its essential character” (Dyer, 1984).

Organisational culture minimises the organisation’s transaction costs by advancing the concepts of synergy and co-ordination, but it runs the risk of becoming an obstacle in the face of needed radical change. This way culture becomes a barrier to change.

In order to conclude then our discussion regarding the relationship of systemic purpose to organisational structure, organisational functions, strategic positioning and culture we can argue that under the *teleological* concept the business systemic purpose should define the above organisational factors, at least this is the case in the birth of the business systems. In later stages when systemic purpose demands for a change in direction they become obstacles to change. In addition, this conclusion implies that a complete analysis of the systemic purpose should include all the situational factors identified above.

2.2.7. The Nature of the Business System defined

The peculiarity of the business systems in regard to being HASs, lies in the fact that the definition of their *instrumentality*, which demands for their design, is the result of the interactions taking place within its content; namely its HAS content, in relation with its *environment*, namely society as a whole. The justification of the business system’s instrumentality, made apparent in the mission statement (what business are we in?), can be understood from the inside but the systems’ instrumental design can only be understood from the outside thus conforming to the functional imperatives of the systemic purpose that is (or should be) formulated from the inside.

Gerlach’s (1992) epistemological approach in regard to his study of the *Japanese Keiretsu* is very interesting indeed and it basically resembles the inside-outside view of the organisations, embedded in a systems framework. Gerlach’s epistemology can be summarised in three steps. The first is *structural analysis*, or in other words network analysis, where special attention is paid to the structural arrangements upon which exchange relationships are based. This implies an outside, functional view of the system in focus. Gerlach makes an interesting point about his network approach:

“This [the network approach] reflects a shift in attention toward complex relationships among other actors not wholly derivable either from the aggregation of the individual actors (as often assumed in microanalytic economic models) or fully internalised attitudes, norms, and values (common in many culturalist explanations of Japanese economic organisation). (Gerlach, 1992).

The above statement implies a systemic functionalist view (outside view) of the system in focus necessary for a designed system. In the second step the rationality of the network is examined in terms of the actors' (stakeholders') purposeful behaviour. The rationality of the Japanese Keiretsu, according to Gerlach, demands that actors try to optimise in reference to the whole network and not in reference to an industry only. He defines optimisation as a game of strategic linking of overlapping interests that in the light of the rule utilitarianism ideology leads to an *alliance* concept based on the reconciliation of the paradoxical positions of *pure competition* and 'pure' co-operation.

"A second characteristic of the approach [Gerlach's epistemological approach] taken here reflects that economic actors view their relationships from what is fundamentally a strategic vantage point. The alliance terminology conveys the seemingly paradoxical combination of intensive, instrumental manoeuvring among corporations for economic advantage and the reality that long-term co-operation is often the best way to pursue those interests. It has a well established position in the vernacular of political science and anthropology in a way that closely approximates its characteristics in contemporary Japanese industrial organisation: an important function of alliances (whether among countries, kinship units, or business corporations) is to serve as a means of creating reliable sources of critical resources and long-term external linkages through which their members are able to carry out their day-to-day activities." (Gerlach, 1992).

In the second step the limits of the actors' rationalities are examined in regard to the functionalist defined system. In the third step the inner logic of the participating actors is examined in terms of their institutional arrangements and their historical evolution. An inside view of the actors makes the epistemology complete.

"Third, intercorporate relationships are set in an institutional context that, on the one hand, shapes the range of options that Japanese firms face when making strategic decisions and, on the other leads to path-dependent business activities that transcend immediate rationality to include distinctive histories that the partners bring to their relationships." Gerlach, 1992).

Therefore from the above discussion we can come to the conclusion that in order to analyse a business system, we have to analyse it both from the outside as well as from the inside. In an *objectified* (people are treated as commodities of the economic system) social system (*colonised* by the economic system) where a business system is embedded, the business system's exchanges with other entities can be described according to the first step, in terms of a 'relative objective network of relationships'. But in order to define the 'rationality' of the actors, which is based on and limited by their normative imperatives, we have to get into the minds of the actors themselves; this can only be done from the *inside*. Then and only then can the 'rationality' of the normative system surrounding the organisation be understood from the inside.

In an epistemological paradigm adhering to the inside-outside view the business system's functional imperatives, namely integration, cohesiveness and synergy, are formulated and pursued in a functional manner only in the case where the business system's systemic purpose is formulated from within, namely from the HAS content.

One might ask at this point what is the role of the analyst in this case. The analyst is no other but a biased stakeholder among the stakeholders being analysed. Since there is no such a thing as a *value-free* observation and a *value-free* intervention then the analyst's moral obligation to himself and to the other stakeholders is to make his/her biases explicit and open to critique. In this thesis the epistemology proposed will correspond to the organisation's special nature (inside/outside views) while the analyst will be regarded as a stakeholder as well.

2.3. Analysis Paradigms and Organisational Behaviour

The above discussion leads us to the critical examination of the analytical paradigms and the methodologies being used to analyze *special-nature-systems*, such as the business system, and to design the business system's information systems or design the system's structures and functions. The purpose of this thesis is to provide the business analyst with a meta-framework (made up to a degree but being more than the individual existing analysis paradigms), as well as a methodological tool for the definition of the business system's information systems. An information system that will produce meaningful knowledge to the extent that it makes its users (business system's stakeholders) to reflect on and thus inquire about their purpose(s), in relation to the business system and the other (perceived) stakeholders, by reflecting both on the sources of motivation and/or deception that are contained in their purpose(s) and also on the sources of collective motivation and/or deception that are contained in the business purpose(s) itself.

The initial motivation for the research work originated from the inability of the information systems development approaches to come to terms with the problematic of the business system's purposeful behaviour. Therefore, the initial conception was to produce an information systems methodology dealing adequately with the above problematic. The special nature of the business organisations meant that the proposed methodology had to be rather a problem solving methodology, but not lose sight of its original intention to become an information systems methodology as well. The above goal was possible due to the fact that a natural relationship exists between business systems problem solving methodologies and information systems methodologies, with the latter being a subset of the former.

Contemporary Information Systems development is regarded as problematic. Numerous reports in the press as well as reports by academic researchers make the case of "*user participation*" in Information Systems (IS) development; of "*organisational resistance to change*"; and of the so called "*productivity paradox*", where enormous spending in IS, during the '80s, did not produce the necessary and desired increases in the productivity of the business systems.

Johnson and Kaplan (1987) in their research of America's accounting practices from the beginning of the 19th century until the 1980's argue that the analysts' efforts, after the 1960s, to computerise *obsolete accounting practices* led to a serious erosion of America's competitive position in the world. In times where the organisational information systems should have been developed under the concept of *cost accounting* (Horngren and Foster, 1991), the analysts were developing systems under the concept of *financial accounting* (Horngren and Foster, 1991), which were dominant in the last decades (Johnson and Kaplan, 1990). According to Porter, lack of information regarding production's *cost drivers* (Horngren and Foster, 1991) left the policy makers guessing in regard to the origins of their *competitive advantage* (Porter, 1985).

Our critical examination, namely our focus on the business system's purposefulness, regarding the categorisation of methodological paradigms and the corresponding methodologies is based on human's three knowledge-constitutive types of interests. These interests, as it was argued above, are the technical interest in controlling and predicting the physical world, the practical interest in communicating with other people and reaching intersubjective meaning, and the emancipatory interest from false ideas (Habermas, 1989). The emancipatory interest would not have existed in the first place if power, coercion and false consciousness, namely the negative side of ideology, did not exist in the real world. False consciousness in real life takes the form of half-truths, propaganda, unethical advertising, censorship and misinformation. Therefore, the intention here is to categorise methodological paradigms, and to define their use in terms of the service they offer to each of the three human interests. By doing this we will be able to define their use in terms of the service they offer in regard to the organisational effectiveness or efficiency, or ideally to both at the same time. In this thesis *efficiency* is defined as doing the right thing in terms of predetermined ends, and *effectiveness* as defining and pursuing the right ends (Koontz et al, 1991). In other words efficiency can be defined as the best selection and use of means in the light of predetermined ends while effectiveness is the definition of the best possible ends to *dissolving* (Ackoff, 1981) a perceived *problematic area* (Checkland, 1989).

Though there seems to exist (subjective judgement) an evolutionary pattern regarding the dominance of the methodological paradigms, focusing progressively from the technical to the emancipatory interests, in this thesis that perceived evolutionary pattern is not regarded as an evolutionary historical process that resulted from 'anomalies' identified in the practice of each paradigm in real life (*World Viewism*¹³). In this thesis 'anomalies' are identified in the practice of each paradigm but no inferences are drawn in terms of their catalytic-role leading to changes regarding the paradigm's dominant position in society. But we can not resist the temptation of regarding (subjective judgement) the evolution of the analysis methodological paradigms, the last few decades, as being the result of a historical process that adheres to the concept of World Viewism. Researchers like Beer, Checkland, Flood and Jackson, who started by practising methodologies focusing solely on the technical interest (namely Operations Research) then progressively focused on the practical and the emancipatory interests. Not all the above have reached the third stage, namely the emancipatory one, in terms

¹³ "*World-viewism* - is a position that rejects the notion of unidirectional model output as not being sufficiently rich to be able to explain contrasting and even contradictory knowledge." (Flood, 1990).

of providing methodological paradigms for this stage, but it is our perception that their intention was to get there. A major point made in this thesis is that the analytical paradigms developed so far have focused into serving one of the three interests and not all three at the same time, as should be the case. Even in an ideal world where coercion and false consciousness would not exist, people's methodological approaches will have to serve the technical and the practical interests simultaneously and not each one separately. The above statement of course implies that the pursuit of 'efficiency' implied by the technical interest can not be at the expense of "effectiveness", implied by the practical one, and vice versa. Effectiveness and efficiency should be linked in such a way that their pursuit should be simultaneous and not independent of each other.

On the basis of Habermas's knowledge constitutive interests we proceed in the critical evaluation and categorisation of analytical paradigms on the basis of the perceived service they offer to human's knowledge-constitutive interests. Therefore, three categories of analytical paradigms are identified, namely the IS methodological paradigm, the system one, and the problem solving one corresponding to the technical, the practical and the emancipatory interests respectively as follows. We elaborate only on those methodologies that we perceive to be most relevant to the objectives of this thesis.

2.3.1. In the Service of the Technical Interest

Important advances in IS methodological paradigms that concentrate on the analysis of the system's processes and the communication between them (*the process-communication model respectively*); or on the analysis of the system's *work-flow* in terms of a series of transformation steps (*state-event model*), aim towards increasing the efficiency of existing organisational structures. The lack of any critical consideration regarding the effectiveness of the system's processes or workflow structures runs the risk of leading towards productivity paradox type phenomena. In these approaches the whole focus is upon achieving the best possible means for given ends, namely the system's systemic purpose. The emphasis on the technical interest is obvious and the risk of increasing efficiency at the expense of effectiveness is real as the Johnson and Kaplan example showed. Representative methodologies of this type include "*Jackson's Structured Design*" (Jackson 1975), De Marco's "*Structured Analysis and System Specification*" (De Marco, 1979), and James Martin's "*Information Engineering*" methodology (Martin, 1989). IE is explicated in section 2.3.1.1..

The development of more sophisticated methodologies, concentrating mostly on the use of biological-organismic principles of systemic viability, for the analysis of business systems and for the purposes of information systems development, amounted to a significant improvement. Their significant contribution can be identified not only in their explicit identification of the laws and the principles of systemic viability but also in the recognition of the determinist nature of the systemic purpose for the definition of organisational effectiveness and subsequently organisational efficiency. This can be summarised in Beer's (1979) definition of *freedom* as a function of the systemic purpose and in his definition of the *cybernetic ratios of productivity, latency, and performance*.

Other developments of viewing the organisation as a system that employs four subsystems, namely the *goal* subsystem, the *human*, the *technical*, and the *managerial*, paid special attention to the systemic purpose (*Contingency Theory*, 1976). In addition, in other attempts special attention was paid to the concurrent optimisation of the above subsystems with special emphasis on the goal subsystem (*Socio-technical Theory*). But the special attention paid to the goal subsystem and the recognition of its importance concentrated on its role as the integrating force; on the basis of which the rest of the subsystems will have to align and co-ordinate their activities. There was no need to critically analyse and evaluate the systemic purpose because it was narrowly defined as the system's striving to remain *viable* (Beer, 1990) or in other words to survive in its environment. The adoption of the *biological metaphor* (where cooperation between system/subsystems is ensured) of systemic viability for the explanation of the business system's purposive behaviour is rather restrictive and very conservative. In biological terms, that purposive behaviour leads to *systemic viability* (Beer, 1990) is basically instinctual but in Human Activity Systems purposive behaviour is the result of a process of negotiation where the basis of the agreement between its members is basically perceptual and not instinctual. The most representative systems development methodologies of this type are the "*Viable System Methodology*" (*VSM*), and its application on a grand scale in Chile as the "*Cybersyn project*" (Beer, 1990); the "*Socio-technical*" theory (Emery and Trist, 1987); and the "*Contingency Theory*" (Pugh and Hickson, 1976). The above approaches, as well as the 7Ss model (Waterman, Peters, Philips, 1980), being representative of the systems development methodologies, are perceived as more sophisticated in regard to their focus on the *technical interest* compared with the pure IS ones mentioned above. Though explicit references are made to the *practical* and the emancipatory interests, and though their intention is to aid the organisations' democratisation process, no provisions are made to deal effectively with the obstacles which suppress the practical interest in favour of the technical one; namely coercion and false consciousness. The 7Ss model and the VSM are explicated in sections 2.3.1.2. and 2.3.1.3..

2.3.1.1 Business Purpose and Information Engineering

Martin's (1989) *Information Engineering Methodology (IE)*, was designed to solve many of the problems identified in Information systems approaches, especially the exclusion of *strategic considerations*. Martin's technique represented as a 'pyramid' pays special attention to strategic considerations. The top part of IE's pyramid (see diagram 2.-3.) is called "*Information Strategy Planning*". (Martin, 1989). Martin defines the IE pyramid as follows:

"It is useful to draw a pyramid to represent corporate information systems I.S. activities ... At the top of the pyramid is strategic planning. This needs to be anchored firmly in the strategic planning of the business itself. The next level down is analysis. A model is built of the fundamental data and processes needed to operate the enterprise. From the analysis the need for systems is determined. The third layer down relates to system design. The bottom layer relates to the construction of systems. On the left side of the pyramid are data; on the right are activities. Both the data and the activities progress from a high-level, management oriented view at the top

to a fully detailed implementation at the bottom....At the top there must be a strategy concerned with what strategic opportunities exist for making the enterprise more competitive. There must be a strategy relating to future technology and how it could affect the business, its products or services, or its goals and critical success factors....Also at the top, there must be strategies for deployment and management of information engineering and of corporate communication networks, both closely tied to availability and adoption of new technologies.” (Martin, 1989).

Information strategy planning is concerned with the identification of the so-called *critical success factors*, and strategic goals. But the whole focus of this analysis is confined into finding ways for the best application of technology in order to gain *competitive advantage*. Martin goes on to define the focus of Information strategy positioning as follows:

“Information strategy planning requires commitment from top management. A primary concern is that of strategic uses of technology: How can computing be used to make the enterprise more competitive? The results are interesting and stimulating to top management because they are concerned with how technology can be used as a weapon against competition. Diagrammed representations of the enterprise are created which challenge management to think about its structure, its goals, the information needed, and the factors critical for success. The information strategy planning often results in identification of organisational and operational problems and solutions.” (Martin, 1989, my underlining).

From the above definition we can infer that the definition of CSF, in Information Engineering deviates from the original conception of CSFs by attempting to precondition them towards technological-oriented tasks despite Martin’s claims that the definition of the system’s CSFs is made in a technological independent manner.

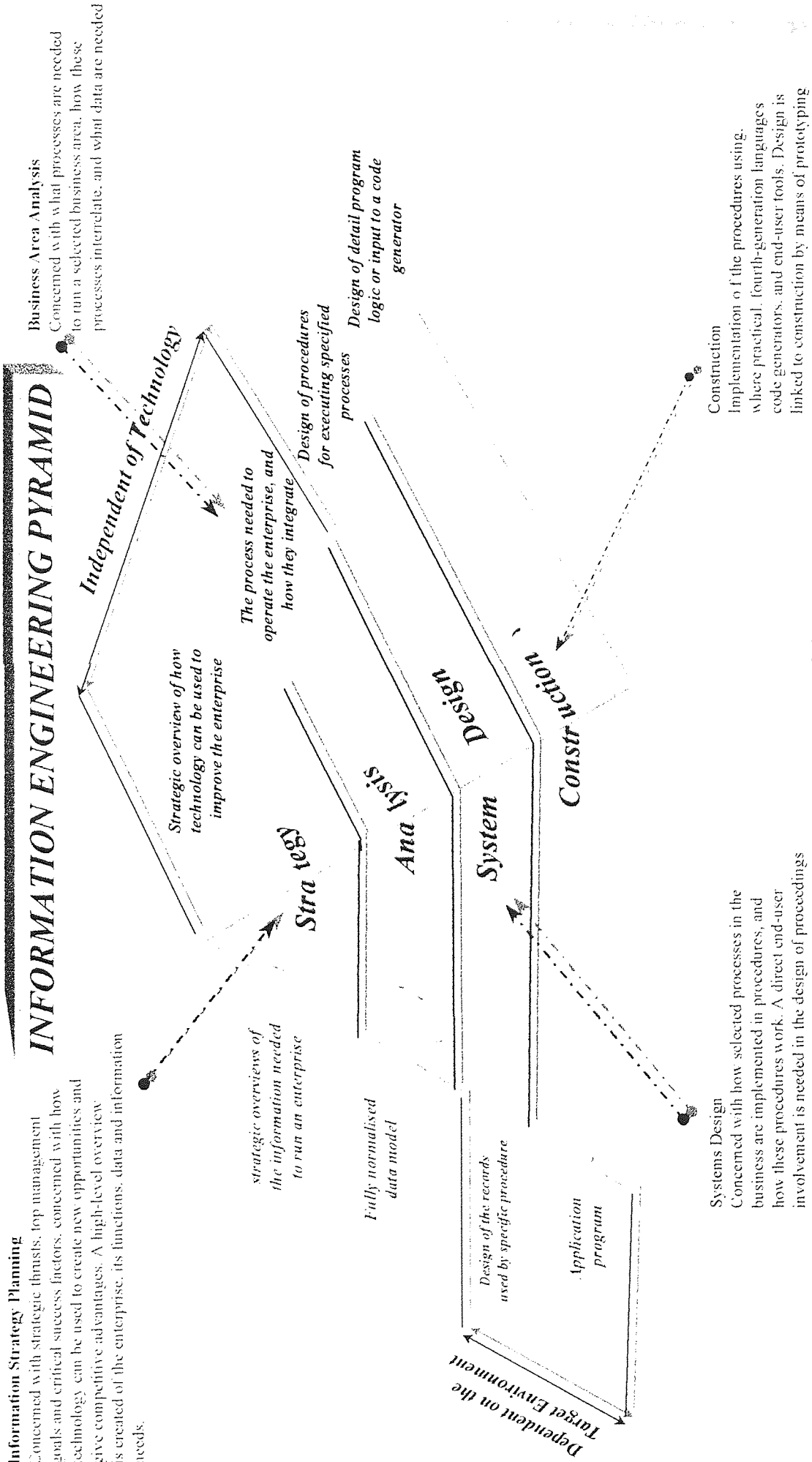


Diagram 2.-3.

Martin makes the distinction between the steps of the *business oriented Information strategy analysis* and the *technology oriented ones* as follows:

“Business Oriented

- Computerise the organisation chart of the enterprise.
- Identify the organisation's goals, targets, and strategies.
- Examine technological trends and how they might be used by the enterprise to create new opportunities or competitive advantages
- Determine critical success factors for the enterprise and break these down into critical success factors throughout the organisation chart.
- Interview key executives to determine problems, opportunities, and information needs.
- Record all the above in a computerised planning and analysis tool.

Technology Oriented

- Develop an enterprise model showing the basic functions of the enterprise on a function decomposition diagram.
- Develop an overview entity model.
- Analyse the functions and entities with a matrix tool and determine business areas (ready for level 2 of the pyramid: business area analysis).
- Analyse current systems.
- Set priorities for information system development.” (Martin, 1989).

The order as well as the content of the IE's *critical success factors* definition is technology-oriented. In addition, the individualistic nature of the CSF analysis does not ensure that there would be agreement in regard to the CSFs' definition within the management team itself. In a technology driven methodology then the views of those who either do not grasp the concepts of technology fully or do not agree with its employment for different strategic reasons, have no place in the organisation. The whole focus of the methodology is on building information systems and thus disregarding those problems that are not related with this effort. Martin does not make this distinction arbitrarily, but the distinction that he advocates between *“perceived”* and *“real”* problems, a categorisation of problems made by Martin, stems from the distinction between *hard* and *soft systems thinking*. The statement that, *“as far as possible, real problems are recorded into the encyclopaedia¹⁴ [my underlining]”* (see diagram 2.-4.) (Martin, 1990) seems to be carrying clear *positivist* connotations.

¹⁴ “The *encyclopaedia* is a computerised repository which steadily accumulates information relating to the planning, analysis, design, construction, and latter, maintenance of systems.” (Martin, 1990).

"[Positivism] *Very broadly speaking, a view that assumes objectivity and neutrality in human thought and reason. It amounts to a rationality, which pervades a whole paradigm. Positivistic social theory accepts in inquiry theory-neutrality and value-freedom which are assumed to be unproblematic.*" (Flood, 1990).

Perceived problems are, by definition, *soft problems* (Checkland, 1989). One might ask then how an 'unreal' perception is formulated and by what comparison can be rated as 'false' or 'elusive'. The categorisation of a 'problem' as real or perceived is made in reference to the perception of the analyst or the sponsor of the study. Basically IE's positivist approach originates from its view regarding the definition of information itself. Mingers (1995) argues that there are two broad views regarding the definition of information itself, the objective and the subjective. IE's definition of information falls within the objective view of information. In fact, Martin defines information as "*any formal, structured data that is required to support a business and can be stored in or retrieved from a computer.*" In addition, IE's approach is *managerialistic* in the sense that it concentrates on the views of the top management layers only and seeks to achieve their support to continue. It seems to favour, in an uncritical manner, the *sponsor* of the study. One could argue that IE's analyst is preconditioned by the sponsor, who will most likely be a technology oriented person; who knows how he/she can enlarge his/her power base by using technology especially when technology is a *black-box* for the rest of the stakeholders. There is no mention or reference in the methodology to the organisation's normative environment namely its organisational ideology that sets and defines the system's priorities and the system's CSFs in the first place. IE methodology though seems to be an excellent methodology in regard to the information systems development stages and to the actual construction of the system. The later stages are defined by Martin as the "Business Area Analysis" concerned with the analysis of the organisational processes needed for running particular business areas as well as the type of data needed by the processes identified. Namely this stage represents the modelling of organisational processes; the "*systems design*" where the *logical design* of the system is performed with emphasis on the development of a *relational database*. DFDs and Entity-relation-modelling techniques are used; and finally in the "*construction*" phase the actual system is coded into computer languages using *fourth generation languages* and *code-generators*.

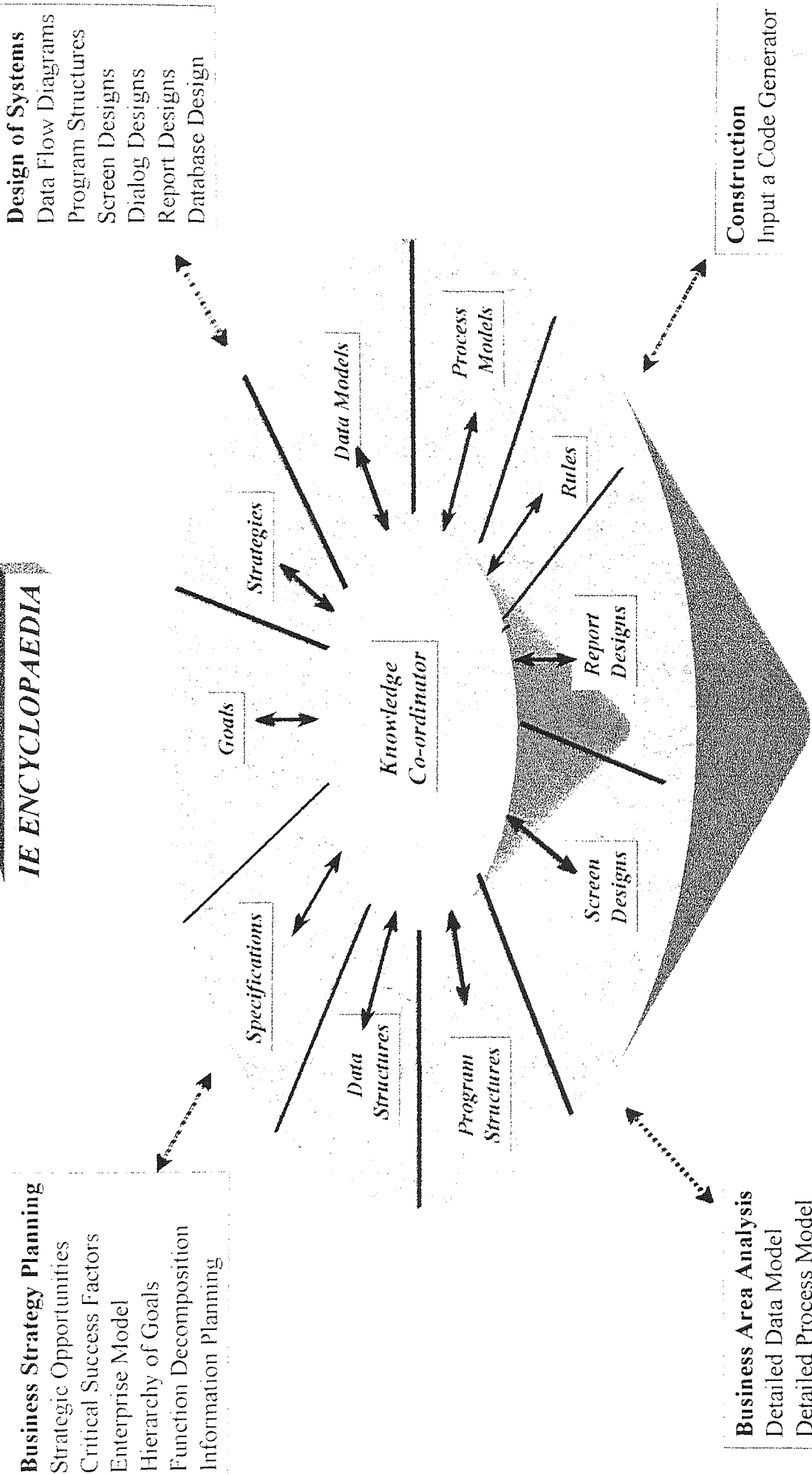


Diagram 2.-4.

2.3.1.2. The 7-Ss model

Waterman, Peters and Philips (1980) developed the notion of the organisation being made-up of *seven subsystems*, namely the “structure”, the “strategy”, the “systems”, the “staff”, the “skills”, the “style” and the “superordinate goals” (see diagram 2.-5.). Strategy in the 7Ss model is defined according to the Peterian-school of strategic thinking. Waterman *et al* define the rest of the subsystems as follows:

*“By **systems** we mean all the procedures, formal and informal, that make up the organisation go, day by day and year by year..... One element of a manager's **style** is how he or she chooses to spend time.... Another aspect of style is symbolic behaviour.... **Staff** (in the sense of people, not line/staff)... We added the notion of **Skills** for a highly practical reason. It enables us to capture a company's crucial attributes as no other concept can do.... The word ‘superordinate’ literally means of ‘higher order’.”* (Waterman, Peters and Philips, 1980, my emphasis).

In a systems-like manner the authors suggest, as the socio-technical theorists do, that attention should be paid to all the “elements” (subsystems) of the 7Ss model, and not concentrate only on one or two. Their main concern is to make aware the managers in regard to the interrelationships of those factors that should be taken into account in regard to organisational change.

“Notions of organisation change that ignore its many aspects or their interconnectedness are dangerous....The central problem in structuring today ...it is not the one which most organisation designers spend their time - that is, how to divide up tasks. It is one of emphasis on co-ordination - how to make the whole thing work” (Waterman, Peters and Philips, 1980, my underlining).

In the diagrammatic representation of the 7-Ss model the *circle* representing the *superordinate goals* is depicted in the centre with all the other subsystems depicted around it. This particular topology in their diagram is not accidental, it is meant to manifest the central role of the organisation's *value system* being the basis of the organisation's purposeful action itself. As a matter of fact they attribute the whole existence of the organisation to those very values.

“Superordinate goals are the fundamental ideas around which a business is built. They are the main values. But they are more as well. They are the broad notions of future direction that the top management team wants to infuse throughout the organisation....The drive for their accomplishment pulls the organisation together. They provide stability in what would otherwise a shifting set of organisation dynamics.” (Waterman, Peters, Philips, 1980, my underlining).

Systemic purposeful “rational” behaviour is attributed to the organisational value system. This of course implies that the analysis of the organisational value system will help us to identify the limits of possible organisational action or the possible sources of false consciousness. Pascale and Athos (1986) argue strongly

against the misuse of the *superordinate goals*, namely their use as a tool for the indoctrination of the employees. Pascale and Athos quote the example of the *Hitler Youth Corps* to make the point of organisational indoctrination as follows:

“Indeed, fascist imagery is often used to express our unease with enterprises that succeed in fashioning intense commitment, our fear of the fanatical is certainly not paranoid.” (Pascale and Athos, 1986).

It has to be noted that the Waterman, Peters and Phillips approach is more individual-centred than the sociotechnical or contingency theories. Peters and Waterman emphasise the respect for the individual and the organisation’s responsibility to grow the individual into an adult, and the type of professional who will be responsible for his actions.

“Let us make clear one final prefatory point. We are not talking about mollycoddling. We are talking about tough-minded respect for the individual and the willingness to train him, to set reasonable and clear expectations for him, and to grant him practical autonomy to step out and contribute directly to his job.” (Peters and Waterman, 1986).

In the 7-Ss model are included other important elements as well, namely the skills subsystem defining the major competence of the organisation being of systemic nature; meaning a particular skill that is characteristic of the whole. For example Rolls Royce is known for its supreme engineering. The authors define the systems subsystem as the major organisational functions and the style subsystem as the pattern of managerial expression in regard to the degree of consistency exhibited in their actions. The 7-Ss model is perceived as a coherent model, quite representative of the organisation’s operations and it can be used as a coherent system for its enquiry.

THE 7-S FRAMEWORK

R. Waterman & T. Peters & J. Phillips, 1980

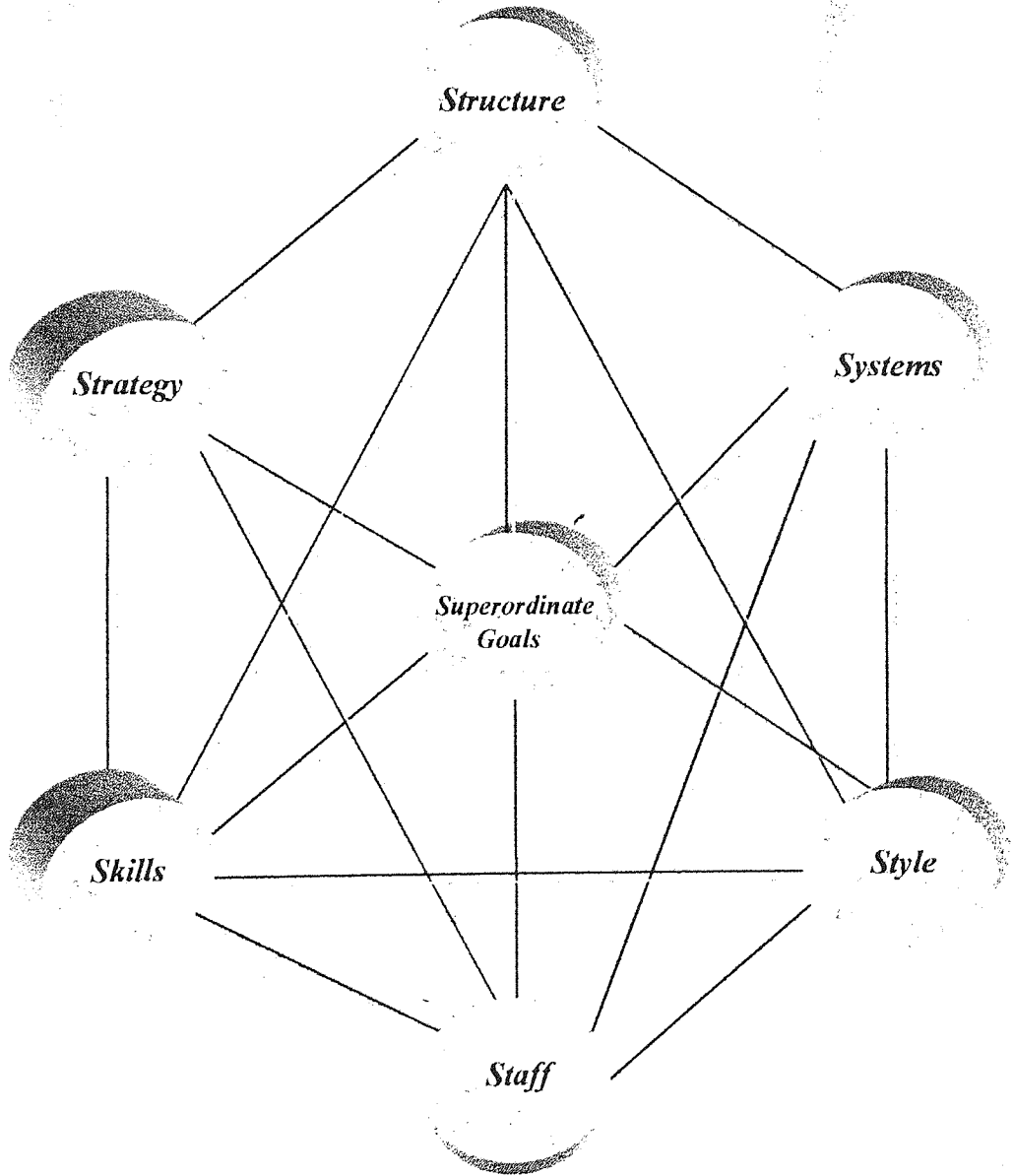


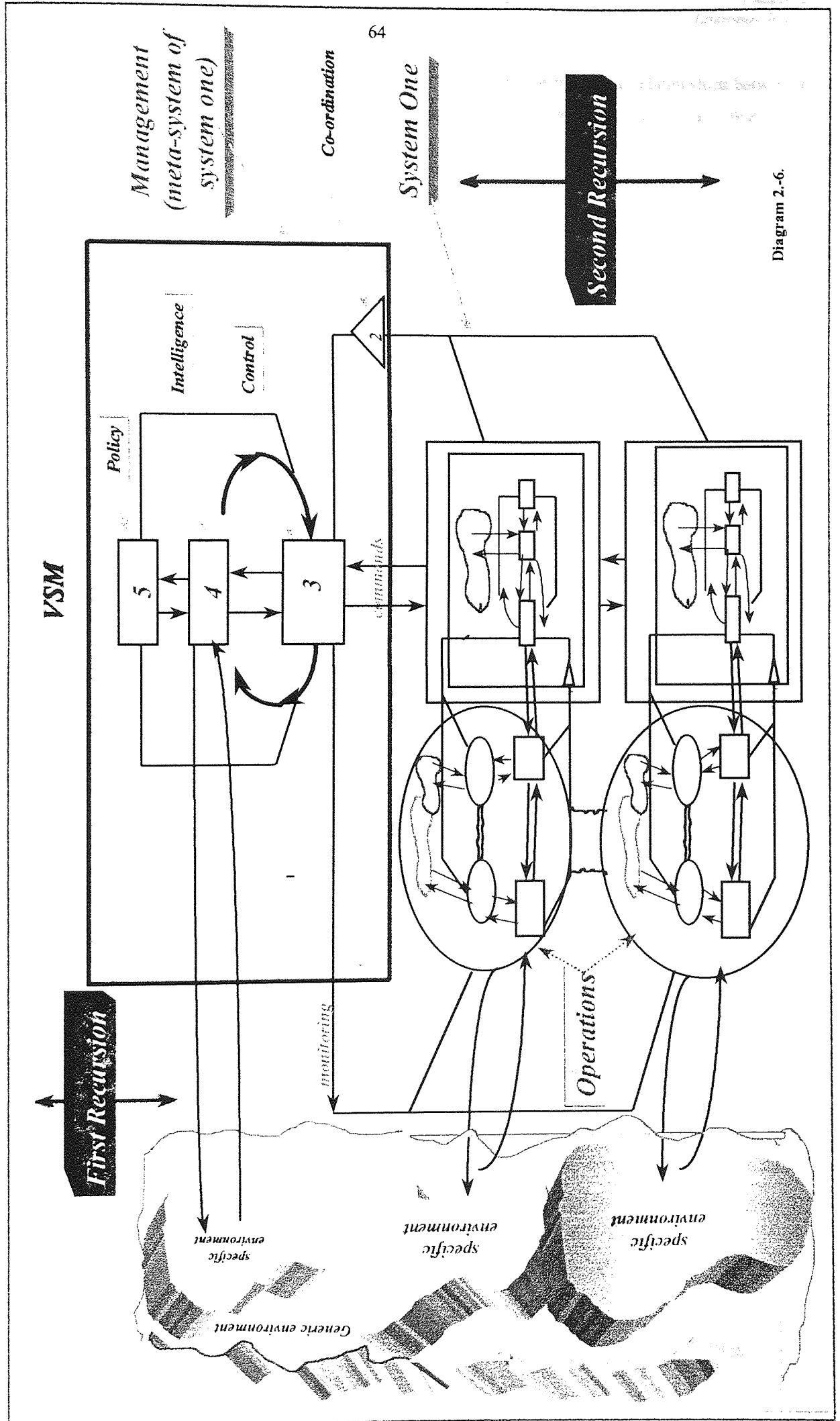
Diagram 2.-5.

2.3.1.3. The Viable System Methodology

Beer's *Viable System Methodology (VSM)* (see diagram 2.-6.) is representative of the type of approach utilising best *organismic, neuro-cybernetic*¹⁵, and *open system* principles. Beer's *organisational cybernetics* methodology is based on the *cybernetic principles* of "black box", "negative feedback" and "variety engineering" (Beer, 1988). According to the black box approach a system can be described in terms of inputs and outputs being processed or being the result of a *transfer function* (Flood and Carson, 1993). The output to the transfer function is brought back to input thus becoming the "feedback", to the function. The term negative feedback implies that outputs are checked against pre-determined goals in order to ensure the transfer function's compliance with these goals. Variety is a measure of complexity and it is defined as "the number of possible states of whatever it is whose complexity we want to measure." (Beer, 1988). But in order for the system to remain in control the *controller* has to exhibit at least equal variety to the system being controlled.

The VSM complies fully with *cybernetic principles* and it specialises in organisational communication and control. The organisation is seen as a *learning-adaptive* system that has as its sole purpose the goal to remain *viable*; meaning to preserve its identity and survive in its environment. Beer defines explicitly the principles of *systemic viability* in terms of *variety engineering*. According to the *organisational cybernetic principles* the varieties exhibited by the *managerial*, the *operational* and the *environmental* systems tend to equate and should be designed with minimum damage and cost to the people involved (*First Principle of Organisation*). The *communication channels* connecting the above subsystems should employ higher *variety* (or at least equal) capacity to transmit the *variety* generated by any of the above systems at a particular point in time (*Second Principle of Organisation*). The *organisational transducers* should exhibit at least equal (or higher) *variety* as the *communication channels* they are connected to (*Third Principle of Organisation*); and finally that the above principles should be applied without hiatus or lags, continuously (*Fourth Principle of Organisation*) (Beer, 1988).

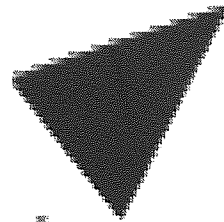
¹⁵ "Beer's aim was to unearth the laws of underpinning the viability of systems so that we can understand how systems are capable of independent existence. It seemed sensible to search for the principles underlying viability by studying 'known-to-be-viable' systems-the human body as controlled by the nervous system.... therefore, a *neurocybernetic* model of the workings of the human body and nervous system is set out. A similar model, Beer demonstrates, can be used to understand how firms must operate if they are to be viable. From this comparison of 'brain' and management structures, Beer is able to construct a scientific model of the organisation of any viable system-the VSM." (Flood and Carson, 1993).



In addition, Beer elaborates on the *axioms of variety engineering* governing the relationships between the organisational systems *one* through to *five*. The significant contribution made by Beer can be identified not only in the elaboration of the *laws of organisational cybernetic viability* but also in the recognition of the determinist nature of the systemic purpose in the definition of organisational effectiveness and subsequently its efficiency. Beer's contribution can be summarised in the definition of *freedom* as a function of systemic purpose and in his definition of the cybernetic ratios of "*productivity, latency and performance*" (see diagram 2.-7.). Beer defines *freedom* and subsequently autonomy as follows:

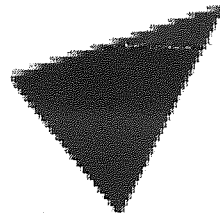
"the freedom of an embedded subsystem to act on its own initiative, but only within the framework of action determined by the purpose of the total system." (Beer, 1988, my underlining).

Problems of information filtration, also researched by Ackoff (1981), and problems of organisational performance-measurement become a by-product of the definition of the organisational systemic purpose. But in organisational cybernetics the special attention paid to the organisational purpose and the recognition of its importance is confined to its role as an integrating force, on the basis of which the rest of the subsystems will have to align and co-ordinate their activities. Basically, there is no need to critically analyse and evaluate the systemic purpose because it is narrowly defined as the system's striving to remain *viable* or in other words to survive in its environment. But the adoption of the biological metaphor of systemic viability for the explanation of the business system's purposeful behaviour is rather restrictive and very conservative. In biological terms purposive (dealing with natural systems the purposefulness of which is inferred in order to avoid metaphysical considerations -teleonomy) behaviour leading to viability is basically instinctual or genetically programmed. But in HASs it is the result of a process of negotiation where the basis of the agreement between its members is perceptual rather than instinctual. VSM does not provide its users with clear methodological techniques for the facilitation and the critical examination of the process of perceptual exchanges for the definition of the system's systemic purpose, though it relies heavily on democratic procedures working a priori for the formation and definition of systemic purpose. In addition the basic assumption made by *cyberneticians* that they can regulate a HAS subsystem under the *black-box* approach is flawed. Beer gives an example regarding the calculation of the *variety* exhibited by a system made up of 40 people, each exhibiting only two *possible states*. The system's total possible states is equal to the number 2^{40} (1,099,511,627,776) (Beer, 1994). By concentrating only on the management of the system's inputs and outputs, according to the *black-box* approach, we can not compensate for the variety embedded even in a small system (made up of 40 people only) like the one described above. Beer of course would have answered by pointing towards another *cybernetic principle*, namely the self-regulation of those systems, which implies the democratic process of the stakeholders choosing or formulating the systemic purpose (in the absence of coercion or false consciousness). This is the case in *organic systems* where all the parts regulate their viability, in the absence of coercion though that might be a rare case, towards the system's viability. But this approach seems to be idealistic in the case of the HASs where power, coercion and false consciousness are present.



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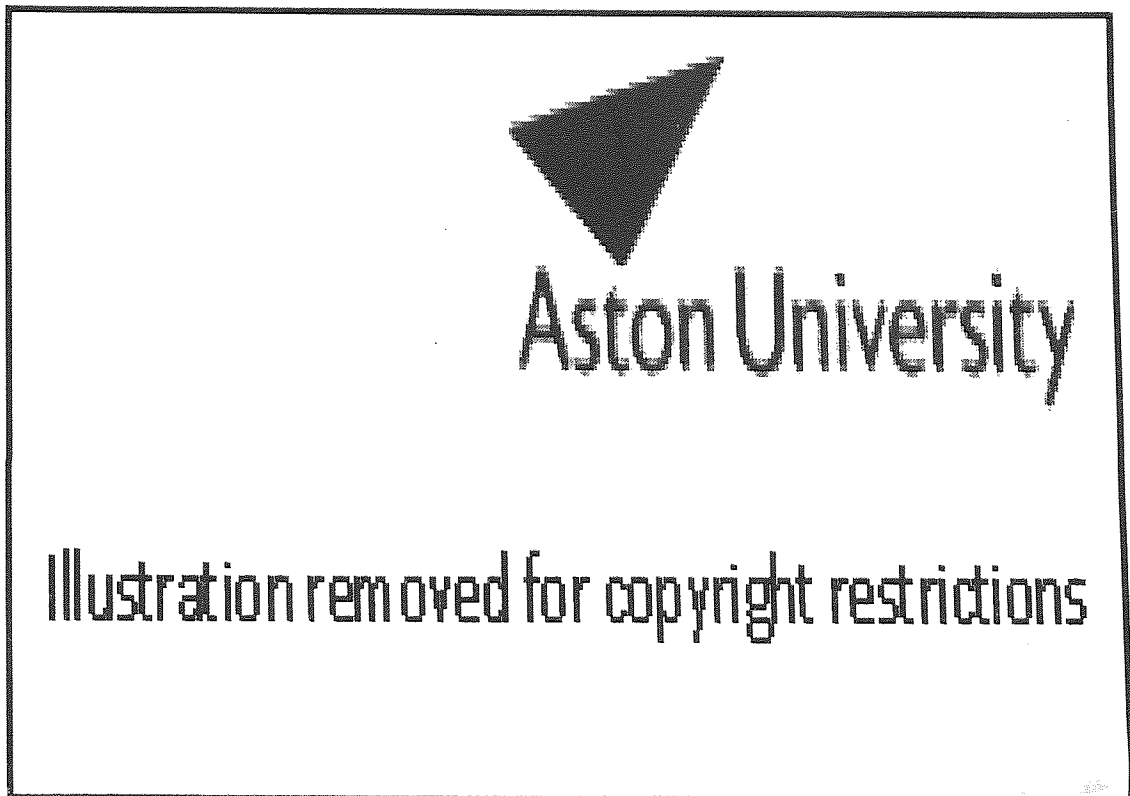
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The powerful unsophisticated regulator of a HAS will use blatant force, namely the force of arms to impose his will (*dictatorship*). A more sophisticated one will employ an ideology that will serve his interests and possibly the interests of other stakeholders as well (*oligarchy*). But a really sophisticated regulator will diffuse his ideology in order to turn people whose interests are not being served by a particular ideology into believing consciously that they are actually being served by the regulator's ideology (*superficial democracy*). That relieves the regulator from monitoring the system continuously, while the system according to cybernetics is functioning well because it is apparently *self-regulated*. According to cybernetics one way to regulate and control very *complex* systems, like a HAS, can be achieved by 'cutting-down' the *variety* of the system. In *self-regulating* systems this is done through the central value system. This raises the ethical as well as the *practical* (referring to why and not only what questions) question regarding the reasons upon which the central value system is founded in order to 'cut-down' or "destroy" particular states of a system and support or allow to exist others. Namely, one might ask "in whose interests is a particular variety reduction is made and why?". Ulrich (1983) argues that the very definition of *variety* is *semantically* (dealing with the relationship of signs to the objects or ideas to which they refer) and *pragmatically* (dealing with the relationships of signs to their users) bounded to the *subjects* (human beings) that make up social systems. But in VSM the semantic and pragmatic dimensions of communication are not included in its rationality. This implies that any social design based on the concept of VSM is bound to focus only on the *syntactic* (dealing with the relationship of signs to one another apart from their meaning) aspects of communication. This reduces the use of the *practical reason* (corresponding to the *practical interest*) into the domain of *theoretical reason* (corresponding to the *technical interest*).

Ulrich (1983) argues that Beer, in an effort to discharge himself from the ethical connotations embedded in the VSM, makes the claim that the VSM amounts to a 'tool' and not to a 'social systems design' methodology:

"In refutation of this argument, we may appeal to the self-evident fact that all design of tools represents somebody's solution to somebody's problems, and hence has a normative content of its own in need of radical questioning. This is what the challenge to practical reason is all about; practical reason cannot be reduced to instrumental rationality, which is only an application of theoretical reason" (Ulrich, 1983).

In the following table 2.-1., Ulrich (1983) provides us with a comparison between the paradigms of purposeful systems and those of organic and mechanistic ones. In this table the weaknesses of the cybernetic approach become evident:

Mechanistic Systems vs. Organic vs. Purposeful Systems*position**position*

- Ashby's law or in other words the "Law of requisite variety" = "only variety absorbs variety" (Beer, 1979).

Table 2.-1.

From the above table we have to highlight the points made about *motivation* and the *criterion of systems rationality* which for the contemporary *cybernetic paradigm* are *extrinsic* and *syntactic* respectively. It has to be noted at this point that the major or better the core weakness of the VSM lays in the fact that it makes no provisions for the critical analysis of systemic purpose. This weakness though does not reduce its validity as a *diagnostic tool* of the utmost sophistication for the efficient design of the organisation's structural and informational aspects; only in the case where systemic purpose is the result of truly democratic processes. For

this reason the VSM, as Beer advocates could be used as a *diagnostic tool* (Beer, 1990) but only after the critical analysis and the formation of the systemic purpose has taken place.

2.3.2. In the Service of the Practical Interest

The development of *soft systems* methodologies moves towards the direction of effectiveness by recognising the perceptual aspects of the systemic purpose but they fall short of analysing the mechanism that underlines the very process that produces those perceptions in the first place. Basically, they can not explain how the reconciliation of opposing perceptions, which they accept to exist, can be achieved in regard to the systemic purpose formation thus leading to unitary action. In other words they downplay organisational conflict and the exercise of power in containing the conflict in the first place. On the basis of the perceptual nature of the social world they regard the nature of organisational problems as *problematic areas* (Checkland, 1989).

This epistemological approach stands in contrast to the previous approaches, which regard an organisational problematic as either means selection or systemic integration between different organisational subsystems and systems in general, on the basis of predetermined ends. The 'objectively' identified organisational system and its subsystems becomes an abstract concept that amounts to a way of shaping our system of thoughts in regard to the perceived organisational purpose in the first place.

Soft systems methodologies lead us to the field of *problem solving*, under the concept of *interpretivism*¹⁶ and the *worldview concept* (*Weltanschauung*), where *pluralism* is expressed through perceptual subjectivity or relative objectivity, namely shared reality. Organisational systemic purpose formation becomes a process of perceptual exchange, best represented in the *Soft Systems Methodology's* (*SSM*), "*root definition*" (Checkland, 1989), being the manifestation of a stakeholder's perception regarding the system's core activity and boundary. But the above process makes no explicit reference to the dominant rationality within which the process itself is embedded. *Soft systems* methodologies seem to claim that we can optimise the operations of the organisational subsystems only if we do co-ordinate our perceptions (as stakeholders) regarding the definition of the *organisational boundary*, on the basis of the purpose we attribute to the system, in the first place. But one might well ask how should we know what subsystems we should co-ordinate and optimise if we do not agree which ones lie within the system's boundary and which are out of it? The most representative problem solving methodology of this type is are Ackoff's *Interactive Planning* (1981) and Checkland's *SSM* (1989).

2.3.2.1. Soft System Methodology

Checkland's (1989), *Soft Systems Methodology* (see diagram 2.-9.), based on a rich philosophical background, is a representative "*soft*" problem solving approach. The term *soft* itself is given by Checkland in

¹⁶ "There is not a once-and-for-all concrete positivistic validation. Rather, validation is made by reference to the inherent assumptions of the adopted theory, or rationality. For example, with *interpretivism* validity implies a guarantee of participation. In this immanent way actions and outcomes are valid according to theoretical and ideological tenets." (Flood, 1990).

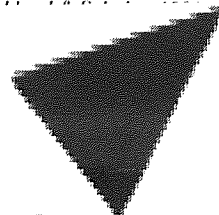
order to distinguish his *anti-functional* approach to problem solving from the “*functionalist*”, “*hard*” one. Checkland rejects the idea of an ‘objectively’ defined problem and he refers explicitly to the *perceptual* nature of problems, which implies the *problematic* nature of ends. According to the SSM philosophy the system concept is a concept for organising and projecting our thoughts upon the social world (see diagram 2.-8.). The social world is not made up of “*hard*”, meaning objectively identifiable systems, social systems exist in the mind of the observer only who chooses the system concept to organise his perceptions of the world.

“This transfers the notion of systemicity from the world to the process of enquiry into the world. For this profound observation the management and systems sciences are indebted to Checkland” (Flood and Jackson, 1991).

Checkland himself attributes the *functionalist* uses of the system concept to *illusions of reality* itself. *“The error here is to confuse a possibly plausible description of perceived reality, with perceived reality itself”* (Checkland, 1990). It is interesting to note here the careful wording used by Checkland in his description of *reality*. *Reality*, according to Checkland, can never be anything else but a perceived entity which according to Ulrich’s (1983) explanation of *Kant*’s employment of the system concept, will always be limited because it will always be subjected to the limitations of human perception. Checkland defines the term “*human activity systems*”, as a concept with the employment of which the observer can organise his thoughts into identifying purposeful social *holons*. The word “*activity*” implies *purposeful action* and the word “*systems*” implies the use of *system thinking* concepts for inquiring the real world. Purposeful action is attributed to human activity holons employing other purposeful holons while they themselves are part of a wider human activity Holon.

SSM is defined as a methodology, which aims to be used by people in a never-ending process of inquiry of the real world.

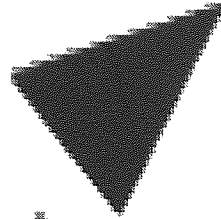
The shift in systemicity between systems engineering and SSM



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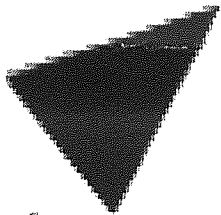
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The methodology is made up of seven stages the order of which in real-life situations, according to Checkland, is not strictly defined as progressing from stage one to seven. In the *first* and the *second* stages of the analysis, namely the “1. Enter situation considered problematic” and “2. Express the problem situation”, a *problematic area* is entered and analysed but the focus is in a sense *problem-free*. What matters is the analysis of the situation surrounding the problem while the problem-expressed amounts to the motivation to enter the *problematic situation* itself. The focus of SSM in this stage is to build a “*rich picture*” of the *problematic area* by examining elements of *structure*, *process* and environmental influences. In the *rich picture* the methodology tries to encapsulate the *pluralism* of a *human activity system* expressed through different viewpoints in regard to the *problematic area* expressed.



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For this reason the problem is not labelled and it is not identified as a distinct and 'objectively' identified entity. In the latest versions of SSM this stage makes reference to the roles of *clients*, *problem solvers*¹⁷ and *problem owners*¹⁸. References to those social entities are necessary in order to define the *problem situation* in the first place. The move away from earlier versions focusing on structure and functions as well as on their relationship was necessary to understand the perceptual nature of the problem expressed through the actions and the roles of the stakeholders identified in the problem situation. For this purpose SSM was supplemented with three types of analyses called "*Analysis 1*", concerned with the identification of "*problem owners*"; "*Analysis 2*" concerned with the cultural background of the *problematic situation*; and "*Analysis 3*" concerned with the influence of power upon the *problematic situation*.

In stage 3 "*root definitions*" are formulated. *Root definitions* are defined as being of "*notional systems*" relevant to the *problem situation* described in the previous stages. According to Checkland well-formulated *root definitions* should include all the elements of the mnemonic CATWOE (*Customers, Actors, Transformation, Weltanschauung, Owner, Environment*). In descriptive terms the CATWOE will read as the system *Owned by...*; subject to the *Environment constraints...*; that *Transforms the*; where the transformation process is performed by the *Actors...*; the output of the transformation affects the *Customers.....*; while the whole *transformation process* is meaningful within the stakeholders' *Weltanschauung*. Checkland defines the *Weltanschauung* as follows:

"In CATWOE the (unquestioned) image or model of the world which makes this particular human activity system (with its particular transformation process) a meaningful one to consider." (Checkland, 1989).

In stage 4 conceptual models of the relevant *human activity systems* are built based on the *root definitions* where the analysts check their completeness using *formal system*¹⁹ models. In stage 5 the conceptual models are built on the basis of the *root definition* and they are compared with the original perception of the *problematic area* recorded in the first two stages. In stage 6 possible intended changes on the *problematic area* are examined in regard to their systemic "*desirability*" and their organisational and cultural "*feasibility*". Finally in stage 7 action is taken to improve the problem situation.

¹⁷ "**Problem solver:** A person or persons anxious to bring about improvement in a problem situation. Problem solver is a role in what the investigator defines as the problem-solving system" (Checkland, 1989).

¹⁸ "**Problem Owner:** The person or persons taken by the investigator to be those likely to gain most from achieved improvement in a problem situation. Problem owner is a role in what the investigator defines as the problem content system. Very frequently problem owners will actively seek such improvement, but the investigator is free to take as problem owners people who do not recognise the problem situation or are too inarticulate to express their views." (Checkland, 1989).

¹⁹ "**Formal System Model:** A generalised model of any human activity system from the point of view: taking a purposeful action in pursuit of a purpose. It may be used to test the basic adequacy of conceptual models." (Checkland, 1989).

Checkland's focus is on the identification of different *Weltanschauungen* (*W*), the negotiation of which, between the different stakeholders, will bring about changes either to the initial *Ws* or to the *problematic situation*. Consensus after the identification of the *Ws* between the stakeholders seems to be a natural consequence leading to action in the real world aimed at improving the problematic area.

The main weakness of the SSM methodology though lies in *stages five and six*, where the conceptual models of the stakeholders are "*Compared with models with real-world*" and "*Define possible changes, which are both desirable and feasible*". (Checkland, 1989, my underlining). These two stages together might lead to superficial changes to the *problematic situation*, built upon a shaky consensus.

The basic notion that changes in the *Ws* will ultimately lead to real and not superficial changes is rather misleading. The stakeholders *Ws* are the result of deep-rooted interests, namely technical as well as practical interests. Those two interests can not be separated because the one complements the other. To put it in cybernetic terms the technical interest becomes the operational environment of the practical interest. Our effort to reach intersubjective meaning (practical interest) is performed within the framework of trying to survive by controlling and predicting our hostile natural environment. In the history of "*the naked ape [namely Man]*" (Morris, 1977), our ancestors, in their effort to survive, developed symbolic communication and subsequently the language medium in order to aid their hunting practices. It is interesting to note that Man's sexual practices and especially the pairing with one female, based on the sexual-mechanism of '*falling in love*', was part of an evolutionary process that was aiming (and still is) at increasing the chances where the *technical interest* will be performed more effectively. Whole cultural systems were developed to support this type of survival. The technical interest for survival led to the creation of *Ws*. Living in a material world where our bodies and our brains are more or less determined to a high degree by their material substance, our first task is to reverse *entropy* (that originates from our environment) and import material energy (*negative entropy*) for our material substance. It is no wonder that the *physiological needs* are the base in *Maslow's hierarchy*. Since we remain entities of essential material substance, still engaging in the fight against entropy the technical interest remains the operational environment of our practical interest. The need for intersubjective meaning can only be explained in reference to the technical interest. In other words we can not explain ideas or *Ws* if we do not refer to the material conditions surrounding those ideas. Therefore in an essentially material world power becomes meaningful because it is tied to possessions or control over material entities defining the basic conditions for our viability. Distortion in communication is the result of our narcissist nature (Freud, 1986) which demands that we should maximise selfishly our changes in viability, through increasing our grip on material possessions, in a world where necessary material entities are not at least easily available for everybody. Freud argues that our birth condition is essential narcissistic. In our mother's womb we live in perfect harmony with our world, food is there and there is no need for work. The conditions are similar to Adam's life in paradise. After the *shock of our birth* (Freud, 1986), we are still left with the *narcissism* of our pre-birth conditions. Therefore the whole effort in life concentrates, or it should concentrate, on the development of the ability to overcome, as Fromm (1977) argues in regard to Man's *existential problem*, our innate narcissism and unite with the rest of

the human race. This means that we are inherently selfish in regard to the possession and control of this world's material entities that can satisfy the conditions of our biological viability. Therefore, the process of identification of the Ws is crippled if we do not refer to the material conditions, which surround and produce Ws and *distortion in communication* in the first place. According to Marx (1973) changes in the Ws will originate from changes in the material conditions. For example the whole concept of the *Pax-Americana* plan, devised and implemented by the American Governments after the second world war, was to inhibit Communism by improving the devastated nations of Japan's and Germany's material conditions. The whole effort was to turn the poor low-morale average German and the average humiliated Japanese to a confident middle-class citizen. Ws change when material conditions change or when we can reflect on the limits of our Ws imposed by our material conditions, thus acquiring self-knowledge about the origins and the limits of our rationality. Morris argues the following in regard to the development of pairing and love in our distant ancestors, as a by-product of the effort to co-operate better in hunting.

"To begin with, the males had to be sure that their females were going to be faithful to them when they left them alone to go hunting. So the females had to develop a pairing tendency. Also, if the weaker males were going to be expected to co-operate on the hunt, they had to be given more sexual rights. The females would have to be more shared out, the sexual organisation more democratic, less tyrannical. Each male too, would need a strong pairing tendency. Furthermore, the males were now armed with deadly weapons and sexual rivalries would be much more dangerous. (Morris, 1977).

In addition, if we take into account the perceptual nature of Ws, we can argue that no problematic situation can be perceived if the priori presuppositions making up the Ws do not make allowances for the perception of a problematic situation. The same applies for the prescription of any 'solution' for a problematic area. In other words the improvement as well as the perception of the problematic area becomes meaningful only within the framework of a particular W. Therefore, we are led to the conclusion that a problem-solving approach that does not refer to the origins of the stakeholders' Ws, namely to their material origins as well as to the material conditions of the problematic area, can not hope to be radical in terms of changes. Resolving a problematic situation would be its best achievement and not dissolving it. Agreement between conflicting Ws namely conflicting material conditions, will be most likely to be resolved in the *real world* through the exercise of power or through the development and promotion of false-consciousness by the powerful stakeholders upon the less powerful ones. In this thesis changes in the Ws can only come through changes in their material origins or through learning being focused on acquiring self-knowledge in regard to those material origins. The *dialectical* examination of Ws with no reference to their material origins can not ensure learning with the aim of human emancipation from false ideas or the *prison effect* (Flood, 1991) of power and coercion.

Though in principle the investigator is “free” to select *relevant systems*²⁰ but he will be inhibited into turning those systems ideas into action in order to improve the *problematic situation* which is perceived to be free from any presuppositions of the investigator’s W. He will be inhibited because at *stage six* will have to compare the *problematic area* with his notional system with the aim to decide to undertake *feasible* and *desirable* changes. The terms *feasible* and *desirable* are *normative* based. This implies that one will most likely reject consciously or subconsciously changes which are not *culturally feasible* thus possibly not *desirable* as well. The statement of feasible and desirable changes reflects the inevitability of a situation being characteristic of the hermeneutic epistemologies and not the critical hermeneutic ones. In addition it raises a number of *moral* and *practical* questions as well; namely, “*who says that it is not feasible to make any changes?*”, “*why?*”, “*who will benefit and who will lose from any changes in the problematic areas?*”, etc. In Stalin’s USSR the notional system of “private property” will not be culturally feasible neither desirable in terms of the dominant communist rationality. *Radical* change can only come about when the normative environment is changed despite Checkland’s claims.

According to Burrell’s and Morgan’s (1979) *Four Paradigms* [expressed schematically as four quadrants] *Model of Social Theory*, a *functionalist* approach is defined as the “*sociology of regulation*”, in conjunction with the ability of the observer or the designer to objectively identify the system. According to the *Functionalist approach* systems are supposed to exist in the real world and not being defined according to the purpose attributed by the observer. The other three paradigms are defined as the “*Radical Structuralist*” (*sociology of radical change*, objective in regard to the system identification); the “*Interpretive*” (subjective regarding the system identification, *sociology of regulation*); and the “*Radical Humanistic*” (Subjective, *Sociology of Radical change*). The term *sociology of regulation* means that the sociological *status quo* is not challenged.

“...given the analyst’s complete freedom to select relevant systems which, when compared with the expression of a problem situation embody either incremental or radical change, the area occupied must include some of the subjective/radical’ quadrant [Burrell and Morgan grid of sociological paradigms].”

Checkland uses the word “some” to indicate that SSM could bring about social radical change. A methodology aiming to bring about radical change and emancipation, we are not saying good or bad change but radical change, has to employ a critical hermeneutic epistemology and not a hermeneutic one. Bleicher (1980), quoted in Flood (1990) defines hermeneutics as follows:

“...can be loosely defined as a theory or philosophy of the interpretation of meaning...”
(Bleicher, 1980).

²⁰ “**Relevant System:** A human activity system which an investigator using soft systems methodology names a likely to yield insight in latter stages of the study. For each relevant system a root definition is formulated and a conceptual model built.” (Checkland, 1989).

The SSM epistemology is basically hermeneutic that's why it is placed in the subjective/regulative quadrant and not in the subjective/radical *one* in Burrell's and Morgan's Four Paradigm for the Analysis of Social Theory. One might argue though that there is no such a thing as an emancipatory methodology. This is true! But a methodology in order to fulfil the purpose that it was built for, namely in this case to emancipate will have to be used for this purpose. If we assume then that the methodology will be used to emancipate then success in emancipating will be dependent on the methodology's designed attributes aimed at fulfilling the methodology's purpose. For example a knife, being developed to cut bread, fulfils its purpose to cut bread when it is used for this purpose and it exhibits the attribute of cutting based on its sharp blade. One should not forget though that a knife could be used to murder somebody as well. An emancipatory methodology then could be defined as such when it was developed for this purpose, its users are using it for this purpose and the methodology provides the users with the ability to do just that. As a knife can be misused to kill an emancipatory methodology can be used as well to subjugate further instead of emancipating.

Before we conclude the discussion about SSM we should examine the use of SSM in the development of computer-based information systems. Winter, Brown and Checkland (1995) define information systems as systems that "serve" a purposeful system (see diagram 2.-10.):

"Recent years have seen a growing interest in the use of soft systems methodology (SSM) in work related to computer-based information systems (IS). Against this background, this paper seeks to identify and define, more fully than hitherto, a role for SSM in information systems development which stems from its fundamental principles. Since SSM sees computer-based information systems as systems which serve purposeful human action, the notion of 'information system' in SSM is one that necessarily involves two systems, a 'serving system (the information system) and a served system or purposeful action. This notion of 'information system' leads to certain principles for IS development. These are expressed in the form of a model, referred to as the 'information system/information system development model' (IS/ISDM)." (Winter, Brown, Checkland, 1995).

The distinction made between a *serving system* and the *purposeful system* served in the above approach is not accidental; basically it reflects SSM's interpretive approach to social systems design. In addition it reflects its focus on a HAS's behavioural aspects namely on the identification of *Ws* only without reflecting on the sources of *possible deception* (Ulrich, 1983). In other words the *serving system* can be defined as an "extrinsically motivated information system" (Ulrich, 1983) and not as an "intrinsically motivated information system". In other words Winter, Brown and Checkland propose that an information system, developed according to the "law of conceptualisation", has to be a *fact-providing* system where facts are defined on the basis of the organisational normative environment. In other words the *serving system* serves the existing normative environment and does not offer any facilities to question its normative environment. Or in other words the serving system serves another system which in its turn must be culturally feasible and desirable. The

law of conceptualisation namely a "methodological law... states that conceptualisation of a system which serves another must be preceded by conceptualisation of the system served" (Winter, Brown, Checkland, 1995). But before we proceed let us see how Ulrich (1983) defines *extrinsically* and *intrinsically* motivated information systems:

"An extrinsically motivated information system is capable of constructing 'fact nets,' i.e., of not only storing but also interrelating and combining, cataloguing and retrieving data. If it is given the necessary algorithmic and heuristic routines, it can also perform various tests to make sure that its inputs are syntactically well-formed and statistically plausible; it can extrapolate new facts from given fact nets, receive and identify inquiries and 'answer' by putting out corresponding facts nets, etc.. But it cannot recognise and question the semantic and pragmatic meaning of these fact nets, it has no knowledge of what it knows and why it knows what it knows. The classical example of such an information system is the library; the contemporary example is provided by the computerised information system.... The design of extrinsically motivated information systems - 'fact finding systems' as we might call them - must be oriented toward the crucial problem of securing communication between the fact finding system and its external user. The only design ideal that makes sense for a fact finding system is maximum responsiveness to the language and the problems of its external motivator. ↯

An intrinsically motivated information system must include at least one human inquirer, for purposefulness exists only where human reflection can recognise and question facts.... A good design for inquiry will have to consider this fact and its consequence: namely, that an information system can produce meaningful knowledge only to the extent that it makes its user reflect both on the sources of deception that might prevent his inquiry from serving its purpose, and also on the sources of deception that might be contained in the purpose itself. Churchman's term 'inquiring system' refers to such a design that includes the self-reflectiveness of human inquirers as a mandatory component of a purposeful information system." (Ulrich, 1983, my underlining).

An intrinsically motivated information system then should include for example the material sources of particular facts of the sources of organisational conflict that impact facts. The IS/ISDM model can lead only to the development of extrinsically motivated information systems. This is made apparent from the stated distinction in the theoretical paradigm proposed for the analysis of the *served* system than that of the *serving*.

"The served system, which represents purposeful human action in real-world organisations, is rooted in the theory of paradigm II, better known as 'soft' systems thinking, while the serving information system, with its link to computer technology, is rooted in the theory of paradigm I, better known as 'hard' systems thinking. More generally, the left-hand side of the core concept [see diagram 2.-10.] is rooted in the theory of the so-called interpretive paradigm while the

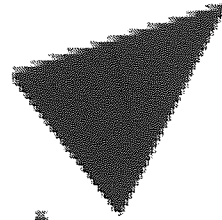
right-hand side is rooted in the theory of the so-called functionalistic paradigm (Burrell & Morgan, 1979)." (Winter, Brown, Checkland, 1995).

The argument that the *IS/ISDM* leads to a 'fact-net' information system is made apparent from the following passage written in the paper:

"The paper puts the human being, as an attributor of meaning, in a central position in IS work; but two points about this need to be made at this stage of the argument. Firstly, in designing the 'information system, the designers [the Human Activity System] will aim for outputs which have meaning according to the rules and norms of the organisation in question. The processed data provided as outputs will in general be seen as meaningful information within the organisation. But the designers cannot force users to see the system outputs as meaningful in the way they intend. Would-be-neutral corporate information concerning resource use and costs, for example, may well be interpreted and used politically in a dispute between department heads competing for corporate resources." (Winter, Brown, Checkland, 1995).

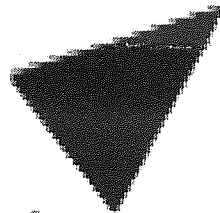
It is made obvious from the above that in the information system design proposed by Winter, Brown and Checkland, there is no room for the identification of the *possible sources of deception* stemming from the *normative* context of the information system's 'fact-net' itself. Therefore, we can conclude that in critical system thinking terms the IS/ISDM leads to the development of extrinsically motivated information systems thus increasing the chances for the unreflective use of 'facts' in organisational life.

In general we can conclude that in soft systems methodologies 'real' systems in the *functionalist* sense do not exist with 'objectively' defined boundaries and purposes. Systems are notions of purpose projected in the real world thus identifying entities with purposeful behaviour. These notions of the 'real' world are inevitably limited due to the stakeholders' bounded rationality, thus they can be described as expressions of a pluralism of different world views. A pluralism that is described as value-laden in regard not only to the system's ends definition but to the means selection as well. But Soft Systems methodologies focus on Habermas's practical interest only. In an ideal world where power, coercion and false consciousness would be absent there would be no need to emancipate people from coercion and false consciousness. But because this is not the case in the real world the need for the development of the critical systems methodologies, elaborated in the next section arose.



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2.3.3. In the Service of the Emancipatory Interest

Critical Systems thinking is a relatively new approach to problem solving. It emerged as a new discipline in the 1980s. The field is still in the pioneering stage and it accounts basically for two methodologies, which were built on the basis of Kant's *critical systems thinking* philosophy. Kant uses the term system as a critical standard used to reflect on the unity of understanding by reflecting on the totality of conditions that flow in to it.

"Kant does not frequently use the concept of system; more commonly he uses the concept of totality which we have introduced above. Both concepts refer to the whole set of relevant conditions in a given situation of inquiry. The essential difference is this. When Kant speaks of a totality of conditions, he thinks of the entire series of conditions that precedes a given appearance and hence must also be assumed to be given, accordingly to his principle quoted earlier: 'if the conditioned is given, the whole series of conditions...is likewise given.' On the other hand, when Kant speaks of a system, he tends to think of the result, rather than the presupposition, of reason's reflection on the totality of conditions determining the knowledge of the understanding; that is to say, he intends the systematic unity, or coherence, of our knowledge. 'The systematic unity (as a mere idea) is, however, only a projected unity, to be regarded not as given in itself, but as a problem only.' In other words, the systems concept is just another name for the critical standard formulated in the general principle of reason, according to which it is the task of reason to 'bring to completion' the unity of the understanding by reflecting on the totality of conditions flowing into it." (Ulrich, 1983).

These two methodologies are Ulrich's (1983) "*Critical Systems Heuristics*" (CSH) and Flood and Jackson's (1991) "*Total Systems Intervention*" (TSI). According to Flood and Jackson though a critical systems methodology that will facilitate the mapping and the critical analysis of *coercive* and *highly complex problematic areas* is still in anticipation.

Schechter (1991) defines *critical systems thinking* as follows:

"My argument is that critical systems thinking is defined by three commitments: to critique, to emancipation and to pluralism. The commitment to critique is a commitment to questioning the methods, practice, theory, normative content and limits of rationality of all schools of thought. It requires a never-ending attempt to uncover hidden assumptions and conceptual traps. The commitment to emancipation is a commitment to human beings and their potential for full development via free and equal participation in community with others. It is also a commitment to recognising the barriers to human emancipation - unequal power relations and conceptual traps which perpetuate them - and incorporating this understanding into systems thinking" (Schechter, 1991).

Central to the *critical systems thinking* field is the idea of *complementarism* (Flood, 1990).

“Complementarism seeks to respect the different strengths of the various trends in management science, encouraging their theoretical development and suggesting ways in which they can be appropriately fitted to the variety of management problems that arise..” (Jackson, 1993).

The concept of *complementarism* is based on the idea of *theoretical commensurability*, at a meta-level of reasoning, and on the idea of *methodological incommensurability*. Theoretical commensurability assumes that a variety of theories can be used in a complementarist manner [“i.e., are a variety of theories and/or methodologies considered to be complementary?” (Flood, 1990)], through sectioning and recombination at a meta-level of reasoning. Flood and Jackson (1993) define *complementarism* as follows:

“A position that seeks to recognise the complementary strengths of different tendencies and to align each of them with the sort of situation for which it should, in theory, provide the most suitable reasoning” (Flood, 1990).

This idea and the idea of “*inter*” [“i.e., is it considered acceptable for two or more theories and/or methodologies to be ‘sectioned’ and ‘recombined’ into new forms when appropriate?” (Flood, 1990)], and “*intra*” [“i.e., is it considered acceptable to take out just part of a theory or methodology for use in particular contexts?” (Flood, 1990)], theoretical partitioning only (and not methodological) have led Flood and Jackson to the development of *Total Systems Intervention (TSI)* methodology.

With complementarism a *Kuhnian Crisis*²¹ becomes basically meaningless. In TSI, it is argued by Flood and Jackson that the theoretical *complementarist* context, namely the Jackson’s and Key’s (1991) *System of Systems Methodologies (SoSM)* [elaborated in section 2.3.3.1. -see diagrams 2.-11., and 2.-12.] overcomes the problem of *methodological incommensurability*.

Theoretical commensurability is based on Habermas’s categorisation of the origins of knowledge on the basis of the quasi-transcendental philosophy of the three types of humans’ knowledge-constitutive interests. Habermas’s knowledge-constitutive interests are used as the necessary meta-level of reasoning for theoretical commensurability. Each theoretical approach is regarded as the expression of pluralism originating from a particular human interest. Therefore theoretical commensurability is defined and theories are regarded as complementarist depending on their focus on a particular knowledge constitutive interest. Theoretical pluralism then is defined as “*concordant*” (Gregory, 1992, quoted in Midgley, 1995) in terms of a unifying meta-theory

²¹ “*Crisis* occurs, according to *Kuhn*, when the dominant paradigm in a field of study is confronted by apparent anomalies with which it cannot deal. If the anomalies persist, a number of potential alternative paradigms are likely to arise. A period of crisis will ensue as the competing paradigms battle for dominance....According to Kuhnian reasoning, a period of crisis comes to an end when one of the competing paradigms establishes itself as the new dominant paradigm and the practice of normal science resumes on this new basis” (Jackson, 1993).

but methodological pluralism is defined as "discordant, demanding, in our opinion, for the development of a meta-methodology as well and not a simple alignment or mixing of existing methodologies based on Flood and Jackson's System of Systems Methodologies or even Gregory's Critical Appreciation theory.

*First, she talks in terms of 'discordant pluralism' to differentiate her own understanding of methodological pluralism from that offered by Jackson (1987a) and Flood and Jackson (1991b). These authors view the various systems methodologies as 'concordant' in the sense that a meta-theory can be provided to make them appear complementary: the differences between the methodologies are only important in as much as they indicate what alignments should be made with the System of Systems Methodologies. In contrast, Gregory (1992, 1996) believes that the differences between the methodologies shouldn't be 'rationalised away' through the use of a meta-theoretical structure. She therefore wishes to preserve discord and learn from it. Gregory (1992, 1996) uses a metaphor, borrowed by Bernstein (1991) to explain her understanding of pluralism. This is the metaphor of 'constellation'. A constellation of methodologies, like a constellation of stars in the sky, is not ordered in a regular fashion, changes over time, and can be seen from many different angles. Each researcher can develop his or her own constellation of methodologies in discussion with others who likewise have their own constellations. There is no attempt to bring once-and-for-all theoretical unity to the constellation, except insofar as a 'snapshot' taken at a moment in time will reveal certain regularities of ordering that are visible because of the dominance of a temporary theoretical perspective. On its own, Gregory's vision of discordant pluralism might be difficult to differentiate from atheoretical pragmatism, where people pick a mix from the various methodologies without theoretical reflection. This is where the theory of **Critical Appreciation** comes in. The theory of Critical appreciation suggests that there are four dimensions of critical research practice: empirical-analytic (based on experiment and observation), historical-hermeneutic (two way communication with others), self-reflection (revealing ones own assumptions) and ideology-critique (revealing assumptions of the level of society).... Gregory (1992) argues that all four of these aspects should be built into research for it to be considered critical. Gregory (1992) makes it clear that the practice of mixing methods is at the heart of her approach: interventions must draw upon and mix different methods so that empirical-analytic study, historical-hermeneutic inquiry, self-reflection and ideology critique can all be included-no single method is currently able to offer adequate support to all four of these aspects of the critical research process. (Midgley, 1995, my underlining).*

A business system can be defined in terms of its economic, cybernetic, social, psychological, organisational, etc., aspects or perspectives by an economist, a cybernetician, a sociologist, a psychologist, etc.. These theoretical frameworks (paradigms) appear concordant in the sense that they can be combined together into a new paradigm that has as its central theme human emancipation from the negative side of ideology. But in

order to explain our position further we will quote the passage from Flood's book "Solving Problem Solving" referring to the birth of the idea of complementarity.

"Science is a knowledge-generating process. Knowledge can be generated by reasoning between parallel cases, i.e., through analogies. Physics a scientific discipline that has used analogies to make sense of particular phenomena. One phenomenon understood in this way is light. At one time light was a little-understood phenomenon. Physicists brought forward an explanation of light by drawing parallels between the behaviour of light and the behaviour of water waves. From this parallel came the wave theory of light. This parallel, however, provided only a partial explanation. Some properties of light do not conform to the theory of water waves. A second parallel was drawn between light and particles. Some of the behaviour of light not explained by the wave theory was explained by the moving particle theory. So two analogies had been drawn. The first analogy reasoned that light behaved like moving particles. Niels Bohr called this dual analogy 'the wavicle theory of light' and from this was born the idea of complementarity between theories." (Flood, 1995, my underlining).

The meta-theoretical level is necessary not only in terms of unifying under a systemic framework the different paradigms but in terms of dealing with an emergent organisational attribute that holds the organisation together in the capitalist society; power itself. It is true that we can not transcend totally our own paradigms ["paradigm problem" (Gregory, 1992)] but we can certainly learn from other paradigms in an everlasting process of trying to transcend them. Training and self-reflection are the keys to the paradigm problem (Midgley, 1995).

"Gregory's (1992) thinking on the paradigm problem is very similar to Midgley's (1989a,b, 1992b), only she has taken it one stage further. Like Midgley, Gregory insists that it is impossible to transcend the paradigm debate: each attempt to do so must inevitably involve researchers in making new paradigmatic assumptions. However, she moves our thinking on by examining the nature of communication between people based in different paradigms. Every time one person listens to another whose thinking is based in another paradigm, he can only interpret what they are saying through his or her own terms of reference. However, this does not mean communication is impossible-just that care is needed not to be either dismissive or to think that full understanding has been achieved. If care is taken to appreciate the other, in the knowledge that full understanding in the other's own terms is impossible, then ones own learning can be enhanced. This way of thinking moves the debate on because it allows us to see paradigms in relation to the perspectives of individuals. Learning through appreciating the viewpoints of others can feed back (via communication with one's peers) to transform one's own paradigm." (Midgley, 1995, my underlining).

The alignment of the methodologies, elaborated in the previous sections on the basis of Habermas's knowledge-constitutive interests, aims at learning from other paradigms and not to mixing them ultimately, at least in the way TSI does, for the analysis and the definition of the organisational systemic purpose. The idea of "*inter-theoretical partitioning*" (Flood, 1990) allows for the "*sectioning*" and the "*recombination*" of two or more theories to be "*recombined*", while the idea of *intra-theoretical* partitioning is accepted only for the theoretical and not the methodological level. In the theoretical level *intra-theoretical* partitioning allows for the use of just part of a theory where separate schools of thought are recognised, in particular contexts. In the methodological level *intra* partitioning the use of parts of a methodology in separation is not allowed according to Flood (1990). But theoretical inter and intra partitioning should be allowed because the interfaces between the different theoretical perspectives have to be developed. In addition, inter and intra partitioning is allowed in methodological terms as well. In the development of a meta-methodology to match a meta-theory the methodologies aligned for learning are regarded as the elements used for the new methodology's construction. This implies that a meta-methodology should not be built on the assumption of being a meta-methodology used in the sense for choosing other methodologies but rather on the assumption of being a new methodology.

In addition, central in the critical systems thinking field is the concept of Habermas's "*ideal speech situation*". The model of *ideal speech* demands for *discourse* situations where the participants entering a *discourse* situation, are free from the influence of power, coercion, or false consciousness. In an *ideal speech* situation the exchange and the validity of value arguments, is assessed and facilitated by the *lifeworld* and the *three world* concepts (Habermas, 1987) but it does not being constrained by it. This is contrary to the SSM philosophy where the lifeworld is regarded as the ultimate constrains of an ideal speech situation. The lifeworld is defined by Habermas (1984) as the *knowledge-background of unquestioned a priori presuppositions* upon which speech acts, and *communicative action* becomes meaningful. Habermas (1987) defines lifeworld as follows:

"...the cultural interpretative systems or worldviews that reflect the background knowledge of social groups and guarantee an interconnection among the multiplicity of their action orientations" (Habermas, 1984).

On the basis of the lifeworld the participants of a discourse situation can infer the validity of their claims, based on the "*objective world*" of facts, the "*inter-subjective world*" of normative rightness and the "*subjective world*" of sincerity. The three worlds become the subject matter of science, sociology, and psychology respectively. The rationalisation of the lifeworld is subject to "*normative ascribed agreement*" versus *communicatively achieved understanding*. In other words the more we rely on cultural historical traditions (being a component of the lifeworld) to infer the validity of our value arguments the less we need to enter a discourse situation having as subject to make explicit the lifeworld's presuppositions. In this situation the chances of critique are lessened dramatically.

Finally, central to the critical systems field is Freud's *psychoanalytic paradigm of neurosis healing*. It is regarded as emancipatory because its main focus is on liberating humans from hidden causes leading the subject into behaving in an "irrational" neurotic manner. The process of uncovering those hidden presuppositions is regarded as a *rationalisation* process from 'false' hidden presuppositions of behaviour. Habermas (1984) defines *psychoanalysis* as "*therapeutic critique*".

"Freud examined the relevant type of argumentation in his model of the therapeutic dialogue between analyst and patient. In the analytic dialogue the roles are asymmetrically distributed; the analyst and the patient do not behave like proponent and opponent. The presuppositions of discourse can be satisfied only after the therapy has been successful. I shall call the form of argumentation that serves to clarify systematic self-deception therapeutic critique." (Habermas, 1984, my underlining).

The mode of psychoanalysis as it is explicated by Habermas is not one of *adversarial debate* but *hermeneutic* at the beginning and *critical* at the end. In other words to use Flood's (1990) expression, the *psychoanalytic paradigm* aim is to "*Liberate and Critique*". The therapeutic approach's success lies in the attainment by the subject of self-knowledge in regard to the hidden causes of his behaviour. The analytic dialogue becomes *symmetrical* only when the patient acquires self-knowledge.

The psychoanalytic paradigm can be exported to the inquiry of social systems as well. It is expert-free, has a subjective orientation, and its focus is on uncovering the hidden forces which distort communication; it can be said that the psychoanalytic paradigm adheres to Churchman's philosophy regarding the use of the system concept for social enquiry. Basically the psychoanalytic paradigm is the only means for uncovering the stakeholders' false consciousness in a anti-positivist stance. Habermas, according to Ulrich, describes psychoanalysis as "emancipatory", or a "critically oriented science" (Ulrich, 1983). But it has to be noted at this point that Habermas reconstructs the Freudian theory of drives through a linguistic reinterpretation of the Freudian psychoanalytic paradigm. In Freudian psychoanalysis the reality and independence of the body drives make a claim upon man's psychic, according to the Freudian theory of drives (needs), but in Habermas's theory of communicative action the independence of drives becomes subject to *linguistic* interpretation through discourse practices. With this reconstruction Habermas overcomes the conflict between the Freudian *superego* (*external nature*) and the *id* (*internal nature*) an issue that was dealt with by the early *Frankfurt School* through either the *autonomy of the ego* or the *autonomy of the id*.

"Id psychology, in a manner analogous to Hobbes, begins with an assumption of constitutional unsociability and then unsuccessfully tries to account for the facts of society. Social norms must be brought in from the outside, 'grafted up on the genetically asocial individual by discipline and socialisation.' Ego psychology, on the other hand, explains the 'individual's social development by tracing the unfolding of the genetically social character of the human individual

in the course of his encounter with the social environment at each phase of epigenesis.' While Adorno's and Marcuse's wholesale appropriation of id psychology allowed them to dramatise the conflict between the individual and society, and demonstrate the depth psychological consequences of social oppression in a way that was unique in Marxism, it also prevented them from conceiving the condition of the possibility of a free society. This forced them to posit an eschatological rupture as the only means of emancipation. The ego psychologists have no difficulty in accounting for the possibilities of socialisation. The danger with their position lies in the opposite direction, namely, of becoming too harmonistic. What was an account of human genetic sociability at the level of theory often became conform and a disregard for the social origins of psychopathology at the level of practice." (Whitebook, 1985).

Habermas dissolves the problematic of ethics with the introduction of *communicative ethics* where the demands of the *inner nature*, namely the *drives*, along with the moral justification of social norms (the *external nature*) are inserted into the *communicative structure of action* thus becoming subject to *rational interpretation and transformation*.

Habermas's reconstruction of Freud gives rise to the redefinition of the concept of the *unconscious* from being the private inaccessible part of the mind where primitive impulses reside to the realm of suppressed *discourses*. In *discursive psychological* terms the *unconscious* is the realm of the *unnamed aspects of subjectivity* that end up in this way because certain *discourses* are suppressed within a particular social context (Harre and Gillett, 1994).

Therefore, the role of the analyst is to facilitate the everlasting process of reconstructing those discursive contexts and the processes that produce them in which the stakeholders participated in the definition of what "can and cannot be said" (Harre and Gillett, 1994).

"When we want to unlock particular capacities that are realised in the brain, we need to return the person to something similar to the discursive contexts in which the relevant meaning and significations were developed or appreciated. When we do this, the behaviour that tends to be available will comprise responses and structured activity associated with that discourse. These will be understood as we analyse the orientation of the subject to that context and the multiplicity of significations intrinsic to it. Our success in adaptation will not therefore be built on our biological adaptation to the physical objects present in a situation but on our cultural and social history of investing certain things with meaning [namely purpose]." (Harre and Gillett, 1994).

In this thesis the organisational ideological process produces the business system's purpose(s) by producing the discursive contexts that suppress particular discourses. The unmasking of that process and the identification of its inputs and outputs become the main task of the analyst who is charged with the responsibility to facilitate

and help the stakeholders efforts towards that direction. Therefore, in regard to epistemology, Marx's critique of the political economy which is viewed by Habermas as "*an exemplar for critical social science in the area of economics*" (Habermas, 1987) and in this thesis is regarded as adequate for the analysis of the ideological process workings. Thomas and Lockett (1979) argue that Marxists themselves have misconceived the Marxist epistemology. The claim that with Marxism we have identified the general laws of social development is misconceived because it amounts to a positivist and a functional argument. The major contribution of the Marxist epistemology lies in the unification of theory and practice which Marx called "*praxis*". Marx was the first to realise that the roots of possible knowledge do not lie only within the self-reflective subject but in the practice and in the history of social life itself. In other words he made it absolutely clear that the separation between means and ends does not exist. Ulrich summarises Marx's epistemological approach as follows:

"The decisive dialectic for him [Marx] was therefore not in the self-reflective process of the knowing subject (who thereby becomes its own subject) but rather in the process of work, in which human subjectivity - the realm of the 'spiritual' - and the objective forces of nature and human society - the realm of the 'material' - meet and coproduce human consciousness, interest and knowledge" (Ulrich, 1983).

In other words theoretical reason concerned with the "*what is*" is inseparable from the practical reason concerned with the "*what ought to be done*". Or better the *practical interest* can not be explained in its own terms but in reference to the technical interest and vice-versa. The critical reconstruction of material conditions in a particular point in time will lead to the *critical* reconstruction of the corresponding human consciousness, and knowledge. Anthropologist Bastide (1973), quoted in Thomas and Lockett (1979) sums up the difference between the Marxist epistemology and the scientific one as follows:

"The truth is that which our revolutionary action verifies.....theoretical knowledge develops at the same time as practical knowledge.....Human intervention in social reality is both action and science at once, since it permits us at the same time to change the world, and, in changing, to discover it." (Bastide, 1973, my underlining).

Therefore the Marxist epistemological paradigm mainly concentrates on the *lifeworld's* economic aspect only. It becomes complete only if it is supplemented with the Habermas critique of "*distorted communication*" that attributes *false consciousness to distorted communication*. Midgley (1997) describes Habermas position as follows:

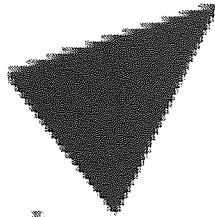
"Habermas maintains that the knowledge held by people in powerless positions come to be 'distorted' so that privileged position of the powerful is effectively never challenged. This is similar to Marx's notion of 'false consciousness'. However, Habermas sees knowledge as deriving from communication because knowledges are expressed in linguistic form (linguistic in

the widest sense, including communicative, nonverbal actions). He therefore talks in terms of 'distorted communication' rather than distorted knowledge. The notion of 'distorted communication' emphasises the social creation of meaning." (Midgley, 1997).

In this thesis we develop the complementary position between Habermas's *communicative action* with *historical materialism* because *distortion in communication* is performed in the name of material interests. This *complementarist* approach leads us to the definition of power in critical terms. Power can be defined as the possession or control over material or informational organisational assets.

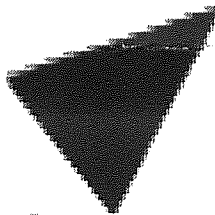
2.3.3.1. The System of Systems Methodologies

The System of Systems Methodologies is based on two dimensions, the *system* and the *participants*. The *system* dimension refers to the *complexity* of the system assumed by each methodology and the *participants* dimension refers to the *relationship between the participants*. A *complex system* is defined as basically an *open-type* system with a large number of elements, with many interactions between them. A *simple system* is basically a *closed-type* system (it does not import or export anything to its environment) with a small number of elements with few interactions. In terms of the *relationship of the participants* three metaphors are considered, the *unitary*, the *pluralist* and the *coercive*. In the *unitary* metaphor the *participation* of the system's elements [humans] is *unproblematic*, characterised by *co-ordination*, *synergy* and purposeful behaviour towards a common purpose. In the *pluralist* metaphor disagreement exists between the elements regarding means and ends: decision-making is participative and usually leads to compromise. In the *coercive* metaphor there is conflict between the elements of the system in regard to the definition of the system's means and ends, and agreement becomes possible through the exercise of the exercise of power by some elements upon others. The combination of the system complexity dimension with the relationship between the participants dimension yields a six-celled matrix made up of the following combinations: "*simple-unitary, complex-unitary, simple-pluralist, complex-pluralist, simple-coercive and complex-coercive*" (Flood and Jackson, 1991).



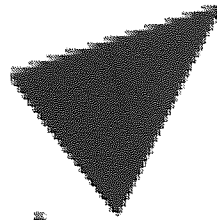
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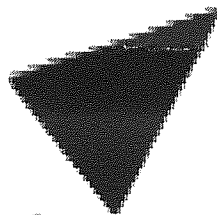
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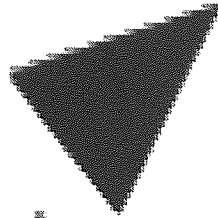
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The SoSM was used as the basis of their complementarist approach in the early TSI but it failed due to the fact that founded on the objectivist illusion of the clear-cut methodological categorisation according to its stated and not perceived, by a particular stakeholder, purpose. The SoSM objectivist approach and objectivist use is discussed in section 2.3.3.3.

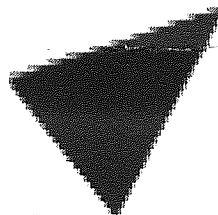
2.3.3.2. Critical Systems Heuristics

Ulrich's (1983) *Critical Systems Heuristics* (see diagram 2.-13.) is regarded as the first methodology of a purely emancipatory interest because it admits that *problematic areas* might be coercive. Ulrich defines as *critical* the effort to make *transparent* the normative presuppositions entering social action and social planning. *Critical* is not the process of evaluating social action or social planning on the basis of *normative rightness* but is the process of making *transparent* the hidden presuppositions flowing into social action. The word *heuristics* is used in an effort to avoid *hypostatisation* in regard to any *a priori* unquestioned statements of truth embedded in any critical theory. The systems concept is used in the *anti-functionalist* sense as the incomprehensible totality of conditions entering social action and social planning. Ulrich's main focus is to provide social planners with a set of *critical heuristics* used in an ever-lasting process of enquiry guarding against *deceptions* of objectivity. Ulrich's methodology defines a number of categories in regard to the effort of designing a social system, or in other words defining its boundary. The two major categories are those "*involved in the planning*" and those which are "*affected*" by planning. These categories refer to social roles. The second set of categories, which the first two are broken into, are categories with *role-specific* concerns. These are in regard to the *involved in the planning* the "*sources of motivation*", the "*sources of control*" and the "*sources of expertise and implementation of (S) [system]*". In regard to the *affected* there is one category defined as "*sources of legitimisation of (S)*". The last four sub-categories are broken into further sub-categories regarding the system in focus boundary judgements in question. In regard to the sources of motivation Ulrich defines the "*Client*" being the *basic* category, having as *auxiliary* categories the "*purpose*" and the "*measure of improvement*". In regard to the *sources of control* he defines as *basic* category the "*decision maker*", and as *auxiliary* the "*components*" and the "*environment*". In regard to the *sources of expertise* he defines as *basic* category the "*planner*" and as *auxiliary* the "*expertise*" and the "*guarantor*". In regard to the *affected* - sources of legitimisation - he defines as *basic* category the "*witness*" and as *auxiliary* categories the "*emancipation*" and the "*Weltanschauung*".



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Ulrich uses 12 questions in the “is” and 12 questions in the “ought” mode respectively in order to make transparent the normative content of systems design. These are the following in the “is” mode:

- 1) *Who is the actual client of S's [system's] design, i.e. who belongs to the group of those whose purposes (interests and values) are served, in distinction to those who do not benefit but may have to bear the costs or other disadvantages?*
- 2) *What is the actual purpose of S's design, as being measured not in terms of declared intentions of the involved but in terms of the actual consequences?*
- 3) *What, judged by the design's consequences, is its built in measure of success?*
- 4) *Who is actually the decision taker, i.e. who can actually change the measure of success?*
- 5) *What conditions of successful planning and implementation of S are really controlled by the decision taker?*
- 6) *What conditions are not controlled by the decision taker, i.e. what represents 'environment' to him?*
- 7) *Who is actually is involved as a planner?*
- 8) *Who is involved as 'expert', of what kind is his expertise, what role does he actually play?*
- 9) *Where do the involved see the guarantee that their planning will be successful? (E.g. In the theoretical competence of experts? In the consensus among experts? In the validity of empirical data? In the relevance of mathematical models of computer simulations? In political support on the part of interest groups? In the experience and intuition of the involved? etc.) Can these assumed guarantors secure the design's success, or are they false guarantors?*
- 10) *Who among the involved witnesses represents the concerns of the affected? Who is or may be affected without being involved?*
- 11) *Are the affected given an opportunity to emancipate themselves from the experts and to take their fate into their own hands, or do the experts determine what is right for them, what quality of life means to them, etc.? That is to say, are the affected used merely as means for the purposes of others, or are they also treated as 'ends' in themselves' (Kant), as belonging to the client?*
- 12) *What world view is actually underlying the design of S? Is it the world view of (some of) the involved or of (some of) the affected?” (Ulrich, 1983).*

The ‘ought’ mode of the 12 critical heuristics questions is rather similar regarding the questions in the ‘is’ mode. Basically, the ‘is’ in the above questions is substituted by the ‘ought’. The similarity with Checkland’s CATWOE is apparent. The critical heuristics questions seem to answer a “what?” or a “what it should be?” and not a “why?” or “why it should be?” question. Basically there seem to be questions, the employment of which will be most likely to invoke normative answers. It seems that the focus on the emancipatory interest is served by focusing on the practical interest with no specific reference to the technical interest. Ulrich with his heuristic questions aims to make use of Kant’s “polemical employment of boundary judgements”. The idea of the polemical boundary judgement lays in the fact that the “experts” proposals employ unquestioned boundary

judgements which in most cases are dogmatic and in the phase of the employment of the 12 critical heuristic questions will be hard to justify. This idea bypasses totally the problem of false consciousness (the negative side of ideology) that in many cases is deliberately engineered by the experts, using their expertise for this very reason in the first place. For example in the case where advertising is building-up false consciousness the use of the polemical argument will be of no use. Schiffman and Kanuk (1983) argue that studies in the United States of blindfolded beer-tests among people with strong loyalty showed that the subjects could not distinguish their favoured brand among others.

“Consumers like to believe that they base their product quality evaluations on intrinsic cues, because they can justify resulting product dimensions (either positive or negative) on the basis of ‘rational’ or ‘objective’ product choice. More often than not, however, the physical characteristic they select to judge quality has no intrinsic relation to the product’s quality. Thus, though many consumers claim they buy a brand because of its superior taste, they are often unable to identify that brand in blind tests. In one study, Budweiser-loyal beer drinkers were asked to sample two beers: first Budweiser, and then a second brand of beer which they had professed to dislike. The subjects could not bring themselves to finish the second beer because of its ‘shunky’ and ‘terrible’ taste. In actuality, both samples of beer were Budweiser. In this situation, perception of taste was clearly based on the product images, not on actual taste differences. In another study, housewives were enthusiastic about the Coke but complained about the bitter aftertaste, many consumers simply attributed that characteristic to all diet sodas and thus ‘tasted’ (perceived) what they expected to taste.” (Schiffman and Kanuk, 1983).

Habermas argues that communicatively achieved understanding is inversely proportional to normative ascribed agreement. This implies that in the case of coercion or engineered false-consciousness the process of critical systems heuristics would yield in the best case a new agreement failing within the limits of the dominant rationality.

It is interesting to note at this point that Midgley (1997) argues that CSH cannot deal with *coercion* because *coercion* by definition implies *closure of debate*, the very method upon which CSH relies to resolve coercive situations in the first place. Midgley (1997) argues that CSH can be used only when communication is possible and can be conducted only with rational argumentation.

Finally, CSH does not refer to the material origins of the normative environment.

2.3.3.3. Total Systems Intervention

Total Systems Intervention (TSI) (see diagram 2.-14.) is based on four principles namely those of “*being systemic, achieving participation, being reflective, and striving for human freedom*” (Flood, 1995). In regard to being reflective *TSI* identifies two *reflective* principles the following:

- “*To reflect upon the relationship between different organisational interests - demonstrating where there is dominance over people who, as a result, cannot meaningfully participate.*
- (ii) *To reflect upon the dominance of favoured approaches to intervention - demonstrating where the use of one (or a few) methods dominate, leaving ‘problem solvers’ with limitations in their ability to tackle effectively the full range of technical and human issues.*” (Flood, 1995).

At this level of reasoning, in theoretical terms, every methodology is the expression of pluralism with strengths and weaknesses defined as relevant in the light of a particular problematic situation. The whole focus of the reflection is first of all to make the problem solvers aware of the limitations of their methodological approaches and their complementarity in terms of a higher level of reasoning. The meta-level of reasoning used for the identification of the different methodological approaches’ limitations refers to Jackson and Keys Systems of Systems methodologies (SoSM – discussed in section 2.3.3.1.).

TSI comprises three stages, as part of a continuous process with no predetermined start or end points. These are the “*creativity*”, the “*choice*” and the “*implementation*” stages.

In the *creativity* stage a *problematic area* is “*decontextualized*”, or in other words is examined from many angles (viewpoints) using tools such as *lateral thinking, brainstorming, nominal group*, etc. The problematic area is then “*contextualized*” where the problematic area is expressed using the *contextualization* method of the methodology chosen for the *decontextualizing* process. This process (of *decontextualisation* and *contextualisation*) is similar to SSM’s first two stages.

In the *choice* stage a suitable method is used to manage the issues surfaced in the *creativity* stage. Based on the SoSM the analyst will be able to choose in a complementarist manner one methodology depending on the purposes of the problem solving methods.

“*These main purposes have been identified :*

- (i) *designing effective and efficient processes and organisations, and how to implement them;*
- (ii) *debating human and technical issues arising in organisations and deciding what to do about them;*
- (iii) *disemprisoning people from dominating designs and dominating outcomes of debate*” (Flood, 1995).

Flood basically implies that a choice of a methodology will be made according to its focus in serving humans' knowledge constitutive interests.

Finally in the *implementation* stage the *problematic area* is 'attacked' and the feedback goes back to the *creativity* step.

TSI admits to an inherited internal weakness that can be identified in its inability to come to terms with complex-coercive relations because it does not employ in its 'portfolio' of methodologies a methodology of this sort. Flood and Jackson (1990) in their book "*Creative Problem Solving*" argue the following:

"...there is no systems methodology corresponding to complex-coercive problem contexts. Readers are invited to contribute such a methodology to the next edition of the book" (Flood, 1990).

It seems that basically no progress has been made in the above field since 1991. Flood (1994) in his book "*Beyond TQM*" argues the following:

"...that said, the inclusion of CSH in this book is crucial because it is the only management and systems science oriented approach that represents disemprisoning. Disemprisoning holds equal status in our theory for the practice of TQM alongside designing and debating" (Flood, 1994).

Finally Flood (1995) makes no reference to any progress in regard to the invention of a methodology which deals with *complex-coercive relationships*. A need for the development of such a methodology is made apparent then. But what would be the criteria for such a methodology? Flood (1990), quoting Jackson, argues that the criteria for a *complex-coercive* methodology should be the following:

"The systemic-coercive [complex-coercive] region additionally reflects issues of complexity so that, unlike the mechanical counterpart, the true sources of power of various participants is hidden. Jackson has noted that no systems methodology currently bases itself upon the assumptions that problem contexts are systemic and coercive. In Flood and Jackson (1991a) we project that a methodology based upon such assumption would have to consider: a) various sources of power in organisations, b) the organisation's culture the way this determines what changes are feasible and c) the mobilisation of bias in an organisation. Important metaphors reflecting issues of these regions and pointing out what should be tackled by useful methodologies for coercive are those of culture, politics, and prisons." (Flood, 1990, p.152-reference to a later paper).

The idea of deciding what methodology should be chosen for the *designing, debating and disemprisoning* purposes implies that the three purposes can be separated from each other into distinct stages focusing on one of the three knowledge constitutive interests. But in regard to the inquiry of *complex-coercive* relationships it seems impossible to separate these three steps. This type of separation though could amount to the separation between *means* and *ends* rejected in this thesis and rejected by Flood and Jackson as well. All three purposes (the designing, debating, disemprisoning) must be achieved at the same time, which implies that we need a framework capable of achieving all three purposes simultaneously and not a selection mechanism which is based on the superficial separation of human's knowledge constitutive interests. In an analysis effort where the focus is on boundary-judgement decisions the critical reflection of the organisation's systemic purpose, on the basis of the teleological paradigm aiming at disemprisoning people, will lead us to the examination of the organisation's ideological process. The critical examination of the ideological process will refer us to its inputs, namely to the material and informational interests identified on the organisation's structure and functions. Only then we will be in a position, according to the psychoanalytic paradigm (in the Habermasian sense) to disemprison people from dominating designs meaning giving them a chance on the basis of the self-knowledge they have acquired to design more effective organisational structures and functions which will enhance or guarantee human freedom. All the above mean that TSI's three stages are inseparable in regard to the complex-coercive metaphor and that the use of the methodologies that are designed outside the critical system thinking field when used in the separate stages, as is advocated by Flood, will only introduce reductionism. In addition it has to be noted that when the three stages of designing, debating, disemprisoning are conducted simultaneously under one framework then the stages of creativity, choice, and implementation coincide as well. Human consciousness, in Marxist terms, is produced when the forces of the spiritual (the subjective), meet the forces of the material namely nature and human society. This process is not performed in stages or steps or in a sequential manner. Human consciousness and perception is a *gestalt*, meaning that a methodology hoping to emancipate and disemprison people from *false ideas*, should be able to treat it as such and not dissect it into artificial made components in a way that fits existing methodological paradigms. The very production process of human consciousness makes the three knowledge-constitutive interests a gestalt as well. The practical and the emancipatory interests surface at the same time when the technical interest constitutes itself. Flood himself admits to the above problem of choosing a methodology for each step in the choice and implementation stages.

"The choice phase has presented the most demanding challenge of the three. The idea and principle of choice of method are clear enough. Difficulties seem to arise when translating these into a format suitable for practitioners....A number of extant 'problem solving' methods have been embedded in the process of TSI. The main difficulty this presents is satisfactorily including them in the process. After all, the methods were designed outside the philosophy, principles and process of TSI. In terms of TSI, each of them can be shown to push one of the three main purposes identified for methods (i.e. designing, debating, or disemprisoning). None of them, however, are found with all the three principles relating to only one of the three purposes."
(Flood, 1995).

From the above we can argue that TSI can not deal with complex-coercive relations, because the best methodology it can employ in this situation is CSH, which according to Flood and Jackson themselves is categorised as simple-coercive. In addition, we can assume that TSI's intended orientation advocating that even new methodologies will have to deal with each purpose separately is on the wrong direction in regard to the complex-coercive field. There is the danger that it would lead TSI towards "*methodological imperialism by subsumption*". Flood (1990) himself defines *imperialism by subsumption* as follows:

"In this approach a methodology is adopted that may call upon other methodologies at a specific point in order to act as submethodologies to deal with specific matters. For example if the 'what' has been decided upon through use of a mother methodology, a 'how' methodology may then be drawn into the process" (Flood, 1990).

One of the major differences between imperialism by subsumption and complementarism is found in the way that they treat theoretical commensurability. According to Flood (1990), theoretical commensurability is possible in *complementarism* "*at a level of meta-reasoning*". In imperialism by subsumption Flood argues that theoretical commensurability is not possible. Jackson (1993) argues the following in regard to the way imperialism is expressed:

"The usual expression of imperialism finds one theoretical position being favoured (and so the strategy is isolationist at the theoretical level), with the methodology most closely associated with that theoretical position also preferred. However, versions or bits of other methodologies corresponding to alternative theoretical standpoints are used in a manner that corresponds to the implicitly or explicitly favoured theoretical position. This obviously denatures them and turns them away from the purposes they are best able to serve." (Jackson, 1993).

Jackson goes on to argue that the imperialistic strategy is made apparent in the fields of soft systems thinking, organisational cybernetics, and the field of critical management science. Jackson attributes the imperialism of those approaches to their effort to distinguish themselves from the pre-existing traditional systems orthodoxy and to present themselves as advances in the field of systems science. Jackson defines SSM as imperialistic (1993). But by using Jackson's logic, which defines SSM as imperialistic, we can define TSI as imperialistic as well. The SoSM implicitly distinguishes between hard and soft approaches as well but at a higher level of resolution based on the systems' complexity and the participants relationships' dimensions. The partitioning as well as the positioning of each segment serving a specific problematic is the central theme of TSI. The meta-level of reasoning that TSI is supposed to offer in regard to theoretical commensurability does not differ from that of SSM, though it seems to be more elaborate. At this point it has to be made clear that the concept of complementarism in this thesis differs from that of Flood's and Jackson's in regard to the critical reflection of the business system's systemic purpose on the basis of the teleological concept.

Flood's and Jackson's definition implies that the problematic areas (diluted from power) are identified and they are reduced into improvised homomorphic models that do not represent reality but can only be dealt by a particular methodology, based on the evaluation of the situational factors surrounding the problematic area. This cannot be the case in the critical examination of the business purpose. The systemic purpose exhibits emergent attributes which are partially (to a degree) cybernetic, sociological, organisational, strategic, economic, informational, sociological, and psychological. At this level they are inseparable in the sense that they can not be examined through different methodological frameworks because this way we will lose sight of the most important aspect, that of their coupling together. In other words different methodological frameworks can explain them only to a degree. Their coupling together we call ideology; ideology as an enabling or a constraining process; ideology as a visible or an invisible process. We need a new framework, which will not only depict each aspect, but should depict homomorphically their coupling together as well. The variety exhibited at this level of recursion is enormous thus making it impossible to use isomorphism in our modelling. Their coupling together, at this level of recursion is the organisational ideology that produces the organisational power forms thus producing, in its negative form coercion and false consciousness. The systemic examination of the ideological process at this level of recursion will determine organisational perception standards, conflict, politics, strategic positioning, and information flow semantics and pragmatics. Jackson's argument that theoretical complementarism will lead to methodological, as this is expressed in TSI, can only be possible if our perception of the problematic area is 'objective' or power-proof. But Jackson (1993) himself argues strongly against the functionalist use of the SoSM.

"Banathy (1984, 1987, 1988) and Keys (1988), for example, both present entirely functionalist interpretations of the system of systems methodologies. They recommend proceeding by identifying the 'true' nature of dynamics of the real-world problem situation faced, so that it can be fitted into some abstract classification of system or problem contexts. Then, because they presume to know the appropriateness of different design methods (Banathy) or the respective strengths of different system methodologies (Keys) in terms of their abstract classifications, it becomes a relatively simple matter to choose the correct methodology for the real world problem they are confronting." (Jackson, 1993).

Jackson (1993) quotes Checkland arguing that no objective classification of the *problematic area* can be done because there is no real structure to the problematic area that can guide methodology choice. Checkland rates *SoSM* as of no practical use. Jackson argues the following in regard to the use of *SoSM*.

"The aim is not to establish the exact nature of some real-world problem context so that an appropriate problem-solving methodology can be used. Rather, it is to reveal the particular capabilities of available system approaches and to make explicit the consequences, because of the assumptions each makes about systems and the relationship between participants, of using any of these." (Jackson, 1993).

Therefore, in order to avoid the functionalist use of the SoSM in regard to problem solving, Jackson defines it as a methodological classification-tool that can be used in a similar way as Checkland's formal system model in the SSM's stage four, namely as a formal system of enquiry. This way the SoSM is de-coupled from TSI's creativity and choice stages. Therefore, since TSI does not employ a methodology for identifying complex-coercive relationships, problems or rather problematic areas of this sort can not be identified and subsequently dealt with. This implies that problematic areas in the choice stage have to be decomposed in order to achieve methodological complementarity between incommensurable methodological paradigms. In principle theoretical complementarity should lead to methodological complementarity due to the fact that every methodology is theory-laden. But theoretical complementarity in principle amounts to a new entity at a higher level of reasoning (recursion) implying that a methodology at this level of recursion should correspond to this level and not be the collection of methodologies, that are mixed together without even having developed the methodological interfaces necessary for their mixing in the first place. A mixing that in any case will correspond to a lower level than that of the systemic purpose. The approach of methodological complementarity then in TSI is flawed, and it invites reductionist and functionalist interpretations of the SoSM. In the case of complex-coercive relationships TSI does exactly that (reductionist), by using CSH which it regards as inferior for this job. It is like diagnosing very serious cancer and prescribing the use of radiotherapy, or chemotherapy, or both of them together without effect and possibly killing a lot of healthy cells in the process. The failure of the standard methodology in the fight of serious cancer lies in the fact that the mixing of an X number of treatments (methods/methodologies) itself lies at a lower level than the level of recursion of the illness itself. It is made apparent that we need a new methodology to depict homomorphically the complementarity of the systemic purpose thus depicting its emergent properties at this level of recursion. One might argue that real life examples such as Ormerod's (1995) excellent work in mixing a number of methodologies, regarding Sainsbury's strategy formation, prove that methodological complementarity works. The answer to this argument is that Ormerod's effort was indeed successful in its contextual framework. His aim was not to deal with complex-coercive relationships or the phenomenon of organisational power. Ormerod's methodology can be regarded as "Interpretive" in terms of Burrell's and Morgan's' grid or in terms of the SoSM it can be regarded as a complex-pluralistic methodology.

Midgley (1995) argues that the use of the SoSM was finally dropped by Flood. In Flood's latest version of TSI, which Midgley calls *TSI(2)* (see diagram 2.-14.), SoSM is dropped because the framework was restrictive in regard to other uses of the methodologies, despite those specifically defined by the SoSM. Midgley concentrates his critique on the fact that *TSI(1)* (the first TSI based on the SoSM) did not actually allow the analyst to perform any mixing of the methods/methodologies but forced the analyst to align each method to a specific predefined problem context. He goes on to argue that *TSI(2)* encourages the mixing of methods without the use of SoSM.

"In summary, TSI(2) is built around the concepts of creativity, choice and implementation, but unlike TSI(1) it specifically encourages the practice of mixing methods. Furthermore, it gives the

researcher the opportunity to develop his or her own pluralist framework and tool-kit of methods in response to local need. It also encourages reflection on the adequacy of its own process. TSI(2) is undermined by the theory of 'liberate and critique' which suggests that some forms of knowledge dominate others. Hence, there is a need to liberate suppressed knowledges (through creative exploration) before critiquing those knowledges in order to move towards the choice and implementation of appropriate methods. Of course, the twist in TSI(2) is that, in offering a meta-methodology to promote methodological pluralism, it inevitably embodies assumptions that set it against other methodological approaches which disallow pluralism. It therefore embraces the irony of 'paradigm (in)commensurability'. (Midgley, 1995, my underlining).

Therefore one can argue that according to Flood's original definition of complementarity no methodological commensurability occurs. Therefore one can argue that the production of a meta-methodology should not be directed towards providing a framework for mixing existing methodologies but towards producing new methodologies. The production of new methodologies will deal with the power/coercion/false consciousness problematic, based on theoretical complementarity, and not being a 'slave' to the methodological one (as is the case in TSI) that according to Midgley is flawed by definition. It seems that TSI's complementarity is methodologically driven rather than theoretically. This is made obvious by the contradictions identified in TSI(2)'s definition of "problem", and the "four key dimensions of organisation" with TSI's mixing practice (of methodologies). Flood (1995) defines problematic as "[the] interacting issues to be managed" originating from the organisation's human and technical activities that we only can get to know by examining the organisation's "four key dimensions". Flood defines the four organisational dimensions as follows:

- Organisational processes - flows, and controls over flows.
 - Organisational design - functions, their organisation, co-ordination and control.
 - Organisational culture - mediation of behaviour in terms of people's relationship to social rules and practices.
 - Organisational politics - power and potency to influence the flow of events.
- Unless all four key dimensions of organisation are taken into account, i.e., a whole system view is developed, then problem solving is bound to be ineffective. (Flood, 1995, my underlining).

In addition Flood defines organisational problems as follows:

"For TSI, problem solving actually means getting to know about and then managing interacting issues as opposed to solving identifiable problems. Problems arise from the interaction of technical and human activities, how they are co-ordinated and mediated, interaction of organisational activities with other factors, organisational mission, organisational design and management style, people's interpretations of these and how people choose to exert the power

that they hold. Problem solving is a particular type of human activity that by definition is also a part of organisational activities. Organisation, then, can be understood as a complex of interacting activities and problem solving as a continuous process of managing them. Problem solving is a part of the problem to be dealt with." (Flood, 1995, my underlining).

In the above statements Flood makes explicit that a *critical systems* methodology should focus on the interaction of the organisational key dimensions and its corresponding problematic and not on single organisational aspects. In addition one should take into consideration the fact that in the organisational key dimensions interaction process, the above key dimensions participate in the development of the problematic area to a certain degree. This comes in clear contradiction with the simple mixing of methodologies which according to Flood focus on aspects and not on the interaction of the key dimensions. In addition this contradiction is made more apparent even if we take into consideration the fact that TSI does not offer a theoretical insight, besides acknowledging the existence, regarding the interaction of the key organisational dimensions in terms of the power/coercion and false consciousness problematic. The lack of this complementarist theoretical background leads to the simple mixing (in a linear sense) of methodologies that it is characterised by the apparent lack of interfaces between the methodologies used for explaining each dimension separately. Flood tries to overcome this problem by introducing the concept of "*the oblique*" method of using a methodology as follows:

"There is an extremely important point that must be recorded here which adds an extra dimension to problem solving with TSI. With careful handling, methods can be used obliquely to achieve purposes that are not their immediate or given purpose. An example is the use of effective organisational design to address coercion. What is happening when your problem is such a case is more complex than so far explained. The method used has an immediate and given purpose to find a solution to effective organisational design. The oblique purpose which is really the whole point of the exercise is to ensure that people are not coerced. So, the way the method is used is with an oblique purpose in mind. This can be true of any method." (Flood, 1995).

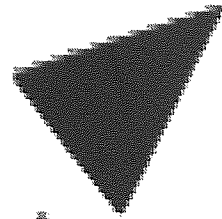
From the above we can argue that the oblique method addresses the problem of positivism introduced in TSI(1) where each method was defined as having a clear cut purpose and usage within the TSI framework but it does not address the problem of the interacting issues (problems) to be managed at the interaction level. The example of the use of the oblique method given by Flood above cannot be regarded as a complete solution. Though the stated purpose regarding, the use of the methodology has been changed to address the emancipation problematic, in the above example, that change does not provide us still with a solution to the interacting issues problematic. It still does not address the interacting issues at the level of the organisational key dimensions but it remains rather reductionist. Even if we accept the argument that the method was used to emancipate, in terms of the organisational design, it does not tell us how the method addresses or should address, in its oblique use, the problematic of the other three interacting key issues: the cultural, the information flow, and the

organisational politics. Therefore, according to Flood himself, the above example can be regarded as ineffective problem solving because unless all four key dimensions of the organisation are taken into account, i.e., whole system view is developed, then the problem solving effort itself is bound to be ineffective.

Therefore, we can argue that we have to strive for producing a meta-methodology managing interacting issues at the level of interaction and not at any lower levels. Since we can not escape the problem of *paradigm (in)commensurability* we should make our paradigm bias explicit in order to invite specific criticism that will provide us with the ability to gain self-knowledge and possibly 'get-out' of a particular paradigm to possibly a better one as Popper (1970) argues:

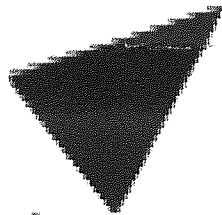
"I do admit that at any moment we are prisoners caught in the framework of our theories; our expectations; our past experiences; our language. But we are prisoners in a Pickwickian sense; if we try we can break out of our frameworks at any time. Admittedly, we shall find ourselves again in a framework, but it will be a better and roomier one; and we can at any moment break out of it again." (Popper, 1970, taken from Hassard, 1995).

In addition, since we cannot produce a meta-theory that will encourage methodological pluralism without disallowing it at the same time, then we should try to produce a meta-methodology that would be based on the existing methodologies' stock of knowledge (which we acquire up to a point through learning) but would differ from the existing ones (though it would have a lot of similarities). One should consider the possibility that the possibilities of methodology mixing could be limited in regard to addressing the power/coercion/false consciousness problematic especially for methodologies that were not designed to do this job, at least in the beginning. One should consider the possibility that one's effort to build a plane out of the parts of a car might not be possible or futile at the end.



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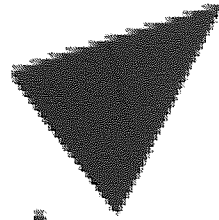


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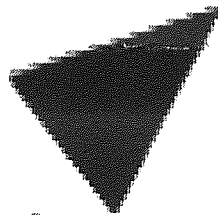
The latest development regarding TSI comes from Wilby (1996) who introduces the *critical review mode* of TSI a version that rather resembles in its philosophical assumptions TSI(1). In Wilby's version the so-called *critical review mode* is complemented by the *problem solving mode* and the *critical reflection mode* (see diagram 2. -15.). In the *critical review mode* a methodology is assessed based on TSI's three stages [Wilby calls them phases] namely *creativity-choice* and *implementation*. The three stages are employed in the *problem-solving mode* and in the *critical reflection mode* while the whole process is embedded into an outer-loop constituted by the three stages themselves. In the *problem solving mode* a practitioner chooses a methodology by matching a methodology's given purpose, as it is stated by the methodology or it is inferred from the use of the SoSM, with the perceived problem situation while in the *critical-reflection mode* he/she reflects critically on the outcome of the *problem-solving mode*:

"The critical review mode, as it currently stands, critically assesses methods that may be used in the problem-solving mode of TSI. This critical assessment is done by drawing upon the three-phase 'creativity - choice -implementation'" cycle as detailed in Solving Problem Solving (Flood, 1995c). It should also be noted that while the information surfaced in this mode may be agreed among researchers and participants, its precise interpretation remains a subjective task dependent on both the individual's biases and the context of the situation the individual is in at that time. The interpretation of any generated information is therefore open to both the internal limits of the individual in terms of skill, knowledge, and biases and the external limitations of the influences of context and physical situation on the individual. These concerns require attention at all steps, both in the critical review mode and in the overall TSI meta-methodology. In the problem-solving mode the phases of creativity, choice, and implementation are used creatively to surface core issues about the problem situation, choose the methodology(ies) best suited for managing those issues. Methodologies are placed in TSI's system of methods following their review in the critical review mode. The methodologies available for use in the problem solving mode are chosen from this system of methods according to the match (determined by the practitioner) between a methodology's given purpose and guidelines and the requirements of the problem situation. The third mode is the critical reflection mode, which reflects on the outcome and the adequacy of the implementation made in the problem-solving mode. This model also uses the three phases of creativity, choice, and implementation. Creativity is used to surface information about the issues arising from the implementation of a methodology, choice is used to decide the use of this information, and implementation in the critical reflection mode causes changes to be made according to the decisions made in the choice phase of the critical review mode. At each phase, the critical reflection mode asks whether or not the most appropriate method was chosen for implementation and whether or not the outcome was of benefit to the individual involved in the situation." (Wilby, 1996).



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Wilby argues that the *critical review mode* can be grouped into three subgroups the *understanding/creativity*, the *categorising/choice* and the *analysis/implementation* subgroups (see diagram 2.-16) which are comprised of a number of steps the following:

“Subgroup 1: Creativity/Understanding

Step 1 Details the candidate methodology’s philosophy, principles, methodological practice, and process

Step 2 Critiques the candidate methodology in terms of how its theory, methodology, utility and ideology address the technical, practical, and emancipatory knowledge-constitutive interests (Habermas, 1972) of the situation and its participants

Subgroup 2: Choice/categorising

Step 3 Evaluates which of the three phases, creativity, choice, and/or implementation, the candidate methodology contributes to using the three phases themselves as the process for evaluation

Step 4 Asks how the candidate methodology creates a vision of the organisational-enterprise ideal (as described later in this paper) while also tackling the four key dimensions of organisation: efficient design, effective organisation, culture, and politics (the ‘How?’, ‘What?’ and ‘Why?’ questions)

Step 5 What meaning, if any, does this candidate methodology give to these four key principles of TSI: being systemic, being reflective, enhancing emancipation, and encouraging meaningful participation? (realising that each candidate methodology will answer these questions in different ways and using their own terms of reference)

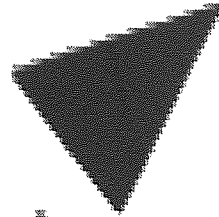
Subgroup 3: Implementation/analysis

Step 6 Asks, How does the information gathered in Steps 1 to 5 combine to present a critique of the candidate methodology? How does this analysis enhance TSI, and how does the information gathered enhance the candidate methodology itself? Finally, how does this critique enhance our understanding of the system of methods, and how is the system of methods itself enhanced by this critique?

In step 6 there is an accumulation of knowledge about a candidate methodology which is used to answer the questions detailed in this step. In addition, at this step there are also final questions about the methodology’s ability to work instead of, or with, other methodologies which are already a part of the system of methods.” (Wilby, 1996, my underlining).

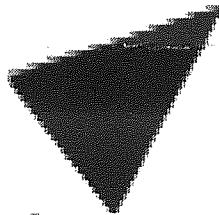
The fact that Wilby breaks down each stage [*phase*] into more creativity, choice and implementation *phases* and into *steps* as well does not overcome the problem of linearity and reductionism (explained above) exhibited by the overall meta-methodological framework (namely of the three initial stages acting as the outer-

loop). On the contrary it makes the whole TSI process more *systematic* (instead of *systemic*) while it increases its complexity as well. But the major issue that the critical review mode of TSI does not address is the problematic of the interfaces (as it was mentioned above) between the methodologies selected at different stages. Further the selection mechanism of the critical review mode of TSI is flawed because it is linear in case where two, or more, different methodologies compete to serve the same stage. As a matter of fact the whole choice mechanism is based on a reductionist binary and positivistic logic which comes into sharp contrast with the Kantian employment of the system concept, being central in the critical systems theory and practice.



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Wilby, quoting Flood [taken from Solving Problem Solving (Flood, 1995, p.85)], argues the following about the final criteria applied on a candidate methodology versus other competing methodologies before being used in the *problem-solving mode*.

“

Flood 1995 p.85

So far the review assumes that methods under review are dealt with separately from other methods. At some stage the method as categorised must be compared with and evaluated against other methods already incorporated in the Problem Solving Mode. The following three questions aid evaluation. Direct them at each phase in turn.” (Flood, 1995, p.85).....

Wilby 1996

At the end of step 6 the candidate methodology [OR METHOD] must specifically answer the following questions [taken from Solving Problem Solving (Flood, 1995c, p.85)] regarding the practicality of its use in the problem-solving mode:

Flood 1995, p.85, quoted by Wilby 1996

- *Is the method [OR METHODOLOGY] under review as categorised more likely in all circumstances to achieve the given purpose of the phase than any other method already incorporate? If yes, then it supersedes those methods.*
- *Is the method as categorised complementary with other methods given the purpose of the phase? If yes, then it is incorporated with those methods.*
- *Is there a method in place that will better achieve the given purpose of the phase in all circumstances? If yes, then the method under review is discarded.” (Wilby, 1996, my underlining).*

The criterion “in all circumstances”, which is repeated twice, implies that the *practitioner* has to comprehend the totality of conditions entering the choice decisions. This very demand on the practitioner though, opposes the very critical systems philosophy because it completely disregards the Kantian (critical) system concept and replaces it with an objectivist illusion. Flood (1995 – in the same book) himself recognises that there are conceptual traps regarding the perceived all circumstances but he prescribes for their resolution simple methods/methodologies that do not, according to Flood, deal with complex-coercive relationships.

“Conceptual traps capture all of us most of the time. They are built on sets of assumptions that we hold. In management these might be assumptions about what in all circumstances is the best leadership style, the best way to motivate staff or the best form of organisation. For problem solving assumptions might be held about which is in all circumstances the best problem solving method, the best problem solving style or the best type of consultant. These assumptions normally

are not challenged and tested. It is pretty certain that if such assumptions are not challenged or tested things will continue to be done in the same old way and so there will be impotence in efforts to introduce innovative changes and progress.” (Flood, 1995, my underlining).

Conceptual traps can lead, and most of the time do, to objectivist illusions! Flood, though he recognises the enormous danger that they pose in critical systems terms, he at the same time prescribes them in the methodology choice stage. This way the effort of the critical review mode of TSI and TSI in general to qualify as a critical systems methodology it cannot stand. In addition the methodology demands from the practitioner to be absolute in his decision regarding the choice of a method/methodology. One might wonder what happens when the practitioner’s perception about the methodology’s fit into a particular stage is *fuzzy*? Things become truly difficult for the TSI *practitioner* when his/her fuzzy interpretation of a methodology lead him/her to believe that not the whole methodology but parts of a methodology fit to a degree into a particular stage. Further, one might wonder how a TSI practitioner is to resolve a conflict between different degrees of methodological fit among competing methodologies or even parts of methodologies for a particular stage. It is not accidental that Flood himself takes such a *positivistic* turn (namely demanding from the practitioner to comprehend the totality of conditions in order to make the best choice between competing methodologies) in order to resolve the apparent paradox. In Flood’s complementarist model intramethodological partitioning, namely the practitioner’s ability to take out just part of a theory or methodology for use in particular contexts, is forbidden. The very fact that intramethodological partitioning is forbidden limits severely the usefulness of the TSI’s oblique mode and it inhibits the creation of new critical systems methodologies originating out of the fuzzy coupling between different parts of different methodologies. In other words one might argue that the critical review of TSI and TSI in general inhibits creative critical systems thinking. But even in case where we accept Flood’s prohibition regarding intramethodological partitioning as an axiom we are still faced with the interfacing problematic between different methodologies selected in different stages. Again, Flood in regard to this problematic takes a positivistic turn and disregards the fuzziness of the interfaces which might be resolved with a fuzzy mix of methodologies or a fuzzy mix of parts of methodologies.

If we turn to the very assumptions of the critical review mode we can identify lateral fuzziness at the heart of the assumptions which then is disregarded in a *positivistic* manner. Wilby defines the assumptions of the critical review mode as follows:

“ The critical review mode begins with two starting assumptions about any candidate methodology. The first assumption is that any candidate methodology advocates certain forms of creativity, choice, and implementation. The second assumption is that each candidate methodology may be defined in terms of four questions, which are in turn linked with the four key dimensions of an organisation. The first and second questions (of these four questions) are ‘how’ questions which address the first two key dimensions of an organisation, i.e., How is the efficient and effective design of a system (the design phase) to be achieved? The next question, ‘What?’

addresses the third key dimension, the cultural issues, and questions the options available for the design (the debate phase). The final question, 'Why?' addresses the fourth key dimension, the political issues, as to why a design should be accepted for implementation, who benefits from its implementation, and whether the process was the result of fair practice (Flood, 1995c)'' (Wilby, 1996, my underlining).

From the above quote then we can assume that Wilby argues implicitly, though correctly, that *any methodology can fit to a degree (degrees spread from 0% –does not fit– to 100% -fits totally-)* at the *creativity, choice, and implementation stages*. The same applies to the *how, what, and why* questions as well. This implies that the selection mechanism of the critical review mode, quoted above, and TSI's is generally flawed and simplistic on the basis of the assumptions that it is based upon.

Flood's and Romm's recent triple loop learning theory refers to the fuzziness of learning and subsequently to the fuzziness of methodological mixing. Flood and Romm appear to imply fuzziness at the level of methodological mixing as well. They argue that action should be based on a *single loop mainly, the dominant loop, and subsequently to a dominant methodology along with supporting ones*. But they provide the practitioner with no guidance as to what degree a methodology becomes dominant or supporting and how it interfaces with the other methodologies either in the role of the dominant or the supporting one. Flood and Romm (1996) define *triple loop learning* (vs. *single and double*) as follows:

“ There are three types of single loop learning each with a different centre of learning. There are specific questions asked respectively for each centre. These are, Are we doing things right? Are we doing the right things? [questions regarding means and ends selection] And Is rightness buttressed by mightiness and/or mightiness buttressed by rightness? [questions regarding human emancipation] But each question is fixed on the task-oriented quest to do its own thing right. The centres of learning are not reflexive. Or, put differently, attention becomes fixed on a single loop with overconfidence in its way of learning.

Double loop learning has two centres of learning, asking, Are we doing things right? and Are we doing the right things? There is a partial reflexivity. There is limited complementarism. There is a danger of slipping into imperialism or stumble-in-the-dark pragmatism.

Triple loop learning wants to establish tolerance between all three centres of learning and preserve the diversity within. It does this by bringing together the three questions from the three loops into one overall awareness: Are we doing things right? and Are we doing the right things? and Is rightness buttressed by mightiness and/or mightiness buttressed by rightness? Triple loop learning links into a triple loop the three centres of learning. Triple loop learners loop between these three questions, rather than settling overconfidently on any one. They commit to a way of

addressing perceived issues, but not before having taking into account the dilemmas involved in doing so. They take responsibility for decision made at decision points.” (Flood and Romm, 1996, my underlining).

In addition from the above Flood and Romm recognise the danger that the splitting or the sequential treatment of means and ends, that is identified above in the TSI, can lead to imperialism or pragmatism thus cancelling-out any critical systems examination of the/a problematic area. Flood and Romm go on to suggest, on the basis of the triple loop learning philosophy that amounts to the underlining philosophy of TSI(2), the following in regard to methodology mixing:

“We raised concern above that triple loop learners must be wary, not only of isolationism and imperialism, but also of pragmatism as manifested in electric attempts to mix and match approaches. But are triple loop learners averse to creating links between what are regarded as separable discursive arenas? We suggest the following. If action-options from any of these loops become linked, that is ‘combined’ in some way, triple loop learners have to remain aware that any synthesis or methodological and model options created is likely to be weighted [fuzziness implied] in some [fuzziness implied] favour. It is, we argue, preferable to be explicit that one is operating with some focus of priority (a How?-type, What?-type, or Why?-type agenda). Elements of methodological approaches associated with an alternative focus can still be invoked, but are then known to operate in a support role. The quality of choice (of priority) is thus open to further evaluation.” (Flood and Romm, 1996, my underlining).

From the above one might argue then that the complementarist philosophy promoted by Flood and Romm can not come to terms with the fuzziness of the real world though it implicitly recognises. In addition one might argue that we need a new critical systems methodology to deal with the above problematic and the problematic of organisational complex-coercive relationships.

2.4. Overall Conclusions

From the literature review we can draw two conclusions regarding the business systems’ purposefulness and the types of interventions undertaken in light of the business system’s purposefulness. These are the following:

a) Mintzberg’s analysis provided us with the necessary evidence about the dynamic nature of a business system’s purposeful behaviour corresponding to a process of power and politics between organisational *selfish* (*profit maximisers*) stakeholders aiming at controlling or influencing the organisation’s purpose towards their ends. The organisational purposeful behaviour, according to Mintzberg (1983) is the result of a power game in which various players, called influencers (stakeholders), seek to control the organisation’s decisions and actions. The organisation first comes into being when an initial group of influencers join together to pursue a common mission (purpose). On the way other influencers are subsequently attracted to the organisation as a

vehicle for satisfying some of their needs, namely their material and informational interests. Because the needs of the stakeholders vary, each tries to use his or her own levels of power – control over or possession of the organisation's material and informational assets- to direct the organisation's decisions and actions. How they succeed determines what configuration of organisational power emerges and in the contemporary organisation is described best by the political metaphor that depicts the relationships between the organisational stakeholders to be full of power, coercion and false consciousness.

Business systems are special nature systems, they are not wholly social systems but they are not wholly expendable tools either. The difference from social systems is that they are man-made systems, *designed systems*, but their contents are Human Activity Systems primarily responsible for the organisation's ends definition. As *concrete designed* (Checkland, 1989) systems they have clearly identifiable boundaries and purposes (primarily economic goals in the capitalist societies) especially if they are viewed within the objectified (socially alienated) social system of the capitalist society. But this is not the case for their HAS contents their purposefulness of which as well as the definition of the business systems boundaries is not, or at least should not be confined solely to economic imperatives. It should include the social and the psychological dimensions of a particular HAS and those of society which is the provider of the designed system's inputs as well as the "client" of its outputs. Human purposefulness, being an indispensable part of Man's lifelong behaviour, should be acknowledged and critically examined at the individual level (psychological level), at the Human Activity level (social-system level), as well as within the limits of the package that it comes in; namely the business system (special-nature-system level).

A further conclusion that can be drawn from the above analysis is that the contemporary business systems' purposeful behaviour can be characterised as a rationalisation process (in the Weberian sense). Though that process seemed to backtrack between the 50s and the 70s where the assumptions of the old classical economic theory were questioned. This rationalisation process is best expressed in Friedman's (1962) amoral and instrumental theory of profit maximisation and is characterised by the complexity of the numerous organisational stakeholders' power game to influence the organisation's orientation solely towards more efficient economic forms. The business system's generic systemic purpose has evolved from the one actor [the owner] one goal [maximisation of profit] doctrine [apparent teleology where developments happen as a result of the ends served by them (Checkland, 1989)] to the political arena and to the contemporary political metaphor describing the business system's purposive, namely teleonomical [(describable by an observer as serving a purpose (Checkland, 1989)] behaviour. The very complexity of the stakeholders' interaction demands for an ever-increasing administrative efficiency as well especially in the light of the demand made by the organisation's ever increasing economic efficiency. This implies that business systems in our age remain purposeful in economic terms but the very complexity of their purposeful behaviour makes them to appear purposive in teleonomical terms as well as purposive rational in Weberian terms. In other words Mintzberg's analysis confirms Weber's rationalisation process where the contemporary dominant institution, namely the business system, is infected by the modernity's discontents disease. The political metaphor of the contemporary

organisation is representative of the modernity's dispatch from the communal to the associative forms of man's social life and social action. The contemporary purposeful behaviour of the business system's human activity system's is oriented towards impersonal social actions dominated by instrumental considerations in the context of bureaucratic organisations (business systems) and in the wider context of market relationships.

b) From the analysis of the types of intervention undertaken in organisations we can argue that a natural relationship is identified to exist on the basis of Habermas' knowledge constitutive interests between the IS methodological paradigms, the systems, the problem solving and the critical systems ones.

In the systems development methodologies the information system is regarded as a subsystem that has to be optimised in reference to the system's systemic purpose; along with the optimisation of the other organisational subsystems identified. In other words the information systems development becomes a subset of the systems development one. This amounts to greater sophistication in regard to the servicing of man's technical interest.

The soft systems methodologies obvious focus on the practical interest make the system development methodologies to appear as a subset of the problem solving ones. In other words, the soft systems methodologies seem to claim that we can optimise the operations of the organisational subsystems only if we do co-ordinate our perceptions (as stakeholders) regarding the definition of the organisational boundary, on the basis of the purpose we attribute to the system, in the first place.

The critical systems paradigm goes beyond the soft systems one in terms of seeking the causes that produce perceptions and the process that defines perceptual exchange in the first place. The definition of organisational purpose is perceived to be the result of organisational conflict's resolution of which is subject to the exercise of power in the form of coercion and false consciousness. Power itself, in this thesis, is defined as the possession and/or the control over the organisational material and informational assets by organisational stakeholders seeking to preserve their grip upon them. In this case the perception of a problematic area and the definition of the organisational system boundary is the result of a process of conflicting claims made upon organisational assets. This implies that material and informational assets have to be analysed in order to deal effectively with the causes of these shared perceptions prior to their exchange. In other words, soft problem-solving approaches become a subset of the critical problem solving ones. The focus then on the emancipatory interest becomes the last link in the chain connecting the IS methodologies, with the system ones, and with the critical problem ones. In mathematical terms we could express the above relation as follows:

Information systems methodologies being a proper subset (Mizrahi and Sullivan, 1988), and not a subset, meaning that the subset can never be equal with the superset, of Systems methodologies, being a proper subset of the Problem Solving ones, being a proper subset of the Critical Systems Thinking ones (see 2.-17.).

$Information\ Systems\ Development \subset Systems\ Development \subset Problem\ Solving\ (Soft\ Systems) \subset Problem\ Solving\ (Critical\ Systems)$ [1]

the above relation could be written as follows:

$Information\ Systems\ Development \subset Systems\ Development \subset Problem\ Solving\ (Soft\ Systems) \not\subset Problem\ Solving\ (Critical\ Systems)$ [2]

only if organisational conflict, coercion and false consciousness did not exist in the real world.

[1] can be depicted diagrammatically as follows:

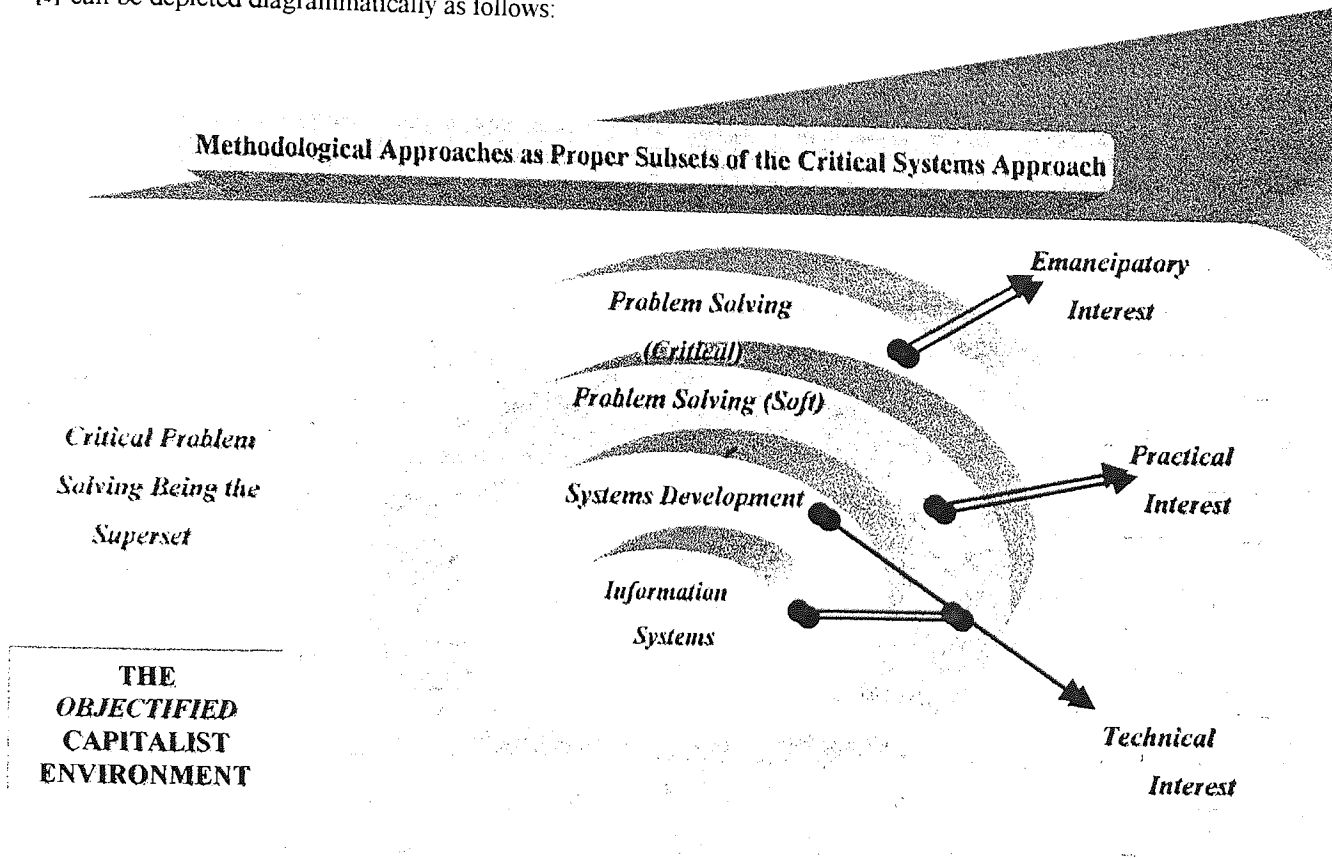


Diagram 2.-17.

The link connecting IS methodologies to the critical problem solving ones, mapped into mathematical language, implies a special link between the emancipatory interest and the other interests; the emancipatory interest becomes the superset that contains the practical one which in its turn contains the technical interest. The organisational IS development then, in the light of its special link with the emancipatory interest, should focus not only on providing the system with processing power or enhanced control of its operations but also should provide the system with information regarding the sources that motivate its HAS content for continuous critical examination. The special link becomes the core of the proposed methodology's complementarity that it is developed as a result of this thesis. The idea of proper subsets, a form of *Russian dolls*, means that when we focus on the emancipatory interest (the outer doll), we simultaneously deal at the systemic level with all the

subsets. This way we are able to deal with the organisation's emergent attributes namely the organisational systemic purpose in the light of conflict and coercion located on organisational structures and functions.

Therefore we can argue that the relevance of a critical problem solving methodology to IS development is that if we want to talk about IS development we should not talk in IS terms only. We should not talk even in systems terms or problem solving terms either, but in more general critical systems terms. The decision to develop the organisation's database system for example, can not and should not be justified in Information Engineering (IE) (Martin, 1989) terms only. It can not and it should not be justified only in business terms either, regarding the organisation's competitive advantage, but rather in critical systems terms in the light of the organisation's objectified environment. In critical systems terms we aim to answer first the 'whys' we should have such as system in the first place; or better does the business purpose demand for the development of such a system?, what is the business purpose and why?

The liberation of the humans that make-up the organisation from false ideas (emancipatory interest), should be based on a communicative process that aims to reach a coercion free consensus (Habermas, 1987) (practical interest) regarding the definition of systemic purpose, structure and functions, in teleological terms (where purpose defines the organisational structure and functions). On the basis of the proper subset example above, we can argue that in order to be efficient then, it is not enough to be effective only a priori, but you have to be effective and efficient at the same time.

Critical problem solving methodologies such as the Total Systems Intervention methodology advocate the selection of different methodologies, under the concept of methodological complementarism. But Flood's and Jackson's approach seems to be impracticable because it is based on the rather reductionist distinction between means and ends (technical, practical and emancipatory interests) resulting from the reductionist focus of the methodological paradigms explained above; paradigms that are drafted in to dissolve organisational complex-coercive relationships. This means that the selection of different methodologies for the "designing" phase, where efficient and effective structures are designed (technical interest), namely the phase of means selection; the "debating" phase where it is debated what to do (practical interest), namely the phase of ends definition; and the "disimprisoning" phase of emancipating people from dominating designs (emancipatory interest) (Flood, 1995), can not be broken down into distinct phases. One has to be effective and efficient at the same time, and not in sequence, in the analysis of complex-coercive (Flood and Jackson, 1991) relationships.

In this thesis we argue that the causes of the failure of IS development methodologies, as well as the systems and problem solving methodologies fail to come to terms with the organisational reality are the three following reasons:

- 1) Failure to analyse thoroughly the most important aspect of the organisation, namely its systemic purpose.
- 2) Failure to analyse organisational power relations and conflict that are critical in terms of the organisational action in the real world that is expressed in business strategy... and
- 3) Failure to come to terms with the emergent systemic attributes of a business organisation such as its special nature and its dominant position in our civilisation.

The above discussion leads us to the conclusion that we need a *total solution* for the analysis of the business systems problematic instead of fragmented ones that in the best case are pieced together in a *cut and paste* manner where problematic areas themselves are made to fit the existing methodological paradigms.

- Chapter Three -

**FORMULATING
THE STRATEGY
FOR A SOLUTION**

3.1. The Business System's Social Environment and the Political Metaphor

The business systems in our age are embedded, as it was argued in section 2.4., in an *objectified* social system (Marx, taken from Habermas, 1989), where the economic sphere has colonised the other subsystems of the lifeworld. Social interactions aiming at the reproduction of the lifeworld have been mapped into the money-medium, which is relied upon to co-ordinate, through the market mechanism, all social interactions. The above statement implies that an organisation's viability (meaning its ability to preserve its identity vis-a-vis its environment) is facilitated basically through *strategic actions oriented towards success* (Habermas, 1984) instead of action *oriented to reaching understanding* with the other stakeholders in regard to a problematic area. A stakeholder's actions is defined as strategic when is not based on mutually recognised validity claims with other stakeholders but rather on power and coercion that is made apparent in the form of manipulation or systematically distorted communication with the other stakeholders. Strategic actions in the business systems contemporary environment are defined as 'rational' and are being 'objectively' measured against their perceived utility which amounts to an illusion-of-objectivity in the eyes of the strategic-oriented organisational stakeholders.

Therefore, the institutionalisation of the contemporary business system is the result of a power game between strategic oriented stakeholders seeking to define and control, for their own benefit (as they perceive it), the system's instrumental purposes. In this setting the phenomenon of the organisational power can be defined on the basis of the *resource dependence theory* (Pfeffer and Salancik, taken from Donaldson, 1995), as well as on the basis of Lewin's (1952) *organisational interdependence*²² theory. Donaldson describes the *resource dependence* theory as follows:

"Resource dependency theory argues that in order to survive, the organisation must acquire resources. The organisation therefore depends on external organisations for resources. The dependence gives rise to control of the focal organisation by the external organisation. The resource dependence perspective also applies inside the organisation. The resources provided by certain organisational members are more important than the resources provided by other

²² **General Characteristics of the Concept of Differentiation.** Differentiation Refers to the Number of Parts of a Whole. It expresses a certain characteristic of a dynamic whole, i.e., it refers to the number of relatively separated of distinguishable parts contained in a definite whole and, perhaps, to the degree of separation of these parts. The mitosis of the egg into two, four, and eight cells, or the latter differentiation of the embryo into ectoderm, mesoderm and endoderm are simple examples of a differentiation which can be determined morphologically. **Differentiation Based on Independence of Parts.** Unfortunately, the psychological degree of differentiation of a person cannot be determined morphologically. In psychology, the distinction of parts within the person will have to be done on the basis of a functional separation of these part... The dependence which has been called **organisational interdependence** shows rather different characteristics. First, it is a type of dependence between *a* and *b* similar to that between leader and led, or between someone using a tool and the tool. In such a case, the way *a* depends upon *b* is obviously rather different from the way *b* depends on *a*. Second, the organisational dependence usually does not work from neighbour to neighbour like the spreading of tension. It is a selective process: sometimes one part, sometimes another part of the system is used as a tool in a specific way. For instance, the same need may produce an organised activity in different parts of the muscular system. Third, the kind of change resulting from the organised interdependence of *a* and *b* usually does not tend to equalise the state of *a* and *b*. The subordinate part *b* (i.e., the part which is led, the tool) changes in a way which helps *a* (the leading part) to reach its objective, but it does not lead to great final equality between the two." (Lewin, 1952).

members. The internal control over resources gives some organisational members more power over the organisation than other members. Thus the resource dependence theory applies at two levels of analysis: extra-organisational and intra-organisational. Pfeffer and Salancik (1978) offer a multilevel general theory of potentially great significance'' (Donaldson, 1995).

In both Lewin's and Pfeffer's/Salancik's theories of *interdependence asymmetrical* relations between the organisational stakeholders are assumed to be arising from differences regarding the possession of and/or control over organisational assets.

''Another key theoretical idea of Pfeffer and Salancik is that power arises out of interdependence. Party A has power over party B if B needs something from A and if B has nothing to give A in return. More exactly, power does not arise through interdependence if A places as much value on what B gives A as B places value on what A gives B, i.e., each party is equally dependent on the other. Power derives rather from asymmetric dependence (Pfeffer and Salancik, 1978:52). The dependence of B on A is greater the more important to B is the thing which B receives from A and the fewer the alternative sources of supply to which B could turn. (Donaldson, 1995, my underlining).

The value placed upon the process of resource-exchange between the organisational stakeholders is regarded as perceptual. This implies that the organisational power in an objectified social environment where the value itself can be measured with the use of the money-medium can be identified subjectively or relatively subjectively as a shared reality that is based on the stakeholders common organisational material and informational interests.

The perceptual and the subjective nature as well as the configuration of the organisational power in the contemporary organisation that defines ultimately the organisation's purposefulness is described best by the political metaphor that depicts the relationships between the organisational stakeholders to be full of power, coercion and false consciousness.

In this case the perception of a problematic area and the definition of the organisational system boundary and systemic purposefulness is the result of a process of subjectively conflicting claims made upon organisational assets. This implies that the stakeholders' material and informational assets have to be analysed in the light of their subjectivity in order to explain and reflect on the organisation's purposefulness itself.

3.2. A Conceptual Solution to the IS Development Failures

In chapter one and in chapter two we made the case that the contemporary information systems development failures are attributed to the fact that the IS methodological paradigms do not make provisions for the thorough analysis of the most important aspect of the organisation, namely its systemic purpose. In other

words no provisions are made for the analysis of the organisational power relations and conflict that are critical in terms of the very formation of the organisational systemic purpose and the organisational action in the real world that is expressed in business strategy. In addition, we made the case that IS developments fail to come to terms with the emergent systemic attributes of a business organisation such as its special nature and its dominant position in our civilisation thus producing adverse social effects in the process of social rationalisation itself. Social effects that lead to the triumph of theoretical reason and to the corresponding detriment of the practical and the emancipatory ones.

Therefore we can argue that the contemporary information systems do not produce meaningful knowledge to the extent that they make the business system's stakeholders reflect on and thus inquire about their purpose(s) by reflecting both on the sources of motivation and/or deception that are contained in their purpose(s) and also on the sources of collective motivation and/or deception that are contained in the business purpose(s) itself. In addition, one can argue that the contemporary IS development failures can be attributed to the fact that they do not produce meaningful knowledge to the extent that it makes the stakeholders reflect on their interactions in the light of their motivations and in relation to the constraints imposed by the instrumental design of the business system itself. An interaction that in contemporary business systems amounts to the essence of the information systems' development problematic and is best described by the political metaphor, namely the business stakeholders' power game that is full of conflict, coercion and false consciousness, or in other words full of complex-coercive relations.

Therefore in conceptual terms we can argue that any solution to the above problematic must include the analysis of the business purpose as an a priori condition to determining the appropriate information systems to be developed. Though, in conceptual terms, this is not a novel idea in IS development, namely the explicit or the implicit inclusion of the reference to business purpose, no solution in terms of methodological paradigm has been developed to tackle the above problematic. A novel methodological paradigm that could resolve the above problematic, as it was argued in section 2.3.3.3., is that of critical hermeneutics with a systems perspective that is focused on the analysis of the organisational material and informational interests and on the complex-coercive relations that arise due to the stakeholders' overlapping claim on the organisation's limited material and informational assets. In addition, this particular paradigm should adhere to the principles of complementarity and human emancipation that characterise the Critical Systems field (Flood and Jackson, 1991) as well in order to come to terms with the enormous complexity exhibited by the contemporary organisation.

The most difficult step in the analysis of the systemic purpose is the definition of the system's boundary and its strategic positioning (purposefulness expressed as the commercial rationale) itself in the light of the organisational power and politics. This type of analysis introduces the analyst to 'uncharted waters' that generate enormous variety in epistemological terms where complementarist thinking, namely the reconciliation of paradigm incommensurability at a meta-theoretical and meta-methodological level, becomes essential.

Therefore the solution need to be developed in the light of the concept of discordant pluralism (Gregory, 1992). In this thesis, theoretical complementarity at a meta-theoretical level (elaborated in sections 2.3.3. and 2.3.3.3.), which implies methodological complementarity at a meta-methodological level, is deemed as essential in order to tackle the above variety problematic in a critical and systemic manner. This must be achieved through an analytical framework that does not act as a simple selection mechanism between different existing methodologies made to 'suit' particular problematic areas but instead exhibits emergent properties that must depict homomorphically different, ideologically produced, organisational power forms. The contemporary business problematic areas exhibit emergent properties that can not be tackled by existing methodologies, including TSI and CSH. These emergent properties can be defined as the different forms of power which have penetrated every aspect of the lifeworld originating from the stakeholders' organisational material and/or informational interests, possessions and/or control, or intended possessions and/or control. Therefore, if we do not deal a priori with the variety generated by the different power forms in a complementarity, critical, systemic and rigorous manner then we will be introducing reductionism into the critical systems field by reducing the organisational problematic areas into inadequate made-to-fit methodological models. In an age where technical tasks are becoming ever more complex, and in an age where we are making our entry to a *knowledge-based society*²³ (Drucker, 1993), co-operation, learning and understanding become essential for the survival of Western business organisations because knowledge itself is locked into the heads of the knowledge workers. Forms of power expressed as ideological constraints, false consciousness, and coercion inhibit the productivity of the *knowledge-based worker* (Drucker, 1993) by introducing *noise* into the information system communication channels. Instead the communication channels should convey new ideas, learning and understanding aiming towards reaching a coercion-free consensus (Habermas, 1987) in regard to the business system's instrumental and social purposes.

This implies that the solution must draw on a wide variety of disciplines, according to this thesis version of complementarity (elaborated in chapter two), for its theoretical base, namely theoretical complementarity. The disciplines that must be included are the following: strategic thinking in order to deal with the organisation's commercial rationale; organisation theory in order to deal with the organisation's structure and process; economics in order to deal with the organisation's transaction costs; sociology and psychology in order to deal with the stakeholders' purposeful behaviour at the individual, at the organisational, as well as at the social levels in systemic terms; general systems theory and cybernetics in order to deal with the organisation's overall functional integration in terms of its purposefulness and in terms of its viability, and overall

²³ "For a hundred years – in the first place – knowledge was applied to tools, processes, products. This created the Industrial Revolution. But it also created what Marx called 'alienation' and new classes and class war, and with it Communism. In its second phase, beginning around 1880 and culminating around World War II, knowledge in its new form came to be applied to work. This ushered in the Productivity Revolution which in 75 years converted the proletariat into a middle-class bourgeois with upper-class income. The Productivity Revolution thus defeated class war and Communism. The last phase began after World War II. Knowledge is being applied to knowledge itself. This is the Management Revolution. Knowledge is now fast becoming the one factor of production, sidelining both capital and labour. It may be premature (and certainly would be presumptuous) to call ours a 'knowledge society' –so far we only have a knowledge economy. But our society is surely 'post-capitalist'." (Drucker, 1993).

cohesiveness and synergy; soft systems thinking, critical systems thinking, philosophy and fuzzy logic in order to deal with the complexity of the perceptual nature of the stakeholders' purposeful organisational behaviour at the individual, organisational and social levels in the light of the ideal human emancipation; and Information Engineering (IE) in order to deal with the development of an intrinsically motivated organisational information system.

In methodological terms the above complementarist meta-theoretical framework that is the result of inter and intra theoretical partitioning and recombination must lead to the development of new methodology that is based on the same complementarist principles, as the methodological one, and must be guided by Habermas's knowledge constitutive interests/methodological paradigms classification (discussed in chapter two). Information Engineering, Soft Systems, and Critical Systems methodologies are the methodologies that the new methodological solution must draw most but it should not share IE's positivist, managerialistic connotations. Soft systems recognise human purposefulness and subjectivity and the limitations of human perception while IE is a complete IS methodology. Critical systems thinking can 'connect' soft systems and IE in a complementarist manner through the application of critical science, namely "the science of emancipation from hidden presuppositions" (Flood, 1990), with a systems perspective. This way organisational information systems could produce meaningful knowledge about the stakeholders' ideological constraints by linking the inputs of the ideological process, namely their organisational material and informational interests, with the ideological outputs, namely the stakeholders' worldviews, shared beliefs, value systems, information system semiotics, and the business systemic purpose itself at the level of the stakeholders' interaction. Ideology in this thesis is defined as the process connecting values and relevant context which produces and sustains meanings, values, signs, shared realities, cultures, worldviews or Weltanschauungen and beliefs originating from humans' material and informational interests in life. This means that the outcome of the ideological process might have two facets: a *positive* (*class-consciousness*) as well as a *negative* one [political and/or coercive one(s)]. The positive side of the ideology (autopoietic process) provides a social group or the society itself with unity in perceiving the social world. In addition, it provides a HAS with *homeostasis*²⁴, cohesiveness, synergy and orientation in regard to pursuing technical and social goals as well as a framework for perceiving and solving problematic areas. The negative side of ideology (pathological autopoietic process) helps to legitimise a dominant political force, it resists social change and it can be used to distort communication systematically thus creating false consciousness or in other words illusions about the reality of the social world. Organisational mission (*purpose, strategy, company values, standards and behaviours*), is the product of organisational ideology that acts as its *epigenetic landscape*²⁵. This implies that the analysis of the ideologically produced

²⁴ **Homeostasis:** The ability of an open system to maintain a steady-state with its environment. In this thesis the concept of organisational homeostasis goes beyond the simple stimulus-response paradigm to include the organisation's spontaneous activity oriented towards creativity beyond stimulus.

²⁵ **Epigenesis** stands for the accretion of design beyond the merely developmental process... A flat genetic landscape (as it were) would have to rely totally random mutations in genetic design; but an 'epigenetic landscape' would *predispose* the Adjuster Organiser (as we are calling it) to particular, rather than random, experiments. They would still have unpredictable outcomes, but the variety of those outcomes would be very much constrained. This landscape is to be imagined as a set of hills and valleys laid out (like a sand model) on a large table. If we drop a ball onto this model it

purpose will have to precede the organisational systems development. In addition, it implies that the information systems produced in this manner would produce meaningful knowledge to the extent that it is ideology-related.

Therefore, we have developed two novel concepts in order to discuss about has to be done to provide the information systems with the type of meaningful knowledge mentioned above thus improving coordination of organisational activities by enabling the development and maintenance of a single/multifaceted view of purpose throughout the organisation. These are the concepts of the *Steady States Range* (SSR - elaborated in section 3.2.), and the *Overall Organisational Entropic Number* (OOEN - elaborated in section 3.2.). The SSR is defined as one or more stakeholders' ideological limits, depicted diagrammatically as a straight line, that extends between a plus sign representing a stakeholder's identification with a particular organisational ideology, and a minus sign representing a stakeholder's rejection of a particular organisational ideology. Intermediate states are allowed. A stakeholder's perception of problematic and solution is made meaningful within the ideological limits. A particular stakeholder's identification with a particular organisational ideology is fuzzy and it arises as the partial, to a degree, containment of the "whole in the part" (Kosko, 1994), the whole in this case being the organisational ideology and the part being a stakeholder's ideology. Kosko explains the whole in the part concept as follows:

"Every whole contains its parts. But do the parts contain the whole? On the face of it no. The question sounds absurd. How can a part contain the whole? The one exception is the degenerate case when the part equals the whole itself. But in general the part differs from the whole. Here the part cannot totally contain the whole. But it always partially contains the whole. The part contains the whole to some degree." (Kosko, 1994).

The whole, being in this case the organisational ideology, is expressed by the ideology of system five in cybernetic terms, namely the Chief Executive Officer (CEO) of any business system. This implies that the CEO is the embodiment, or at least he/she should be the embodiment of the system's identity. In this thesis system five is defined as the person responsible for the systemic management of the organisation, who provides the organisational system with *closure*, namely he/she is the embodiment of its identity ideally; e.g. in an organic organisation operating with democratic processes. In other words as system five we define the top-executive of the business system charged with the above responsibility. This definition of system five does not exclude the possibility that the top-executive could be the owner of the business system as well, as is the case of Microsoft or Virgin.

might roll to the edge of the table at almost any point on its perimeter. But its path, and therefore its destination, now biased by the landscape of hills and valleys. Thus 'random' experiments with the ball-throwing have a much reduced variety –and a much better chance of succeeding in evolutionary terms." (Beer, 1979).

Therefore the degree to which a stakeholder's ideology contains system five's ideology can be described with the *subsethood principle* (Kosko, 1994) in fuzzy sets terms. Kosko defines the subsethood principle as follows:

"Fuzzy sets arise when a set partially contains an element, as when an audience contains a somewhat happily employed person or when a barrel contains a somewhat rotten apple or when a chromosome contains a somewhat mutated gene. In some sense the set is not fuzzy but its elements are fuzzy. The elements all have some property to some degree. I call this elementhood. The old fuzzy or multivalued logic is all elementhood. What happens when one set contains another set? Put a little box in a big box. Then the big box contains the little box 100%. Can the containment take on degrees? Sure it can. Put the little box only halfway in the big box. Then the big box contains the little box only 50%. The little box is both in and outside the big box. I called this fuzzy containment subsethood, the degree to which one set is a subset of another set. Traditional fuzzy theory assumed subsethood was bivalent, all or none, 100% or 0%. That seemed as extreme as any other black-white claim. Very tall men made up a 100% subset of tall men. That I could buy. Every very tall man is tall. But the old view said that tall men made up only a 0% subset of very tall men. That I could not buy. It was a matter of degree. Every tall man is very tall to some degree, often to a very slight degree. In hindsight subsethood was the next step from elementhood of fuzzy sets. Elementhood puts balls in boxes. It put them in to some degree. Subsethood puts boxes in boxes. In the special case the input box shrinks to a ball and you get back the old idea of vague or fuzzy set whose elements belong to it to some degree. So subsethood subsumes elementhood. Subsethood holds between sets. Elementhood holds within sets." (Kosko, 1994)

The OOEN is a measurement of the organisational *entropy*²⁶ that originates from the stakeholders' perceived and fuzzy material and informational conflict for the control (expressed in degrees of control or possession over) the organisation's material and informational assets located upon the organisation's *value chain* (Porter, 1980).

Porter's value chain concept was chosen because it represents the business organisations as a system. In other words a business organisation is depicted as having a production function that defines how inputs are converted into outputs. The value chain is a theory of the firm (Porter, 1985) that views the firm as being a collection of discrete but related production functions, if production (in the broad sense –includes service business organisations as well) functions are defined as activities. The value chain formulation focuses on these activities' systemic integration, coordination and synergy defined as value added that exceeds the sum of

²⁶ "The concept of *entropy* is closely related to homeostasis. It refers to the tendency of things to move toward greater disorder, or disorganisation, rather than maintaining order as homeostasis describes. Entropy is a 'force' working against homeostasis. (Flood and Carson, 1993).

individual activities. In other words the value chain concept depicts homomorphically the organisation as a *nonlinear*²⁷ system thus depicting homomorphically the organisation's operations.

The value chain concept helps us to locate the stakeholder's perceived conflict as the control overlap over or the possession of one or more value chain activity(ies)/task(s) and the organisational material and information assets assigned to those activity(ies)/task(s). But most important of all the value chain systemic framework enables us to assess the systemic implications of the organisational conflict itself as a source of organisational entropy that threatens systemic integration. The control overlap areas themselves are regarded as the areas where organisational entropic trends are developing.

Therefore we can claim that the OOEN is a measure of the fuzziness of the conflict areas where organisational entropic trends develop. In other words the OOEN is a *fuzzy entropy measure*. Kosko (1994) defines fuzzy entropy as follows:

"Fuzzy entropy measures the fuzziness of a fuzzy set. It answers the question How fuzzy is a fuzzy set? And it is a matter of degree. Some fuzzy sets are fuzzier than others. Entropy means the uncertainty or disorder in a system. A set describes a system or collection of things. When the set is fuzzy, when elements belong to it to some degree, the set is uncertain or vague to some degree. Fuzzy entropy measures this degree." (Kosko, 1994).

For this reason the fuzzy measurement of organisational conflict, located in the control overlap areas, must be used for the development of an *organisational entropic monitoring system*. The monitoring system must be based on the product of the measurement of the overlapping claims made upon the organisation's material and organisational assets along with the actual number of the stakeholders who make a claim on a particular asset. The control overlap areas are regarded as the product of conflicting motivational forces representing the stakeholders' intentions to control, possess, and/or defend the existing control or possessions, over organisational material and informational. The time length of those conflicting motivational forces, namely the subjective time horizon over which those motivational forces demand gratification, defines to a high degree, the intensity of the conflict itself along with the degree of control sought (full or partial control) over.

Both the SSR and the OOEN are measured and compared based on the following *fuzzy rule*²⁸ that expresses our bias about what a solution needs to look like. Namely our belief that the roots of the organisational ideological conflict can be located on the organisational value chain in the form of the stakeholders' conflicting

²⁷ "Linear system: A system whose whole equals the sum of its part. All other systems are nonlinear. To study a linear system you cut into small pieces and then study the small pieces and then patch them back to give the whole system." (Kosko, 1994).

²⁸ "A conditional of the forms *IF X IS A, THEN Y IS B*. A and B are fuzzy sets: "IF the room air is COOL, THEN set the motor speed to SLOW." In math terms a rule is a relation between fuzzy sets. Each rule defines a fuzzy patch (the product $A * B$) in the system 'state space' –the set of all possible combinations of inputs and outputs. The wider the fuzzy sets A and B, the wider and more uncertain the fuzzy patch. More certain knowledge leads to smaller patches or more precise rules. Fuzzy rules are the knowledge building blocks in a fuzzy system." (Kosko, 1994).

motivational forces for the control over or the possession of the organisation's material and informational assets. In addition, in the fuzzy rule we implicitly express our bias that the ideological process's outputs, namely the organisational value system, shared realities, cultures, worldviews or Weltanschauungen and beliefs, that tend to appear as independent ideas originate from processed (by the ideological process) material and information interests. Further, the fuzzy rule expresses our bias that in the contemporary organisation environment, described by the political metaphor, the value chain's conflict areas are the areas where the stakeholders engage in power relationships. In the conflict areas the most powerful stakeholder, namely the person who possesses or controls organisational material or information assets, that are disputed by other stakeholders, is better positioned to control the ideological process's outputs as well thus leading to the subjection of the other stakeholders. This implies that human emancipation and the resolution of conflict is possible, in critical systems terms, when the stakeholders are made aware of the link between the ideological process's inputs and outputs. The proposed fuzzy rule is the following:

General Fuzzy Rule

.IF. *incompatibility*

(measured in terms of the subethood principle)

exists between system five's ideology and the members of the management team

(performed on the basis of system five's SSR)

.THEN,

conflict that is located on the organisational value chain

(measured in terms of the overall organisation entropic number)

exists for the control of the organisation's material and informational assets

.ELSE,

.IF. *compatibility exists*

.THEN, *the organisation is organic* (conflict-free)

.OR

false consciousness

.AND.

coercion exist.

In epistemological terms the above fuzzy rule implies, as it was mentioned above, that the analysis of organisational ideology leads us to the identification of possible conflict of material and informational interests, power relationships, perception standards (Weltanschauungen), as well as information flow semantics and pragmatics. The stakeholders' reflection on their ideological limits, in terms of their organisational material and informational interests, aims towards creating the necessary conditions for building a coercion-free consensus between the stakeholders for the definition of the business purpose itself. A coercion-free consensus leads to a situation where the sources of organisational entropic trend over the medium to the long-term are

reduced until the very process that leads to reaching coercion-free consensus, namely the process of ideological self-reflection, becomes institutionalised. This implies that entropic trend could be increasing in the short term. The entropic trend feeds on the stakeholders' overlapping claims for the control and/or the possession of the organisation's limited material and informational assets and severely limit the coordination and synergy of the organisational activities. Intense conflict can threaten the organisation's viability itself.

3.3. Developing the Ideological Steady States Range Concept

In chapter two we argued that ideology corresponds to a process that connects values and relevant context that produces and sustains meanings, values, signs shared realities, cultures, worldviews or Weltanschauungen and beliefs originating from humans' material and informational interests in life. The purpose of the organisational ideological mechanism is to attenuate and direct the variety exhibited by the organisations' operational units (employees – inside stakeholders) in order to maximise cohesiveness and synergy. This implies that ideology plays a homeostatic role in a human activity system. But if this is the case, how can we define the homeostatic role of ideology in an open system such a business organisation? Namely, what is the relationship between the inside stakeholders and the rest of the stakeholders (outside stakeholders) that reside beyond the business system's boundary, defined in very general terms as the business system's environment? That's the first question we have to answer in regard to the evolution or change of a business system's purpose. The second thing we have to define is the identification process of an operational unit with the organisational ideology.

The identification of an individual with the organisational ideology can be defined between the ideological range expressed with a *plus* and a *minus* sign. The plus sign coincides with the qualification of the individual to a particular organisational ideology while the minus coincides with the *rejection-subjection* of the individual to a particular organisational ideology. Rejection implies imprisonment of consciousness, namely subjection, where the stakeholder who rejects the ideology has to adjust his/her purposefulness (to various degrees) to meet the ideological constraints imposed on him/her. For example, a Christian living in a Muslim country and vice-versa. A special form of rejection-subjection is that of false-consciousness where the consciousness of rejection-subjection itself has been suppressed by the organisational ideology and has been replaced by the ideological identification. This type of subjection is expressed with a plus sign where in reality it should have been a minus sign.

An open system achieves a *steady-state* with its environment or in other words achieves a *dynamic equilibrium* with its environment by adapting or influencing itself the environmental demands or its environment and in the process of doing so changes its structure and processes. Bertalanffy (1987) rejects the *homeostatic stimulus-response (S-R)* model as rather restrictive regarding the behaviour of an open system and specifically of a HAS.

“(1) The S-R scheme misses the realms of play, exploratory activities, creativity, self-realisation, etc.;

(2) The economic scheme misses just specific, human achievements - the most of what loosely is termed ‘human culture’;

(3) The equilibrium principle misses the fact that psychological and behaviour activities are more than relaxation of tensions; far from establishing an optimal state, the latter may entail psychosis-like disturbances, as e.g. sensory-deprivation experiments” (von Bertalanffy, 1987).

Von Bertalanffy goes on to argue that humans, and in general *open systems*, enjoy the attribute of being motivated, thus being purposeful, despite the lack of a stimulus. This ability he calls *spontaneous activity* and it coincides with Maslow’s *self-actualisation needs*. Von Bertalanffy’s paradigm is in line with Maturana’s work on *autopoiesis*. Maturana (1980a) was concerned with the nature of living organisms, and with the nature of perception. Maturana’s breakthrough was to see that the nature of the living organisms and their perception are in fact intimately connected. Initially explored in *The Biology of Cognition* (1970b), this led to a characterisation of the observer as the system in which description takes place. Mingers (1995) defines humans as autopoietic living systems, which are organisationally closed and structurally open.

“As humans, we are autopoietic systems, each with a plastic nervous system that is organisationally closed. This is structurally coupled to the rest of our body and through this to the environment. Both the body and the nervous system are structure-determined systems; the changes they undergo depend on their own prior structure and can only be triggered, not determined, by interactions with other systems.” (Mingers, 1995, my underlining).

Though von Bertalanffy’s paradigm is concerned with the individual we can generalise it to a human activity system and especially to a business system as well. But how can we define the *homeostatic* attributes of *organisational ideology* of an *open socio-technical system*, namely a business system? How can we define ideology as an autopoietic process that produces a system of ideas, beliefs, world views or *Weltanschauungen* that uses as its input the stakeholders’ material and informational interests in life? Before we proceed though with the definition of organisational ideology as autopoietic or not we have to examine Maturana’s definition of *autopoiesis* itself and decide if it can be applied to organisations.

“A dynamic system that is defined as a composite unity as a network of productions of components that,

a) through their interactions recursively regenerate the network of productions that produced them, and

b) realise this network as a unity in the space in which they exist by constituting and specifying its boundaries as surfaces of cleavage from the background through their preferential interactions within the network, is an autopoietic system.” (Maturana, 1980b).

Mingers (1995) goes on to examine the application of Maturana's concept of autopoiesis to social systems and business organisations. He argues that the concept of autopoiesis can not be applied in the strict biological sense to social and business organisations but it can be applied to conceptual systems, namely to systems of ideas.

"If the attribution of autopoiesis to social systems is to be more than a woolly generalisation, then we must examine carefully its specific definition. There are three essential elements:

- 1) Centrally, autopoiesis is concerned with processes of production -the production of those components that themselves constitute the system.*
- 2) It is constituted in temporal and spatial relations, and the components involved must create a boundary defining the elements the entity as a unity -that is a whole interacting with its environment.*
- 3) The concept of the autopoietic organisation specifies nothing beyond self-production. It does not specify particular structural properties and thus shouldn't need to be modified to deal with social systems.*

In applying these ideas strictly, there are obvious problems. Is it right to characterise social institutions as essentially processes of production and, if it is, what exactly is it that they are producing? If human beings are taken as the components of social systems, then it is clear that they are not produced by such systems but by other physical, biological processes. The emphasis on physical space and a self-defined boundary is also problematic. While space is a dimension of social interaction, it does not seem possible to sustain the central idea of a boundary between those components that are both produced by and participate in production, on the one hand, and those that are not, on the other. Generally, people can choose to belong or not belong to particular institutions and are members of many at any time." (Mingers, 1995).

Varela (1981a) argues that we can not sustain the application of the concept of autopoiesis, in the strict sense, to social systems.

"...in order to say that a system is autopoietic, the production of components in some space has to be exhibited; further, the term production has to make sense in some domain of discourse. Frankly, I do not see how the definition of autopoiesis can be directly transposed to a variety of other situations, social systems for example. It seems to me that the kind of relations that define units like a firm.....or a conversation....are better captured by operations other than productions. Such units are autonomous but with an organisational closure that is characterisable in terms of relations such as instructions or linguistic agreement." (Varela, 1981a, taken from Mingers, 1995).

Varela himself developed a less specific version of autopoiesis where he preserves the concept of organisational closure but he replaces the physical processes of component production with processes of non-physical or symbolic production such as systems of ideas, descriptions or computations of any kind. In this thesis we believe that we can not apply for the same reasons the strict concept to business system either. But it is possible to, as Mingers and Morgan (taken from Mingers, 1995) argue to use the concept *metaphorically* regarding *organisational closure* on a system of ideas.

“However, it is possible that the concept [of autopoiesis] can be useful metaphorically in helping our thinking, or that a more generalised version, such as Varela’s idea of organisational closure, could be fruitfully applied. A more radical approach is to apply autopoiesis not to physical systems but to concepts of ideas. Maturana defines a unity as ‘an entity, concrete or conceptual, defined by an operation of distinction’, and thus opens the possibility of an autopoietic conceptual system. Such a system might consist of ideas, descriptions, or messages that interact and self-produce.” (Mingers, 1995).

Therefore based on the above we can define ideology as an autopoietic process that takes as its input the stakeholders’ knowledge-constitutive interests (technical control, communication and emancipation) which are located on the organisation’s value chain (a business system’s interest structure for work, language and power).

In addition, we can argue that the ideological process produces a system of ideas, beliefs, and Weltanschauungen, which self-produce themselves by preserving and reproducing the original interest structure used as the process’ input in the first place. A conceptual system, produced ideologically, provides a business organisation with organisational closure and it allows an observer to contemplate the organisational purposeful behaviour in autopoietic terms through the critical examination of its dominant ideology, namely the dominant mechanism that ‘works around the clock’ to provide the organisation with closure.

An autopoietic ideological system is characterised by emergent attributes produced by its homeostasis. The homeostatic attributes of organisational ideology cannot be defined though according to the S-R paradigm because that would amount to the suppression of the organisation’s spontaneous activity. The organisation’s spontaneous activity can be defined as rather proactive (anticipating) or rather interactive (influencing) purposeful behaviour and not reactive in the sense that in structure-driven autopoietic organisations it aims to create the necessary conditions that the organisational structure demands for its best functioning. In other words the autopoietic process of the organisational ideology is structure-driven and not environment-driven. Ideological structure can be described, at the highest level of abstraction, as the consolidated interrelationships between the stakeholder(s)’ perceived material and informational interests.

Equifinality in this thesis is regarded as structure-driven and environment-triggered. This implies that internal structural differentiation and elaboration will be limited by the structure itself, which corresponds to a particular organisational ideology. This implies that in the case where change is not compatible with ideology it would be either rejected or resisted while ideology itself would become pathologically autopoietic and the organisation a closed system. In other words equifinality will be preconditioned as long as organisational closure, that is defined according to a particular ideology, is not threatened. In regard to the workers-union example investment actions, regarded as purely capitalist methods, will be disregarded because that would have undermined irrevocably the organisational closure of the union which is defined as Marxist union. Namely its identity is a Marxist one and not a Capitalist one.

3.4. The Strategy for the Development of an Intrinsically Motivated Organisational Information System

So far we have considered one dominant organisational ideology. But what happens when the socialisation mechanisms of the dominant organisational ideology have failed to socialise all the stakeholders? Or in other words what happens when the necessary inter-dependencies have not been created and organisational conflict surfaces? One might ask how a steady-state can be achieved if the indoctrination effort has failed and the organisation employs a number of stakeholders that do not qualify with the organisational ideology but rather they are subjected by it? And how stable would be the steady-state achieved under these circumstances? Basically if the organisational ideology can not evoke natural identification, then cohesiveness and synergy would be achieved through coercion. The ability of the dominant stakeholder to threaten with losses of rewards or social rejection will evoke conformity. But in this case lateral forces develop which become apparent when they gain in power. These forces might lead to organisational cleavage, where two or more opposing forces, expressing different ideological positions, or in other words conflicting interests are fighting to control the organisational material and informational assets, in order to define the organisational purpose(s) for their own benefit. The organisational steady states range then would be located between the pluses of the conflicting ideologies, because the equilibrium achieved will have to be acceptable to at least one of the conflicting ideologies. A stakeholder can be positioned at the plus sign when he identifies, qualifies, with the organisational ideology. A stakeholder is positioned at the minus sign when he rejects the organisational ideology. Intermediate stages are defined as lying between the plus and minus signs. This is defined as the ideological steady states range because equilibrium with the environment would be made meaningful within the ideological plus and minus signs. This of course implies that a stakeholder's perception of a problematic area and the domain of solutions for the perceived problematic areas will be located between the ideological limits as well. Organisational equifinality would be conditioned and it would be made meaningful only within the ideological limits. Solutions or spontaneous activity positioned outside the ideological limits will demand for the termination of the ideology itself and they will be resisted. An organisation's steady states range, where is subjected to ideological cleavage, can be depicted diagrammatically as follows (diagram 3.-1.):

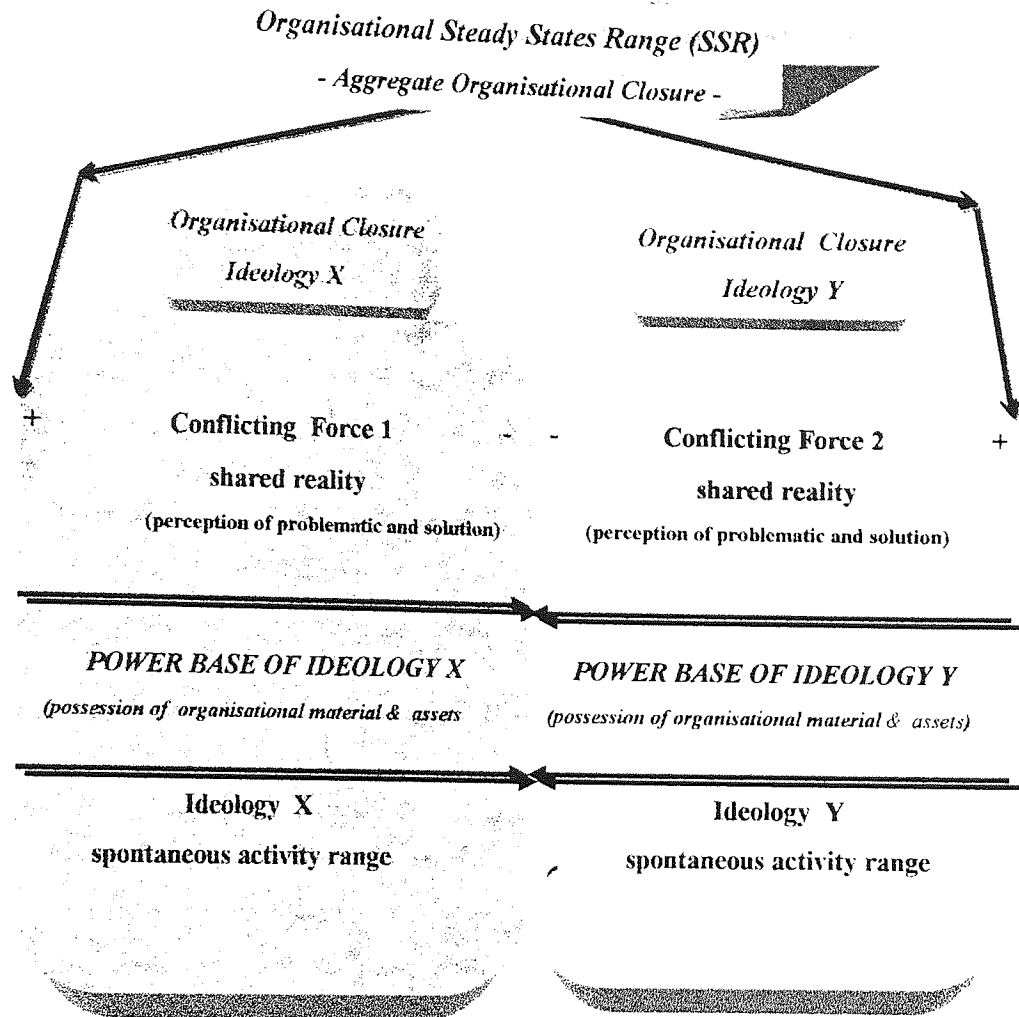


Diagram 3.-1.

The ideological range of conflicting forces is inversely related to the forces' power bases and inversely related to the degree of group cohesiveness. The more strongly a group identifies with an ideology, and the more it can enforce that ideology the less it needs to create new structures and functions. The above diagram implies that when two ideologies conflict, the steady-state achieved becomes more unstable because the range within which it can be located increases. Methodologies that assume that the organisation functions as an organism (unitary metaphor) ignore the whole of the Steady states Range when lateral conflicting forces exist. In addition, methodologies, which acknowledge the existence of those forces, but take for granted that by acknowledging them only they can strike a compromise, or dissolve them, are flawed. Their approach might hold some truth (in identifying the lateral forces) but they run the risk of being wrong for two reasons: First a compromise might not be possible, and secondly in the case where one force was developed as a reaction to the other, then the solution (a new steady-state) might lie beyond the existing SSR. In other words a 'solution' might demand for the dissolution of both forces because if the reaction force exists only to oppose action then it feeds on the action itself. Finally, methodologies which do not examine the material and informational power bases of the forces, they ignore the very length of the SSR thus they do not examine thoroughly the possibilities of compromise between the conflicting forces.

The SSR concept parallels Lewin's (1952) *social fields* and *phase spaces* where individual intentions or motivations can be represented as vectors of forces; their opposing direction of which represents conflict as part of a dynamic process that produces a *quasi-stationary equilibrium* (Lewin, 1952) between opposing forces. Lewin's defines social fields as follows:

"A basic tool for the analysis of group life is the representation of the group and its settings as a 'social field'. This means that the social happening is viewed as occurring in, and being the result of, a totality of coexisting social entities, such as groups, subgroups, members, barriers, channels of communication, etc. One of the fundamental characteristics of this field is the relative position of the entities, which are part of the field. This relative position represents the structure of the group and its ecological setting. It expresses also the basic possibilities of locomotion within the field. What happens within such a field depends upon the distribution of forces throughout the field. A prediction presupposes the ability to determine for the various points of the field the strength and directions of the resultant forces. According to general field theory the solution of a problem of group life has always to be finally based on an analytical procedure of this type. Only by considering the groups in question in their actual settings, can we be sure that none of the essential possible conduct has been overlooked." (Lewin, 1952).

Therefore in the SSR a group's social field is treated as the aggregate life space of the individuals that make up a particular group. Gartwright, the editor of Lewin's book titled *'Field Theory in Social Science'*, defines in the *'foreword'* section of the book the term *life space* as follows:

"The most fundamental construct of Lewin is, of course, that of 'field.' All behaviour (including action, thinking, wishing, striving, valuing, achieving, etc.) is conceived of as a change of some state of a field in a given unit of time, (dx/dt). In treating individual psychology, the field with which the scientist must deal is the 'life space' of an individual. This life space consists of the person and the psychological environment as it exists for him. In dealing with group psychology or sociology, a similar formulation is proposed. One may speak of the field in which a group or institution exists with precisely the same meaning as one speaks of the individual life space in individual psychology. The life space of a group, therefore, consists of the group and its environment as it exists for the individual [meaning that a group life space acts as the meta-system of the individual's life-space and not that it equates with every group member's life-space]. (Lewin, 1952).

In SSR, Lewin's field concept should be modified to represent the life space of the individual stakeholders and the life space or the group of the organisational stakeholders as a whole. This leads us to the problem of defining the boundaries of the stakeholders' field in terms of the syntactic, semantic, and pragmatic dimensions of the stakeholders' decision making process, as well as in terms of the interdependency between the

dimensions identified. According to Gartwright an individual's as well as a group's field exhibits three attributes in terms of its location and its depth in time, *existence*, *interdependence* and *contemporaneity*, defined as follows:

'Existence. The life space is defined so that at any time it includes all facts that have existence and excludes those that do not have existence for the individual or group under study. 'Existence for the individual or group' is given a pragmatic definition....

Interdependence. It is a basic assertion of field theory, and here its close relation to Gestalt psychology is apparent, that the various parts of a given life space are to some degree interdependent. It is probable that nothing satisfying the criterion of existence in a given life space can be completely independent of anything else in the same life space....

Contemporaneity. Lewin's assertion that the only determinants of behaviour at a given time are the properties of the field at the same time has caused more controversy than any of his other systematic principles. This principle asserts that the life space endures through time, is modified by events, and is a product of history, but only the contemporaneous system can have effects at any time. The principle of contemporaneity of causation seemed to many to be an attack upon psychoanalytic theory, which asserts the extreme importance of early childhood for later personality, and a denial of the efficacy of learning. In fact, neither of these implications was intended... The methodological consequences of the principle of contemporaneity are evident in the abstract discussion of anamnesis as a method of determining the individual's present state and in the more detailed treatment of problems of conducting research on group culture and history.' (Lewin, 1952, my emphasis).

Based on the above we can argue that in the SSR the boundary of the stakeholders' life space (defined as the steady states-range) is identified as the stakeholders' ideological limits, while existence, interdependency, and contemporaneity are defined as the stakeholders' decision process dimensions; their semantic and pragmatic content of which exist within the stakeholders aggregate ideological limits.

The SSR concept will be developed further in chapter four as an applied concept (the *Specific* and the *Extended* version of SSR) for the identification of ideological conflict within the management team.

3.4.1. The Relationship between SSR and OOEN

The relationship between the SSR and OOEN can be characterised as a *double loop learning* for the business system's stakeholders and for the solution's biases expressed above in the general fuzzy rule. Argyris (1990) defines double loop learning as follows:

"A thermostat is a single-loop learner. It detects when the air around it is too hot or too cold and corrects the situation by turning the heat on or off.... Single loop learning solves the presenting

problems. It does not solve the more basic problem of why these problems existed in the first place..... we have first alter the governing values. This means we have to learn a new theory-in-use. This is double loop learning...



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The measurement of the SSK and the COEN concepts will provide feedback for the further development of an organisational intrinsically motivated information system while it will protect the methodology itself from positivistic applications since the methodology's bias itself becomes subject of evaluation by the stakeholders themselves as well. Their relationship is depicted in diagram 3.-2., as follows:

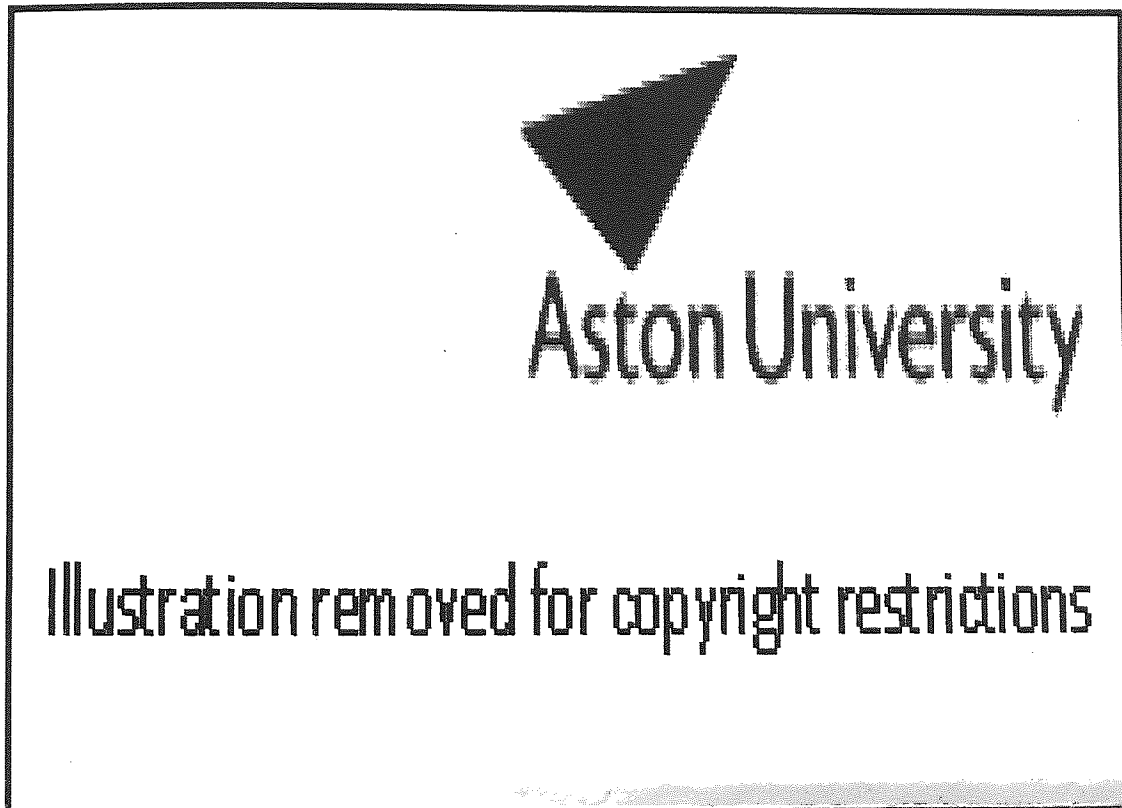


Diagram 3.-2.

In analysis terms the definition of the concept of SSR, that is concerned with the ideological systemic integration of the business systems in terms of its purpose, and the OOEN, that is concerned with the sources of the stakeholders' ideological disposition, on the organisation's value chain, leads us to the development of a twofold analysis paradigm that corresponds to the business system's special nature.

The business system should be analysed from the outside as a relatively objectified system, and from the inside as a HAS. The outside view should be systemic and functionalist in the sense that it should examine the organisational instrumental purpose(s) in the light of systemic integration, cohesiveness and synergy in cybernetic terms. The basic concept for the development of an organisational information system to support and constantly monitor and evaluate that systemic integration is the SSR. The inside view should be emancipatory aiming at facilitating the HAS content to define the organisational purpose(s) free from coercion and false consciousness. The basic concept for the development of an organisational information system to support, constantly monitor and evaluate in critical systems terms the definition of the business purpose itself in an emancipatory manner, is the OOEN. The joining of the two in a double-loop would provide the organisation

with an intrinsically motivated organisational information system. An information system that will constantly report, monitor and support the compatibility, in critical systems terms, of the organisational strategic orientation, value system, standards (policies), major competencies, process and functions with the organisational purpose.

One of the major outputs of an intrinsically motivated organisational information system should be the creation of a "profile" for every stakeholder identified. That profile should include the following information:

- 1) The stakeholders' ideology described on the basis of the steady states range vis-à-vis his/her description of the stakeholders' position on the organisational value chain (perceived as well as official) and vis-à-vis the stakeholders' perception of the overall organisational purpose, strategy and structure and systems. In other words it should include the stakeholder's ideology vis-à-vis his/her organisational power in terms of his/her possession and/or control over the organisational material and informational assets.
- 2) A description of the stakeholders' relationships with other inside and/or outside stakeholders vis-à-vis the conflict overlap areas that the stakeholders participates in for the control and/or possession of the organisation's material and informational interests.
- 3) A description of a particular stakeholder's socio-economic history.

The stakeholders' profile, point (1) would enable them to reflect on and thus inquire further about their purpose(s) by reflecting both on the sources of motivation and/or deception that are contained in their purpose(s) and also on the sources of collective motivation and/or deception that are contained in the business purpose(s) itself.

In addition, the stakeholders' profile point (2) would provide them with meaningful knowledge to the extent that it will enable them to reflect on their interactions with the other stakeholders in the light of their motivations and in relation to the constraints imposed by the instrumental design of the business system itself. Finally, the stakeholders' profile point (3) will enable them to discern how their evolution in the organisation has influenced their present motivation and/or deception that are contained in their purpose in the light of the evolution of their material and informational interests as well as in the light of their interactions with other stakeholders in different time periods.

3.5. Establishing the Validity Criteria for an Intrinsically motivated Organisational Information System

The conceptual solution described above, being a critical systems solution for the development of an intrinsically motivated information system, should be able to establish its validity by showing that it adheres in a complementarist manner to both hard and soft systems thinking philosophies. The two-way intervention of the conceptual solution namely the inside-outside view implies a complementarist approach in terms of hard and soft systems thinking best represented by Simon (1969) and Churchman (1979) respectively. In order to establish then the criteria for the validation of the conceptual solution we will use as a base a "*fictitious debate*", taken from Ulrich (1983), between Simon and Churchman in regard to the philosophical disposition of hard and soft systems thinking and complemented with the conceptual solution's validity criteria. These validity criteria will act as a *formal system*³⁰ *concept* for the design of special nature systems, namely business systems (see the Conceptual Solution's Validity Criteria Table 3.-1.).

³⁰ *Formal System Model*. A generalised model of any human activity system from the point of view; taking purposeful action in pursuit of purpose. It may be used to test the basic adequacy of conceptual models." (Checkland, 1989).

Conceptual Solution's Validity Criteria Table

Position:	"Sciences of the Artificial"	"Philosophy of Social Systems Design"	Validity Criteria
Represented by:	H. A. Simon	C.W. Churchman	
Subjectivity	<p><i>avoided:</i></p> <p>excluded from the definition of objectivity; objectivity has no way to deal with the spirit of social system</p>	<p><i>not avoided:</i></p> <p>must be included in the definition of objectivity; the designer must consider the spirit of individuals and whole systems in the design</p>	<p><i>Must be used to explain objectivity:</i></p> <p>the materialistic and the informational roots of subjectivity must be used to explain relative objectivity in terms of ideological identification and subsequent systemic cohesion</p>
Complexity	<p><i>hierarchical:</i></p> <p>complex systems are built up from hierarchies of subsystems</p>	<p><i>not hierarchical:</i></p> <p>systems are complex because they cannot be described as hierarchies of components</p>	<p><i>Must be both:</i></p> <p>business systems are made up of official objectified hierarchies that are interwoven with its HAS content</p>
Wholeness of systems (holism) is	<p><i>denied except in a pragmatic sense:</i></p> <p>the whole is not more than the sum of the parts, though its analysis is not trivial; regarding complex systems as wholes does not help explain them</p>	<p><i>critically considered:</i></p> <p>cannot be dealt with as sums of parts; regarding complex systems as wholes serves the critical purpose of reminding us of the limits of our understanding</p>	<p><i>Must be considered as a critique of organisational ideology:</i></p> <p>parts (namely the stakeholders motivated by their knowledge constitutive interests) must be defined in terms of common material and informational interests. The highly complex material and informational interaction of parts corresponds to the autopoietic ideological process. The concept of organisational ideology as the ideology of the whole must serve the critical purpose of reminding us of the limits of organisational strategic orientation and action</p>

Reducing complexity of systems to 'simple' subsystems (reductionism) is

a source of knowledge:
every system has components which are simpler systems; systems can be understood as black boxes, and the inquirer's task is to make them transparent (reductionist systems approach)

a source of irrelevance:
what really matters is systems that are individuals; the inquirer's problem is to account for the individual aspect of systems (antireductionist systems approach)

Must be a source of relevance:
only when we consider that the individuals making up a business system (the HAS content) are part (a subsystem) of an *expendable tool* (the business system) with distinct instrumental orientation

The purposeful character of systems (teleology) is

denied:
ascribing purposes to social systems is a source of deception (teleological fallacy)

critically considered:
ascribing purposes to social systems serves a necessary critical purpose against hidden value assumptions (teleological imagery is needed in addition to causal-analytic terms)

Must be critically considered in the terms of the organisational ideology autopoietic nature:
official organisational purposes must be interpreted by the management and the employees. Organisational perceived purposefulness must be examined in the light of organisational power and politics

The decomposability principle is

accepted:
near-decomposability of complex systems (the decomposability principle for artificial systems is applied to social systems)

rejected:
design-nonseparability of the components of complex systems (the design-separability of components of artificial systems does not hold for social systems)

Must be accepted:
only after the HAS content of the business system has defined, in a coercion-free manner, the purpose as well as the structure and the functions of the business system (being a designed system)

The description of systems must

focus on redundancy:
by making use of the world's redundancy, complex systems can be described simply (e.g. in terms of simple process descriptions standing for redundant state descriptions)

focus on uniqueness:
every system has not only redundancy but also uniqueness; to the extent a system is unique, it is its own simplest description (description of uniqueness matters as much as description of redundancy)

Must focus on uniqueness for the HAS content and Must focus on redundancy for the business systems instrumental (based on theoretical reason) design in the light of its HAS uniqueness

<p>The crucial design task to be solved is</p>	<p>problem decomposition: how to decompose a complex system into simple systems that are easy to be controlled? Or: how to design and control complex hierarchies? ("Divide et impera!" standpoint; control problem)</p>	<p>problem identification: how to describe unique systems, and especially: how to identify the whole system on the one hand, the smallest system (individual) on the other? ("Ethics of whole systems" standpoint; boundary problem)</p>	<p>Must be problem identification in terms of the organisational ideological constraints and in terms of the phenomena of organisational power, coercion and false consciousness of the whole system before the design of the business instrumental design takes place</p>
<p>The designer's main tool is</p>	<p>objectivity: semantic precision of concepts, model building, causal-analytic explanation: mathematical analysis, empirical research, computer simulation, heuristic programming: scientific rigor, "programmed decision making" (Science of the Artificial 1969)</p>	<p>subjectivity: reflection on the sources of knowledge and deception: social practice, community, interest and commitment, ideas, esp. the moral idea, affectivity, faith; on going debate and self-reflection, "process of unfolding" (The Artificiality of Science, 1970b)</p>	<p>Must be subjectivity and relative objectivity that must be facilitated through the exchange of validity claims which aims to a coercion free consensus and thus becomes the necessary relative objectivity needed for the design of the business system instrumental design itself</p>

Table 3.-1.

3.6. Conclusion

From the above discussion we can conclude that the solution to the IS development problematic must look at purpose before developing IS, it must cope with the stakeholders' complex-coercive relationships and the phenomena of organisational power, coercion and false consciousness that characterise the contemporary business organisations. It must explicitly deal with organisational ideology and it must take both an inside (for emancipation) and outside (for systemic/functional integration) views. It must produce meaningful knowledge to the extent that it makes the stakeholders reflect on their ideological limits and inquire about their purpose(s) in relation to the business system and the other (perceived) stakeholders. In addition it must produce meaningful knowledge to the extent that it makes the stakeholders reflect both on the sources of motivation and/or deception that are contained in their purpose(s) and the perceived business purpose(s) itself. Overall it must produce meaningful knowledge regarding the organisation's domain of problematic and solution, incipient instability arising from organisational conflict and the organisation's ability to adapt or influence its

environment by achieving a steady-state at a particular point in time. This solution must ultimately produce an intrinsically motivated Information System that is the result of theoretical and methodological inter/intra complementarity. To be more specific, this particular intrinsically motivated Information System must produce meaningful knowledge in regard to the following organisational issues (see the Formulating the Strategy for a Solution Table 3.-2.):

Formulating the Strategy for a Solution Table

<i>Issue</i>	<i>Conceptual Solution</i>
1. Track, measure, and report on the organisational systemic/functional integration in terms of the organisational ideological cohesion - Outside View	Based on the SSR concept/subsethood measurement
2. Track, locate on the organisational value chain, measure and report on the organisational entropic trends in terms of the stakeholders' conflict for the control and/or possession of the organisations' material and informational interests - Inside View	Based on the OOEN concept /fuzzy entropy measurement
3. Track and compare the organisational ideological cohesion with the organisational entropic trends	Based on the General Fuzzy Rule - single loop learning - (the subsethood measurement compared with fuzzy entropy one)
4. Track and report on the methodological bias itself	Based on the General Fuzzy Rule - double loop learning - The general Fuzzy Rule under review on the basis of the comparison results from the above measurements

<p>5. Create the stakeholders profiles</p>	<ul style="list-style-type: none"> - To provide the stakeholders with meaningful knowledge to the extent that it will enable them reflect on and thus inquire further about their purpose(s) by reflecting both on the sources of motivation and/or deception that are contained in their purpose(s) and also on the sources of collective motivation and/or deception that are contained in the business purpose(s) itself. - To provide the stakeholders with meaningful knowledge to the extent that it will enable them to reflect on their interactions with the other stakeholders in the light of their motivations and in relation to the constraints imposed by the instrumental design of the business system itself. - To provide the stakeholders with meaningful knowledge that will enable them to discern how their evolution in the organisation has influenced their present motivation and/or deception that are contained in their purpose in the light of the evolution of their material and informational interests as well as in the light of their interactions with other stakeholders in different time periods.
<p>6. Use complementarist thinking to address different aspects of organisational life</p> <p>7. Use the conceptual solution's validity criteria to transform system model</p>	<p>Production of a new methodology based on the inter/intra methodological complementarism</p> <p>The production of a new methodology should meet the conceptual solution's validity criteria in a complementarist manner in regard to the hard and the soft system thinking philosophy.</p>

Table 3.-2.

The above table should be used as a guide for the development of the new methodology.

- Chapter Four -

**THE BSPA
SOLUTION**

4.1. Our Research Bias Expressed

- A Connecting Summary and Chapter Four Introduction -

In chapter two we took up a 'journey' into the world of knowledge produced by many researchers, practitioners, and philosophers in the fields of management, organisational behaviour, information systems, systems analysis, cybernetics, soft systems thinking, and critical systems thinking. Our 'journey' was planned, meaning it was biased, by an initial assumption that the existing information systems developed for business organisations fail because the systems developed are inappropriate for the organisations that they are designed for. Basically, they fail because they do not take into consideration the purpose of the system that they are designed for. Therefore we set-out to search for evidence of truth regarding our initial assumption with a critical disposition aiming towards discovering the reasons why contemporary information systems fail and why they do not take into consideration the organisation's purpose. This implies that attached to our initial assumption there was a further assumption that business organisations do have a purpose(s), namely they are purposeful entities. These two fundamental assumptions led us to a third epistemological assumption that the examination and the analysis of the organisation's purpose(s) can not be performed through the examination and analysis of one organisational aspect only, namely the strategic, or the psychological, or the sociological, or the cybernetic, etc., but at a meta-level of analysis, namely at a complementarist level, where all these aspects complete the organisation's purpose(s) puzzle. The third assumption corresponded to our initial belief that the failure of information systems development originated from the designers' (analysts') inability to come to terms with the multiplicity of organisational aspects, meaning that the failure of their designs (the organisational information systems produced) were due to their very limited and reductionist focus.

The third assumption demanded, in epistemological terms, that in our examination of the organisational purpose(s) we should include all the organisational aspects or at least the major ones in a homomorphic manner. Three main organisational aspects were identified. The social aspect that views and examines the organisation as a HAS pursuing social purpose(s) -thus being subject to practical reason; the management aspect, which views the organisation as a designed system pursuing instrumental purpose(s) -thus being subject to theoretical reason; and the critical systems aspect, which views the organisation as a viable system pursuing emancipatory purpose(s) regarding its existence and its identity -thus being subject to critical systems thinking. These three major aspects contained more detailed organisational aspects as well, such as the strategic aspect, the psychological aspect, the economic aspect, etc... It has to be noted at this point that the classification of all (means all those aspects we perceive to exist) organisational aspects into three major aspects it is not an absolute one in the sense that all the organisational aspects must fall exactly within one of the major aspects. It is rather a fuzzy classification meaning that there are 'overlaps' between the three major aspects. But those very overlaps do not provide us with the necessary meta-level of reasoning concerned with their fit and interaction in order to analyse the organisational purpose(s) itself. That meta-level of reasoning can only be possible through an analysis paradigm that will consider all the three aspects concurrently and not in isolation or in a sequential manner but also at the level of their interaction where the organisation's emergent property, namely its purpose(s), can be comprehended. Our initial assumption that at least one analysis paradigm, that of the

information systems development, does not deal adequately with the organisational purpose problematic prompted us to undertake a more specific 'journey' in the 'land of knowledge'. This time we searched for other analysis paradigms that will satisfy our need for an analysis paradigm which treats all three aspects as a unified whole thus providing us with the ability to analyse the organisation's purpose. Therefore we drew a fourth segment in the 'land of knowledge' where we concern ourselves with the analysis of the analysis paradigms in the light of the service they offer to the inquiry of the organisational purpose. That fourth segment was not easy to draw because it tended to overlap with all the three previous segments. This is due to the fact that different analysis paradigms focus either on the business system's HAS's or on its instrumental design but at the same time they raise serious epistemological as well as ethical issues such as the observer-analyst problematic or ideological as well as ontological issues.

Therefore by examining all these four aspects we kept-on searching for evidence of truth supporting our initial assumptions. This search led us to the following conclusions that provide us with the foundations upon which we can build the proposed methodology:

a) At the sociological level man becomes a purposeful element of a purposeful holon namely of a HAS, a larger purposeful entity, which ensures the coordination and synergy between the purposeful behaviour of its operational elements (men) with the use of the ideology mechanism. A mechanism (meaning a process) which creates commonness between the operational elements (humans) in perceiving the socio-economic conditions, within which the elements themselves are embedded by connecting situational values and relevant context at a particular point in time. The corporate ideology, namely the business system's ideology, is based on the same principles but it corresponds specifically to a particular business system. The role of corporate ideology is regarded as rather important in social terms due to the fact that the business system is regarded in this thesis as the dominant institution in our contemporary society.

b) At the management level we started developing the concept regarding the business system's nature by adding provisionally the design attributes of the organisation upon its HAS nature identified implicitly in the social aspects section. A business system in this segment is defined provisionally as a human activity system, which facilitates economic transactions ideally in a less costly manner than the market, or in other words is defined as a bureaucracy in the Weberian sense. One might wonder then what is/are or could be the purpose(s) of a special nature system, namely a system which is designed but at the same time is a HAS as well?

Mintzberg provides us, in section 2.2.1., with an analysis of the evolution of the generic business purpose since the 1950's. Mintzberg's analysis provided us with the necessary evidence about the dynamic nature of a business system's purposeful behaviour that corresponds to a process of politics between the organisational stakeholders aiming at controlling or influencing the organisation's purpose towards their ends. Basically the main conclusion drawn is that the business systems' purposeful behaviour can be characterised as a differentiation process of the business system's subsystems (in the Weberian sense), which set off many organisational stakeholders employing the requisite power to influence in their way the organisation's

orientation. The fact that the business organisation's purpose has evolved from the one actor [the owner] one goal [maximisation of profit] doctrine (apparent teleology) to the political arena and to the contemporary political metaphor (teleonomy) describing the business system's purposive behaviour confirmed our initial differentiation assumption.

Therefore, since we have proved the dynamic nature of the business system's purposeful/purposive behaviour we turned our attention to the relationship between the organisational purpose and the organisational structure and processes. Johnson and Kaplan provided us, in section 2.2.1., with an analysis of the history of the Great American Corporation focusing on the evolution of organisational processes and especially the accounting process in conjunction with the evolution of the organisational purpose and structure. Their analysis confirmed the existence of the indissoluble bonds between purpose-structure-process and it highlighted the serious organisational problems that arise due to their incompatibility through the failure of the contemporary financial accounting systems to come to terms with the rapid changes in the contemporary organisation's structure and purpose.

Since we proved the relationship between purpose with structure and process we turned our attention to the examination of the teleological concept, which advocates that purpose defines (or it should define) the organisational structure and process. The aim was to reinstate the teleological concept as a critical concept in epistemological terms, which will allow us to critically examine organisational structure and processes in order to facilitate their design or redesign. In addition, we examined the compatibility of the teleological concept with the cybernetic principles. By arguing that the organisational viability principles complement the teleological concept and that strategy (namely the commercial rationale) should be subject to conscious planning, we set the foundations for the epistemological use of the organisational cybernetic principle into the proposed methodology's complementarist framework, while at the same time we set the foundations for the critical examination of strategic decision making in the light of organisational purpose.

In addition we explored the relationship of the organisational purpose with the situational factors that the proposed methodology will have to address. These situational factors, according to Mintzberg and Quinn, are the age and size of the organisation, its environment, its technical system, and its power structure. Purpose, as in the case of structure and process, according to the teleological concept defines organisational culture and organisational ethics. But when systemic purpose demands for change in the organisation's direction then these organisational factors become obstacles to change.

c) At the analysis paradigms level we tried to discover how the major analytical paradigms, used in the last few decades, served the purpose of analysing organisational purpose and its relationship with the other organisational factors, namely structure, process, culture, ethics, etc., in the light of the business system's special nature (designed system and HAS at the same time). The argument about the organisation's special nature implies that its purpose at any one time would be a mix of instrumental as well as social imperatives.

This argument also implies that an analytical approach should be a mix of theoretical (theoretical reason) and practical (practical reason) elements to meet the variety exhibited by the organisation's purpose itself.

In addition, by defining the contemporary organisational metaphor as the political one then we admitted elements of critique (critical systems reason) in the business system's purpose mix. One can clearly distinguish that our stance vis-a-vis the existing methodological paradigms is a critical one and it corresponds to Habermas's knowledge-constitutive interests. Therefore, based on Habermas's knowledge-constitutive interests we were able to segment the analysis paradigms segment into three sub-segments. These three sub-segments were filled with methodologies that concentrate on the technical interest thus addressing the instrumental elements of purpose; with methodologies that concentrate on the practical interest thus addressing the social elements of purpose; and with methodologies that concentrate on the emancipatory interest thus addressing the political elements of purpose. The major conclusion drawn from the analysis of the analysis paradigms is that no methodological paradigm deals with organisational purposefulness in its totality. In other words none of the methodological paradigm deals with all three human interests simultaneously. This implies that the paradigms analysed can be characterised as reductionist in terms of the organisational purpose problematic. This conclusion made apparent the need for a new critical systems paradigm that will deal with the above problematic.

Therefore, in this chapter we are going to put some "flesh" on our arguments that we need a new critical systems methodological paradigm and a new methodology that will provide the organisational information systems that demonstrably improve the coordination of organisational activities by enabling the development and maintenance of a single/multifaceted view of purpose throughout organisations. Namely, intrinsically motivated information systems that will produce meaningful knowledge to the extent that it makes its users (business system's stakeholders) reflect and thus inquire about their purpose(s), in relation to the business system and the other (perceived) stakeholders, by reflecting both on the sources of motivation and/or deception that are contained in their purpose(s) and also on the sources of collective motivation and/or deception that are contained in the business purpose(s) itself.

In other words in this chapter we are going to turn the strategy for a solution, that is explicated in chapter three, into a solution that comes under the name of *Business Systems Purpose, Analysis (BSPA)*, methodology. Therefore in section 4.5., following the demands of the strategy for a solution, that is summarised in table 3.2., we develop the concept of the outside view and subsequently the concept of the specific SSR that corresponds to point (1) in table 3.2.. In section 4.6., we develop the concept of the inside view and subsequently the applied OOEN concept by developing the concepts of the BSPA value chain, the control overlap areas, and the stakeholders power-types that correspond to point (2) in table 3.2.. In section 4.8., we develop the concept of the Actor Profiles that corresponds to point (5) in table 3.2.. The development of all the above concepts is performed in a complementarist manner which meet the validity criteria for an intrinsically motivated organisational information system that correspond to points (5) and (6) in table 3.2..

The strategy's demands for the development of a double-loop learning, that correspond to point (4) in table 3.2., is met in sections 4.3. and 4.4., where we explicate the BSPA philosophy and principles. In these sections the proposed methodology's methodological bias is made explicit, a necessary step for the development of a double-loop learning that according to the demands of the strategy for the development of a solution should be based on the General Fuzzy rule. For this reason in this chapter we elaborate first the BSPA philosophy and the BSPA principles before the development of the methodological concepts themselves.

Finally, in section 4.8., we outline the methodology's necessary methodological steps that we explicate in chapters five and six. The strategy's demand for a single loop learning, that correspond to point (3) in table 3.2., between the SSR and the OOEN concepts in the light of the General Fuzzy Rule is explicated in chapter five and six where the detailed development of the Specific SSR Rule and the detailed development of the OOEN on the BSPA value chain respectively allows for the development of the BSPA fuzzy rule (single loop learning).

4.2. BSPA Philosophy

The BSPA philosophy helps one to perceive business systems as special nature, self-constrained systems by their organisational ideology(ies) (explicated in the sub-section 4.2.1.), that can be described best with the employment of the political metaphor. In addition, the BSPA philosophy helps one to distinguish and critically evaluate the operations of a business system within its operational environment, namely within the wider objectified social environment that the business system is called upon to play the role of the dominant institution. Therefore, the BSPA analyst should not allow him/herself to become an 'instrument' in the hands of the most powerful stakeholder. Instead he/she should strive for human emancipation by being always conscious of his/her biases and values entering his/her epistemology in perceiving as well as in the inquiry of the organisational problematic areas. The role of the BSPA analyst is explicated in the sub-section 4.2.2..

4.2.1. The Stakeholder Concept and the Role of the Organisational Ideology

The organisational actors in BSPA are defined as stakeholders in the sense that they have an implicit or explicit stake, as they perceive it, in the operations of the business system in focus. They can be passive beneficiaries, or losers, as a result of the business system's operations, or active influencers and shapers of the system's purposes and mission. The stakeholders could be defined as individuals but they can and mostly do appear in the form of groups of individuals who express commonness in regard to perceiving the social world and a business system's purposes, as well as commonness in regard to their purposeful behaviour. The common factor originates from common organisational and informational interests leading to relative objectivity (shared realities) in perceiving the business system's purposes. The perception of common interests can be the result of an act of qualification, originating from self-knowledge, or an act of subjection based on false consciousness or coercion.

Organisational ideology, in the contemporary business system, is defined as the process that produces and reproduces a consensus reached through the interaction of strategic-oriented actions, which are undertaken by a number of stakeholders that focus on the maximisation of their utility functions as they perceive them, within a particular epigenetic landscape (Beer, 1979); that being no other than the contemporary objectified social system. This statement implies that in the contemporary objectified social system organisational ideology assumes its negative side thus helping to legitimise political forces by distorting communication, promoting false consciousness and concealing strategic-oriented actions under the cloak of amoral pseudo-consensuses. In other words then, ideology is the process that facilitates the realisation of particular material and informational interests, and it can be understood only through the critical reconstruction of those material interests and socio-economic conditions which made the functioning of the process possible (*critical hermeneutics*). Historical materialism and critical hermeneutics (Habermas, 1989) focusing on material as well as on the communicative reproduction of the lifeworld, are chosen to be the basis for the BSPA's social inquiry. An inquiry that is directed by an analyst who has denounced positivism and functionalism in regard to his/her role, thus being conscious of his/her biases in his/her enquiry of the business system in focus.

The role of the organisational ideology, as it was argued in chapter three, then can be defined as being homeostatic in regard to the organisations operations, but does not conform to the stimulus-response (S-R) paradigm because that would amount to the suppression of the organisation's spontaneous activity (von Bertalanffy, 1987). In addition, organisational ideology adheres to the principle of equifinality. The *spontaneous activity* of the organisation, that leads it to a steady-state with its organisational environment based on different initial conditions (equifinality), will be preconditioned by the organisation's ideology itself. The organisation's *internal elaboration* will be preconditioned by ideology as well. Any organisational steady-state would be meaningful only within the limits of organisational ideology. Any states beyond the limits of the organisational ideology would be resisted because they will demand for the destruction of the ideology in the first place. In other words organisational ideology provides an organisation with organisational closure. Any organisational steady states as well as the perception of any organisational problematic areas, by the stakeholders who qualify (or they are subjected through false consciousness) with a particular organisational ideology, would only be meaningful within the dominant ideology's limits. Therefore, if we take into account the objectification of the contemporary social world, being the ultimate *metasystem* (Beer, 1979) of the business system in focus, and if we further make the assumption that the ideological inputs are material and informational interests, then we are led to the conclusion that the most powerful stakeholder, in terms of having the *capacity* to exercise power, would be most responsible for the functioning (namely the preservation) of the organisational ideological mechanism (process) as well. Strong organisational ideologies reduce transaction costs but they limit and precondition the chances for critique as well. In the absence of genuine critique the organisation runs the risk of becoming pathologically autopoietic. This implies that in the absence of genuine continuous critique organisational ideology can turn an open autopoietic system (Maturana and Varela, taken from Mingers, 1995), such as a business system, from being organisationally closed and structure-open to being structure-closed as well as organisationally closed. Namely organisational ideology, in its negative form can transform an open system into a pathologically autopoietic one. That implies that organisational processes

and the organisational structure and processes themselves become sources of resistance to organisational change while the system becomes closed rather than open. Inputs conveying environmental changes are not perceived or they are disregarded. In this case the organisational strategic positioning is left to emerge, in an uncritical manner as a pattern (Peters 1984), originating from the consolidated organisational processes and structure.

4.2.2. The Role of the Analyst

The role of the analyst, when confronted with the negative side of the ideology, would be to avoid becoming an 'instrument' in the hands of the most powerful stakeholder's political game. His/her mission is to direct the epistemological inquiry into the problematic area in a way that human emancipation is achieved and human's basic needs (Maslow, 1970) are satisfied in the light of the concept of the good society (Maslow, 1970). It is a basic assumption of the BSPA philosophy that systems design should aim towards creating an environment where subjectivity and individualism have meaning in the modernist³¹ sense. An environment where ethical relativism is rejected as dangerous for the welfare of society as a whole.

The BSPA application onto organisational problematic areas or messes (Ackoff, 1981) is based on the generic classification of those problematic areas according to the motivation of perceiving them in the first place. In BSPA we have classified the organisational stakeholders' motivations leading to the perception of a problematic area into three distinct classes defined as "losing money", "conflict", and "self-knowledge". These three generic classes correspond to Habermas's knowledge constitutive interests and they represent general cases of business problematic areas created when the business system engages in the process of discharging its stakeholders' interests in the contemporary social environment; namely the capitalist society.

The generic class losing money represents a general business problematic area that corresponds to man's technical interest and to the organisation's instrumental purpose(s); the generic class conflict represents a general business problematic area that corresponds to man's practical interest and to the organisational HAS's workings; the generic class self-knowledge represents a general business problematic area which corresponds to man's emancipatory interest and to the organisation's power structure. These generic classes serve the purpose of providing the analyst (as an outside stakeholder) with a provisional idea in regard to the role he is called upon to play by the initiator of the study, who might be the most powerful stakeholder as well. These classifications are explained as follows:

³¹ *Modernism* is the philosophical stance which upholds reason and believes that rationality can be used to promote and perfect human life. Modernism originates from Enlightenment which upholds that history is a progression towards the perfect human life. Modernism is distinguished into "systemic emancipation or towards the perfect working of the society as a system. Modernism is distinguished into "systemic modernism" and "critical modernism" (Cooper and Burrell, 1988). Systemic modernism is associated with the use of the systems approach in describing an programming society towards predetermined ends. Critical modernism opposes systemic and especially opposes the functionalist use of the systems concept used as a tool in social planning.

a) Losing money: In an objectified social system, which acts as the outer algedonic loop³² (Beer, 1990) of a special nature social entity, such as a business system, the money-medium acquires a meta-attribute, that of measuring 'objectively' the organisational transactions. In addition, the concept of the business system's successes or failures within the objectified outer-algedonic loop can be measured "objectively" by the stakeholders in terms of gains or losses observed as expansions or contractions respectively in the money-medium. The money medium is the main currency that the outer-algedonic loop used to report to the society the 'successes' or 'failures' of the Western organisations. In this case critique would be confined to the ways of correcting the losses. Solving positively, the 'well defined' and 'objectively' measured problem (and not problematic area), would lead to the reaffirmation of the organisational status-quo. In the case where that is not possible then is most like that a differentiation organisational process (namely the de-coupling) will begin regarding the organisational subsystems. That differentiation process might lead to the surfacing of lateral conflict thus leading to an increase of the organisational entropic trends.

b) Conflict between different stakeholders is the result of a power game for the control of the organisation's material and informational assets. In this case we are talking about the conflict of two (or more) ideologies in an organisation where the ideology of the most powerful stakeholder has not been fully diffused in the business system in focus. Compromise or coercion is the most likely outcome. The analyst is called upon to produce that compromise or to coerce with his expertise one of the conflicting parties.

c) Self-knowledge of a stakeholder's ideological limits, including their origins and thus the need for transcending them is the ideal case (because there is the willingness to transcend ideological limits a priori) for organisational change and for reaching a coercion-free consensus with other stakeholders. In this case the analyst is called to aid the process of critical reflection by advising the interesting party(ies) in terms of the systems science perspective.

In the next chapter where we elaborate on the applied (on business system) SSR, namely the Specific SSR, we will see how the SSR concept is connected with the problematic areas and the organisational ideology.

4.3. BSPA Principles

The BSPA philosophy leads us to the formulation of ten BSPA principles. These principles are defined as *relative a priori* of our *experience*³³ (Ulrich, 1983). The term *relative a priori* is used to define the BSPA

³² *Algedonic Loop*: "a circuit for algedonic regulations, which may be used to over-ride an analytic control circuit. For example, acute discomfort may stop us from performing a task we perfectly understand and wish to complete; fail-safe devices may be used to switch-off a whole plant when some critical variable is exceeded, without knowing why it has happened." (Beer, 1990).

³³ "In a postscript to knowledge and Human Interests Habermas introduces a distinction which is not contained in *knowledge and Human Interests* Habermas (1973b) introduces a distinction which is not yet contained in *knowledge and Human Interests* but which helps to clarify many of the difficulties of a post-Kantian approach to transcendental reflection. Referring to Karl-Otto Apel's (1967-70) distinction between 'constitution of meaning' (*Sinnkonstitution*) and 'reflection

principles as the fundamental conditions of the possibility of intersubjective meaningful experience. They are made explicit in order to avoid any positivist illusions regarding the stakeholders the a priori of experience. Contrary to positivism they are made explicit in order to be used consciously and in a critical manner by the stakeholders in their search for a coercion free consensus regarding the evaluation of the business system's purposeful behaviour as well as its redefinition if a redefinition is perceived as necessary. BSPA's nineteen relative a priori principles of experience are the following:

1. Human Nature

Human nature is regarded as need-based and as relatively universal, and it adheres to Maslow's hierarchy of needs. Human Activity Systems design should be oriented towards satisfying human needs in the light of the concept of the good society (discussed in sections 2.2.).

2. Human Purposefulness

Human purposefulness corresponds to an innate human need to attribute meaning to his actions and to the world around him (discussed in section 2.2.).

3. Relativism

The concept of relativism is disregarded as dangerous for the welfare and the very existence of society as a whole (discussed in section 2.2.4.).

4. Shared Realities and Ideology

Shared realities express the collective identity and the socio-economic interests of a human activity system or subsystem (discussed in section 2.2.3).

5. Ideology

Ideology is the autopoietic process that produces and sustains meanings, values, signs, shared realities, cultures, world views or Weltanschauungen and beliefs originating from human's material and informational interests in

on validity' (*Geltungsreflektion*), he proposes to distinguish two types of 'transcendental' questions that a transformed transcendental philosophy, as he calls it, would have to consider:

- a) a question of the 'a priori of experience' (*Erfahrungsapriori*), and
 - b) the question of the 'a priori of argumentation' (*Argumentationsapriori*, also called 'a priori of communication' by Apel).
- The **a priori of experience** takes up one intention of Kant's transcendental question: What are the conditions that precede (are a priori to) the constitution of objects of experience and give it meaning? The **a priori of experience** concerns a second intention of the transcendental question: What are the conditions for justifying the truth claims of statements about objects of experience, i.e., assertions of 'facts'? (The same question also applies to validity of claims and statements about values, i.e., assertions of 'norms'.) (Ulrich, 1983).

life. The positive side of the ideology (autopoietic process) provides a social group or the society itself with unity into perceiving the social world. In addition, it provides a HAS with homeostasis, cohesiveness, synergy and orientation in regard to pursuing technical and social goals as well as with a framework for perceiving and solving problematic areas. The negative side of ideology (pathological autopoietic process) helps to legitimise a dominant political force, it resists social change and it can be used to distort communication systematically thus creating false consciousness or in other words illusions about the reality of the social world (discussed in section 2.2.3.).

6. Organisational Metaphor

The political metaphor (Flood and Jackson, 1991), is representative of the contemporary business organisation's operations. The relationships between the stakeholders are deemed to be power relationships, implying politics, conflict, coercion and false consciousness. The business system's systemic purpose is the result of the stakeholders' purposeful interaction, defined as strategic (Habermas, 1984), motivated by the collective interests they represent (discussed in section 2.2.).

7. Organisational Purpose

The organisational purpose is defined as the result of the interaction of internal and external stakeholders engaging in strategic-oriented actions aiming to maximise their utility functions as they perceive them, thus resulting in a power game characterised by asymmetrical power relations, coercion and false consciousness (discussed in section 2.2.)

8. The Teleological concept

The validity of the teleological concept, advocating that purpose defines structure and process, is confined into its epistemological use as a critical systems concept (discussed in section 2.2.2.) and is used in the analysis of the business system.

9. The Relationship between organisational purpose, structure, and processes

Organisational purpose defines organisational structure, process and culture, and organisational ethics at least at the birth or the early age of the business system, while it is subject to situational factors. Organisational structure, process, culture and ethics become obstacles to change when the business system's purpose changes (discussed in sections 2.2.2. and 2.2.6.)

10. Strategy as a Position

The teleological concept is compatible with the Porterian school of strategic thinking regarding strategy as a position. The Porterian concept of value chain describes in systemic terms the organisation's activities (processes) as an open system interacting with its environment (discussed in section 2.2.6.).

11. Organisational Purpose Content

The acceptance of profit-maximisation for the stockholders, as the sole systemic purpose is deemed to be short-sighted, practically unattainable, and socially irresponsible. Profit is perceived to be a precondition for a business system to remain viable (and to be socially responsible), but it should not be an ideal in itself (discussed in section 2.2.).

12. Business Social Responsibility

The realisation of consumer sovereignty should be the ultimate responsibility of a business system, and it should be expressed in its systemic purpose (discussed in section 2.2.5.).

13. Business Systems Nature

Business Systems are defined as special nature systems in the sense that they are 'expendable tools', pursuing instrumental purposes in the service of humans' technical interest; but their content is a HAS. Instrumental purposes should be defined from the inside, meaning that they should originate from its HAS content, being the result of a coercion-free consensus (discussed in sections 2.2.7.).

14. Analysis Methodology Concept

The analysis of a business system should be twofold corresponding to its special nature. The system should be analysed from the outside as a relatively objectified system, and from the inside as a HAS. The outside view should be systemic (based on the BSPA's homomorphic model) and functionalist in the sense that it should examine the organisational instrumental purpose(s) in the light of systemic integration, cohesiveness and synergy in cybernetic terms. The inside view should be emancipatory aiming at facilitating the HAS content to define the organisational purpose(s) free from coercion and false consciousness (discussed in section 3.2.).

15. The Observer-Analyst Bias

In BSPA, we attempt to make the analyst's bias explicit. The term observer is rejected in favour of the term stakeholder as a more accurate description of the analyst's role. The BSPA analyst's bias can be identified in his/her adherence to the BSPA principles and philosophy and to the Kantian ethic which advocates that one should never treat people as means but rather as ends (discussed in sub-section 3.4.1.).

16. Epistemology

The analysis of organisational ideology leads us to the identification of possible conflict of material and informational interests, power relationships, perception standards (Weltanschauungen), as well as information flow semantics and pragmatics (discussed in sections 2.2.7.).

17. Knowledge constitutive interests

The above analysis will be based Habermas Knowledge-constitutive interests and will conform to the philosophy of critical hermeneutics (discussed in section 2.4.)

18. Organisational Power

Power relationships, conflict and politics in a business system are deemed as the competition between stakeholders for the control of the organisation's material and informational resources. Power itself can be defined as the possession or the control over of the organisational resources and can be located on the organisation's value chain. The capacity to possess or control organisational material and informational assets amounts to its exercise as well either through imperialistic actions or even 'defensive' actions regarding the preservation of those possessions. Abdication of power amounts to the loss of possession or control over organisational material or informational organisational assets (discussed in section 2.2.4.).

19. Business Organisation and Strategic Positioning

The purpose of the organisation should define the business structure and functions in the light of the alliance capitalism model (Keiretsu) of industrial organisation (discussed in section 2.7.).

4.4. BSPA on Problematic and Solution

In the philosophy section 4.2.2., we talked briefly about the BSPA's classification of problematic areas or messes. In that classification we identified the special role of ideology as being the process which feeds on the possession or control, or the intended possession or control of organisational material and informational resources. We defined its special homeostatic role in regard to the location of the organisation's steady states-range (SSR). In addition in chapter three we answered the question about the organisation's steady states location in the case where the organisation is subject to ideological cleavage with the analysis of the SSR. In this section we will connect the SSR concept with the business systems problematic areas classification and the role of the analyst called to undertake the analysis of the perceived business problematic areas.

In BSPA we treat a group's social field, explicated in section 3.4., as the aggregate life space of the individuals that make up a particular group. In the Specific SSR, Lewin's field concept would be modified to represent the life space of the individual managers and the life space of the management group as a whole. This leads us to the problem of defining the boundaries of the management group's field in terms of the syntactic, semantic, and pragmatic dimensions of the management team's decision making process, as well as in terms of the interdependency between the dimensions identified. Based on the life space's three attributes, explicated in section 3.4., namely the life space's depth in time, existence, interdependence and contemporaneity we can argue that in the Specific SSR, explicated in section 4.5., the boundary of the management group's life space (defined as the steady states-range) is identified as the group's ideological limits, while existence, interdependency, and contemporaneity are defined as the management team's group decision process dimensions; their semantic and pragmatic content of which exist within the management team's aggregate ideological limits.

Therefore, in case where the analyst is called to undertake a project in an organisation being in a state of ideological cleavage, the analyst would be asked to find a solution or to resolve the conflict within a predetermined SSR. The SSR has to be shortened in order for the organisation to become more stable in its operations, or in other words for its steady state to become more stable. The stakeholders in this case will engage in politics employing their power bases to shorten the organisation's SSR by trying to increase each other's ideological SSR. In other words a strong ideology will employ a short SSR because strong ideologies tend to minimise the chances of critique and they rely on symbolic communication mostly for their reproduction. A strong team of well-trained commandos can fight to death when they see that their flag has fallen in the enemies' hands. Their SSR is short, namely their purposeful action(s) to reaching a steady-state with the war environment they are operating within is clear cut. They qualify 'one hundred percent' with the ideology, which says that "never you should leave your flag in the enemies' hands". This qualification implies automatic action within the limits of the ideology.

Group *polarisation* (polarisation is a descriptive term used to describe group phenomena related to the group's ideology where more than one pole exists – plus and minus poles – but the stakeholders are attracted

only by the plus pole) increases, the more the individuals identify with a particular ideology. This implies that in the case of polarisation the SSR would be short. If total and absolute agreement exists between all the stakeholders regarding all the aspects of the system then the SSR will diminish to a single point leading to the loss of equifinality and thus transforming the organisation into a closed system, since the system's purposeful behaviour would be predetermined. The strategy then of two clashing stakeholders with opposing ideologies, is to destabilise the opponent by increasing its SSR thus increasing the changes of critique, and the possibility of rejecting the ideology itself. This was the game played (as we perceive it) during the cold-war years between USA and USSR as part of the limiting nuclear zero-sum option. It is no accident that the USA won the cold-war because its ideology had stronger material and informational roots (inputs) than that of the USSR. The lack of strong material and informational roots of the USSR ideology and the inability of the Soviet State to satisfy the Soviet citizens material and informational interests increased dramatically the Communist Party's SSR. Cohesiveness was threatened because the very cohesive agents (namely the material and informational interests) were calling for the destruction of the Communist ideology itself. Coercion was unavoidable!

Kennedy (1988) describes Stalin's effort to shorten the Soviet Union's SSR between the 1930's and 1950's as a "process of ideological stiffening" based on cruel totalitarian controls. Therefore we can argue that in the case of organisational conflict due to ideological cleavage the stronger (the most powerful) stakeholder would be the one with greater material and informational assets. He most probably will be the initiator of the analysis effort in the hope of enhancing, protecting or preserving his power base. In the case where the organisation is losing money but employs one strong ideology then the analyst would be called in to reaffirm the status quo by correcting the money-losses problem. The IBM example with its insistence in the mainframe market proved very costly indeed. The company's focus on the mainframe market in conjunction with its perception of itself as the 'indisputable market leader' (based on its *market exclusivity* and vertical integration), that could take 'the market by storm', even if huge investments made by its clients on compatible technologies would be rated totally incompatible with the introduction of new technology, led to the company's relative failure, among other factors, in the PC market. In other words IBM's perception and focus led to the underestimation of the PC's market potential and subsequently to the underestimation of the market's vital technologies, namely the PC's processor and the operating system technologies. The peculiar thing about IBM's obsession with the market exclusivity dogma remained strong even when the company subcontracted the PC's operating system and the processor chip to Microsoft and Intel respectively. It seems that Microsoft and Intel were brought-in as suppliers of those necessities that IBM did not want to manufacture, in accordance with their market exclusivity concept. IBM always believed that they can 'sweep the carpet' under their rivals' 'feet' if they became a threat by introducing new products in the PC market. The very introduction of the patented technology *Microchannel*³⁴ was aiming to do just that to IBM's rivals in the PC market. The Microchannel story

³⁴ "Still, from several points of view IBM had badly miscalculated. Buying the key parts of its machines from Intel and Microsoft, without demanding any kind of exclusive deal, effectively left control of the technical standards in these companies' hands. Scores of other firms, many of them new ones such as Compaq, quickly learnt to 'clone' copies of IBM's machines using Intel chips and Microsoft's MS-DOS operating system. Their machines also ran all the software written for IBM's machines. To the user, therefore, there was no real difference between them. Users began buying the machines primarily on the basis of price. As demand for the machines took off, hundreds of small, low cost producers jumped into the

reinforces the suspicion that IBM due to its success originating from the market exclusivity dogma underestimated the very strategic hazards from subcontracting key technologies to lower cost manufacturers.

Only self-reflection regarding the stakeholders' ideological limits undertaken by the stakeholders can bring real change and it implies a critical disposition with the use of the psychoanalytic paradigm as well as noise-free communicative action. The role of the analyst is to facilitate the process of the stakeholders acquiring self-knowledge, as a psychotherapist would do, in regard to their ideologies' material inputs or material and informational interests, thus enhancing the chances of achieving a coercion-free consensus. In the following Problem Types Table (4.-1.) we summarise the above *problematic areas* and their *solution types* that correspond to each problematic area on the basis of Ackoff's *dissolve*, *resolve*, and *solve* generic solution types as follows:

"To dissolve a problem is to change the nature of either the entity that has it or alter its environment in order to remove the problem. Problem dissolvers idealise rather than satisfy or optimise because their objective is to change the system involved, or its environment, to bring it closer to an ultimately desired state, one which the problem cannot or does not arise. I call this the design approach." (Ackoff, 1981).

To resolve a problem is to select a means that yields an outcome that is good enough, that satisfies. I call this approach clinical because it relies heavily on past experience and current trial and error for its inputs. It is qualitatively, not quantitatively, oriented; it is rooted deeply in common sense; and it makes extensive use of subjective judgements. Clinicians do, of course, use research, even quantitative research, but they seldom use it exclusively or allow it to play a decisive role. Its output is seldom the major input to their judgement. The research they use tends to be based on surveys or opinions, attitudes, and characteristics of people...

To dissolve a problem is to change the nature of either the entity that has it or alter its environment in order to remove the problem. Problem dissolvers idealise rather than satisfy or optimise because their objective is to change the system involved, or its environment, to bring it closer to an ultimately desired state, one which the problem cannot or does not arise. I call this the design approach." (Ackoff, 1981, my underlining).

market. Prices began to collapse, even while the growing power of microprocessors rapidly boosted the capabilities of PCs. Until the mid-1980s, many PCs were sold to customers-individuals, schools, small businesses, professional firms- who would never have been makers. But when big corporate customers began trying the most powerful PCs together into networks as alternatives to minicomputers and mainframes, IBM became alarmed. In 1987 it belatedly tried to gain control of the personal-computer market with new models containing patented technology called **Microchannel**, which rivals could not copy and which made IBM's machines incompatible with everyone else's. Competitors aptly dubbed these machines 'clone killers'. But by then it was grasp and the Microchannel machines flopped. Big Blue, like any other manufacturer, had to make its machines fit the industry's standards. Those were now set by millions of personal-computer users and owned by Intel and Microsoft." (The Economist, 1993).

PROBLEM TYPES TABLE

PROBLEM TYPE	SOLUTION TYPE	MODE OF SOLUTION	EPISTEMOLOGY	ANALYSIS DOMAIN
1. Self - Reflection	<i>Dissolving</i>	<i>Coercion free</i>	<i>Critical</i>	<i>Critical Systems</i>
		<i>Consensus</i>	<i>Hermeneutics</i>	<i>Thinking</i>
2. Conflict	<i>Resolving</i>	- <i>Compromise</i>	<i>Naturalist</i>	<i>Soft Systems</i>
		- <i>Coercion</i>	<i>Hermeneutics</i>	<i>Thinking</i>
3. Losing Money	<i>Solving or Leading to Differentiation</i>	- <i>Reaffirming the Status-quo</i>	- <i>Positivism</i>	<i>Systems Analysis</i>
		- <i>Leading to pluralism when lateral conflict exists</i>	- <i>Functionalism</i>	

Table 4.-1.

In the next sections 4.6., 4.7., and 4.8. we will explicate the BSPA methodological concepts and the BSPA methodological steps that we will explicate in the following chapters five and six.

4.5. The Specific SSR and the Management Cohesion Index - Outside View -

The SSR original concept, quoted in section 3.2., can be modified to be used for the business systems mission analysis. If we assume that the question "what business are we in?" can be made to represent the current organisational strategic domain labelled as the Current-State Position (CSP). The question "what business do we want to be in?", can be made to represent the desirable organisational strategic domain labelled as the Desirable-State Position (DSP); while the middle point, labelled as the Intermediate-State Position (ISP) can be defined as the change in strategic positioning (type of competitive advantage) only, with no change in the current strategic domain (what business we are currently in). The above range can be divided into a *skills* part, a *structure* part, a *systems* part, a *purpose* part, and a *values* part. These divisions correspond to four (out of seven) of Peters' and Waterman's 7Ss model. It has to be highlighted at this point that the use of Peters' and Waterman's 7Ss model does not amount to an implicit acceptance of Peters' uncritical position regarding strategy formation (strategy as a pattern) but the 7Ss model is used in accordance with the BSPA complementarist approach. In addition, it has to be noted at this point that in the SSR, only three of Peters' and Waterman's 7Ss factors are used in their original sense. These are the "skills", the "structure" and the "systems" factors. The "superordinate goals" factor is used with the same meaning but under the name "purpose" because it is consistent with the term *purpose* used in this thesis. The "values" part corresponds to the "company values" component of the "Ashridge Mission Model" (Campbell and Tawadey, 1989), concerned with "what senior management believes in?". The "strategy" factor namely the organisation's strategic orientation (the CSP-ISP-DSP points), are defined using Porter's Five forces model (suppliers, buyers,

competitors, substitutes, and potential entrants) (Porter, 1980), as well as Porter's competitive advantage model (differentiation, cost, and focus). The *staff* factor regarding matters of official "appraisal systems, pay scales, formal training programs and the like.", as well as matters "at the soft end, about morale, attitude, motivation, and behaviour" (Waterman, Peters, and Philips, 1980) is dealt in the inside view. In addition, the SSR can be supplemented by an analysis of intended diversification in order to answer the question "with whom should we collaborate?".

Galbraith's (1983) *centre of gravity* and the splitting of an industry's *supply chain* into *upstream* and *downstream* (Galbraith, 1983) halves for the organisation's diversification strategy(ies):

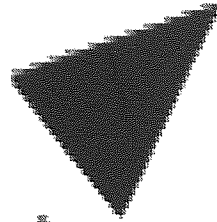
"The centre of gravity of a company depends on where in the industry supply chain the company started. In order to explain the concept, manufacturing industries will be used. Each industry may have more or fewer stages. Service industries typically have fewer stages. The chain begins with a raw material extraction stage which supplies crude oil, iron ore, logs, or bauxite to the second stage of primary manufacturing. The chemicals, steel, paper pulp, or aluminium ingots). The next stage fabricates commodity products from the primary material. Fabricators produce polythene, cans, sheet steel, cardboard cartons, and semiconductor components. The next stage is the product producers who add value, usually through product development, patents, and proprietary products. The next stage is the marketer and distributor. Finally, there are the retailers who have the direct contact with ultimate consumer. The line splitting the chain into two segments divides the industry into upstream and downstream halves. While there are differences between each of the stages, the differences between upstream and downstream stages are striking. The upstream stages add value by reducing the variety of raw materials found on earth's surface to a few standard commodities. The purpose is to produce flexible, predictable raw materials and intermediate products from which an increasing variety of downstream products are made. The downstream stages add value through producing a variety of products to meet varying customer needs. The downstream value is added through advertising, product positioning, marketing channels, and R&D. Thus, the upstream and downstream companies face very different business problems and tasks." (Galbraith, 1983).

The centre of gravity and the upstream and downstream concepts can be used as a basis for the organisation's *vertical* and/or *horizontal chain integration* and/or *diversification* strategies for developing the centre of gravity or the *core business* (Mintzberg, 1988) (see diagram 4.-2.) .

"Now we come to strategies designed to take organisations beyond their core business. This can be done in so-called vertical or horizontal ways, as well as combinations of the two. Vertical means backward or forward in the operating chain, the strategy known formally as 'vertical integration' although why this has been designated vertical is difficult to understand, especially since the flow of product and the chain itself are almost drawn horizontally! Hence this will here

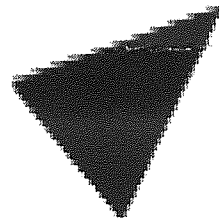
be labelled chain integration. Horizontal diversification (its own geometry no more evident), which will be called here just plain diversification, refers to encompassing within the organisation other, parallel business, not in the same chain of operations.” (Mintzberg, 1988).

In diagrams 4.-1., and 4.-3., we depict the steady states-range basic concept as well as system five’s steady states-range specific SSR.



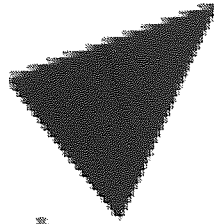
Aston University

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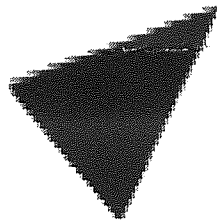
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We will deal with the concepts of business integration and diversification in chapter five where the SSR concept will be elaborated further.

At this stage the company's mission statement is analysed in its five components, (strategic domain and positioning, value, systems, purpose, and skills - namely a general skill that characterises the organisation). Manager "A" for example is asked to interpret the company mission statement, in its five components, and then he is asked to express his perceptions regarding the organisations current strategic domain and positioning. In addition, at this stage he is asked to justify his opinion on the basis of Porter's five forces model regarding the current strategic positioning as well as about the future desired one. Finally he is asked to express his views about the company's organisational structure, systems (meaning processes), and value system, and compare their compatibility with the official mission statement, the perceived current state position (CSP) and the ideal desired state position (DSP). All the above information generated is captured in structured table formats. The management team's SSR mapping starts with system five's (as it is defined cybernetically) views inquiry. In cybernetic terms system five embodies, or at least should embody, the system's identity by providing the system with *closure*³⁵. Therefore, the mapping of the rest of the management team, meaning the first line managers, is performed against system five's SSR, on a one-to-one basis as shown in diagrams 4.-4. to 4.-6..

In diagram 4.-4., we observe that manager "A" agrees with system five about the major strategic choices and basically he shares the same vision but he disagrees with system five about the compatibility of skills and systems employed in the current state position. In addition he disagrees about the structure that should be employed for the business system to arrive at the ideal strategic domain.

In diagram 4.-5., Manager "B" agrees with system five about the current strategic domain but disagrees about the systems that the business system employs while being currently in a particular strategic domain. In addition, manager B believes that the current strategic domain is the ideal for the business system in focus. For this reason manager B's SSR is depicted without a Future part. This implies that he disputes system five's vision for change in the strategic domain.

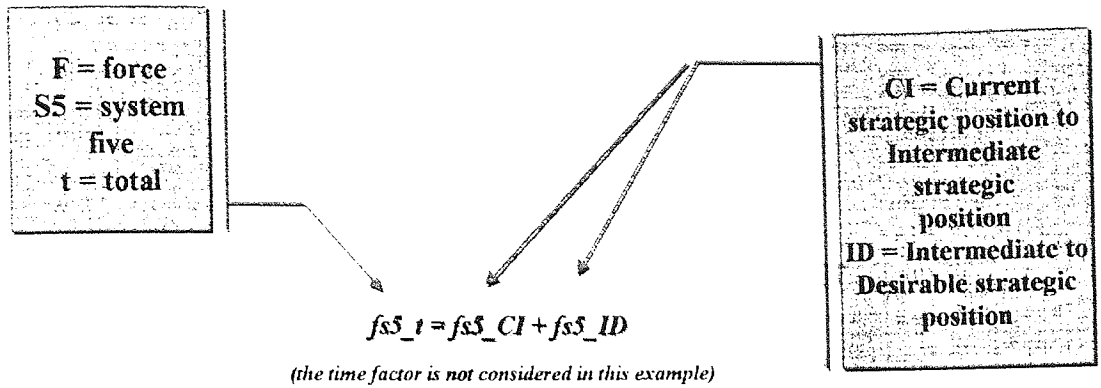
³⁵ "*Closure* is the snake that is eating its own tail. Closure is what makes the language complete, self-sufficient. Closure stops the entire systems from exploding in shattered fragments to the ends of the universe. Closure turns the system back into itself, to satisfy the criteria of viability as its own level of recursion. Closure is the talisman of *identity*... If that is 'closure' what is 'the boss' [system five]? Sometimes he is depicted as the draconian, autocratic, repository of power. He may, indeed, be just that. But such a boss is ruler of a highly unstable situation, unless he uses his power fervidly to repress the variety generated in the viable system - as military dictators are wont to do. Sometimes he is the representative of that very variety. This is supposed to be true of democracies; but usually that picture is illusory. The interesting fact, in cybernetic terms, is that *however* we depict 'the boss' (however calmly, however emotional, however political), this boss *supplies the closure*. That is his cybernetic function. The autocrat supplies the closure by saying: 'that's enough; I have heard all the arguments. THIS is how it will be'. Then high variety generated between Systems Three and Four, and not absorbed between them, is CLOSED by System Five. Such an arrangement may be thought (ethically) to be immoral. Certainly (cybernetically) it is extremely vulnerable, unless the boss (Five) is God Himself. Sooner or later, Five will make a destabilising mistake. That is because his requisite variety (in administrative closure) depends on a much attenuated input. It must so depend, because Five cannot deploy sufficient variety to absorb the variety of Three-plus-Four, which is multiplicative, without that enormous degree of filtration. Perhaps students of the regime of Stalin in the USSR will recognise the point. Perhaps anyone who has worked for an autocratic boss will recognise the point too. Perhaps any observers of the Nixon Administration in the United States will also understand." (Beer, 1990).

In diagram 4.-6., Manager "C" has a totally different opinion from system five about the organisation's ideal strategic domain and he disagrees about the organisation's strategic positioning as well; he agrees with system five only about the current strategic domain. Because his ideal strategic domain is different from that of system five's then the organisational SSR increases in proportion to manager C's future part. This part that is added on system five's original SSR. If manager C disagreed completely with system five about the current and desired strategic domains then system five's original SSR would have been doubled. One should remember though that the SSR's purpose is to identify ideological conflict within the management team thus acting as an 'early warning system' for the purpose of detecting systemic instability. The SSR's diagrammatic representation serves the purpose of making the concept more comprehensible. In addition, one should remember that we do not compare the views of different managers between them, but we compare the views of each manager against those of system five. The comparison between the management team's views, excluding system five's, is done indirectly only, having as reference point system five's views. The fact that all comparisons are done against the same reference point (system five's SSR) provides us with an implicit comparison of the other views between them.

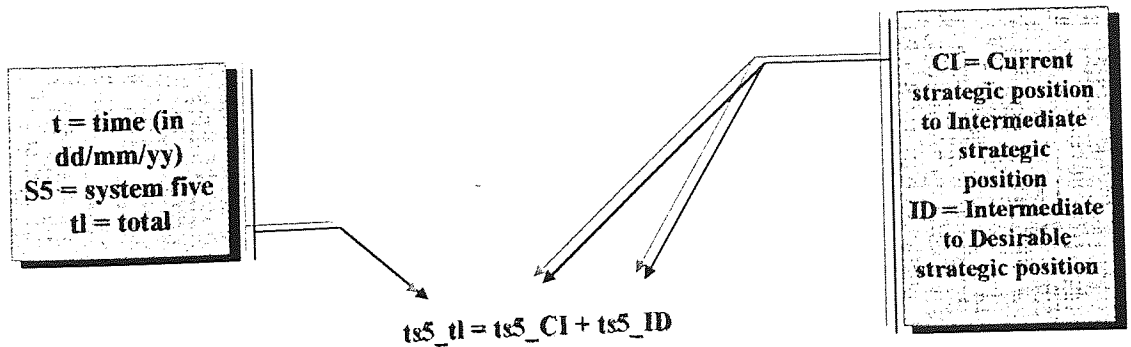
Each manager's purposeful behaviour is depicted as a *vector*³⁶ representing his/her motivation as a *driving force* (*f*) into achieving his/her purposes. In this thesis a vector is chosen in contrast to a scalar to represent a stakeholder's motivation as a driving force (*f*) because we want to preserve the direction attribute of a motivational force and its relationship with size. This is important in depicting the size of the aggregate SSR (depicted in diagrams 4.-4. to 4.-6.) and the SSR as well as the direction and the size of the forces that they are constituted of. In this thesis the vectors decomposition does not correspond to the mathematical vector decomposition method, namely expressing a vector as the sum of two or three or more orthogonal components, because the SSR vectors are represented in only one dimension. Therefore the decomposition of vectors in this thesis takes the meaning of the sum of the component vectors constituting a larger vector within the same dimension.

The direction of a manager's motivation force is relative to the direction of the system five's motivation force, which always is directed from left to right. Therefore the motivation force of a manager who agrees with system five, in regard to his/her choices of the current and future strategic domains, will be depicted as having the same direction. In the opposite case it will be depicted as having the direction from right to the left. Each manager's motivation force is decomposed into two specific motivation forces, one directed from the CSP to the ISP, and another directed from ISP to DSP. Therefore, system five's motivation forces can be depicted as the sum of the two specific forces as follows:

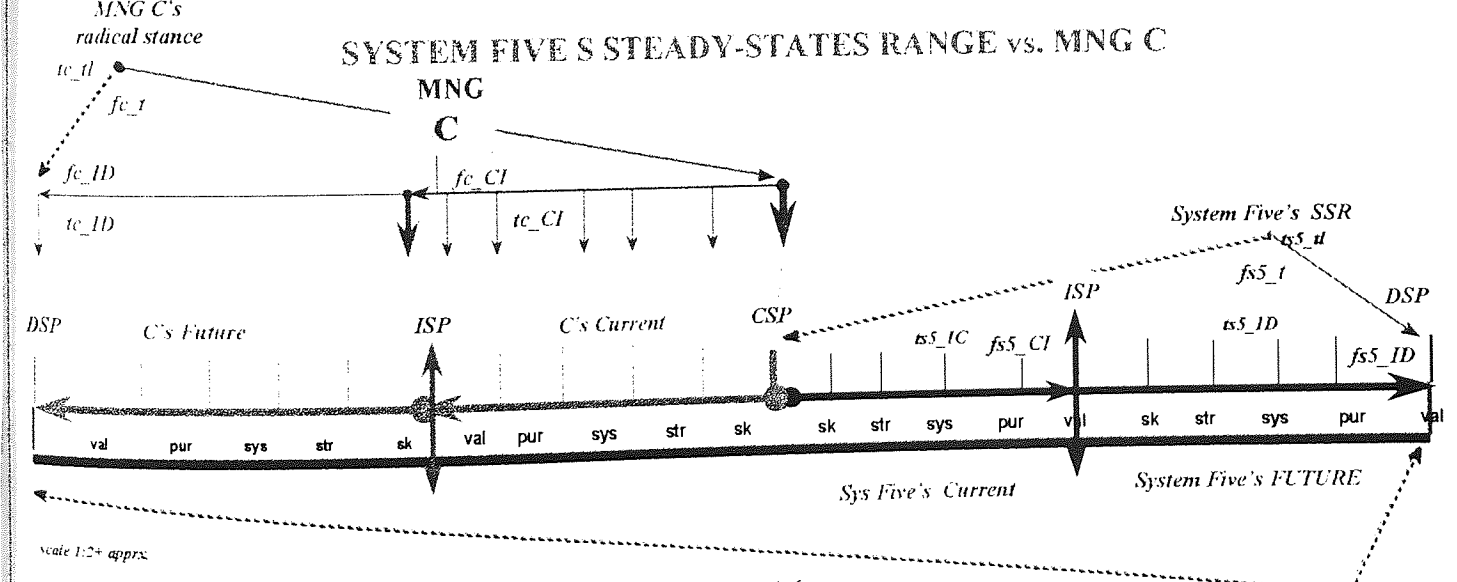
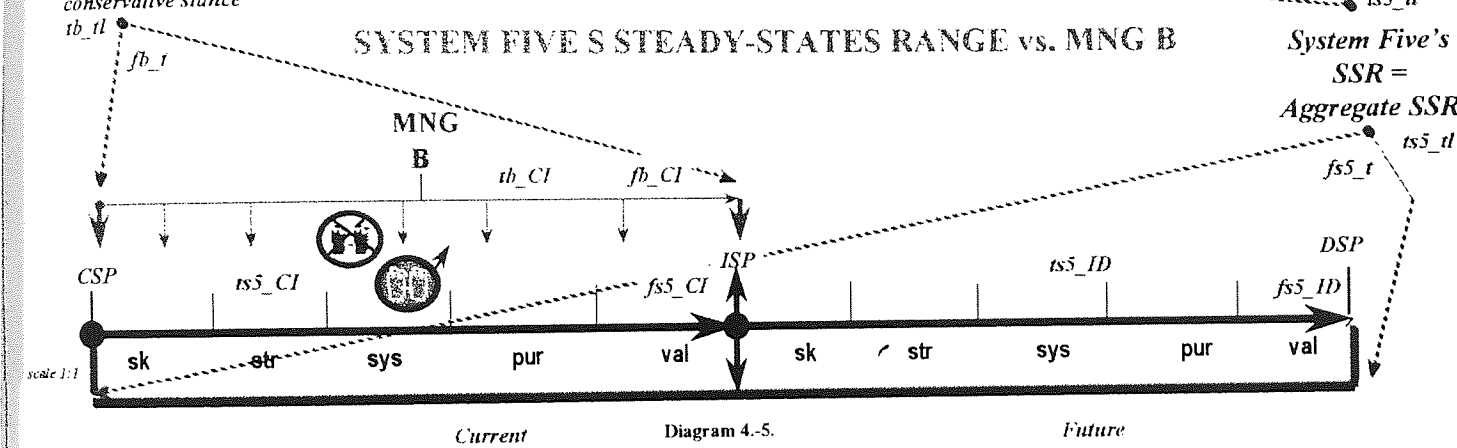
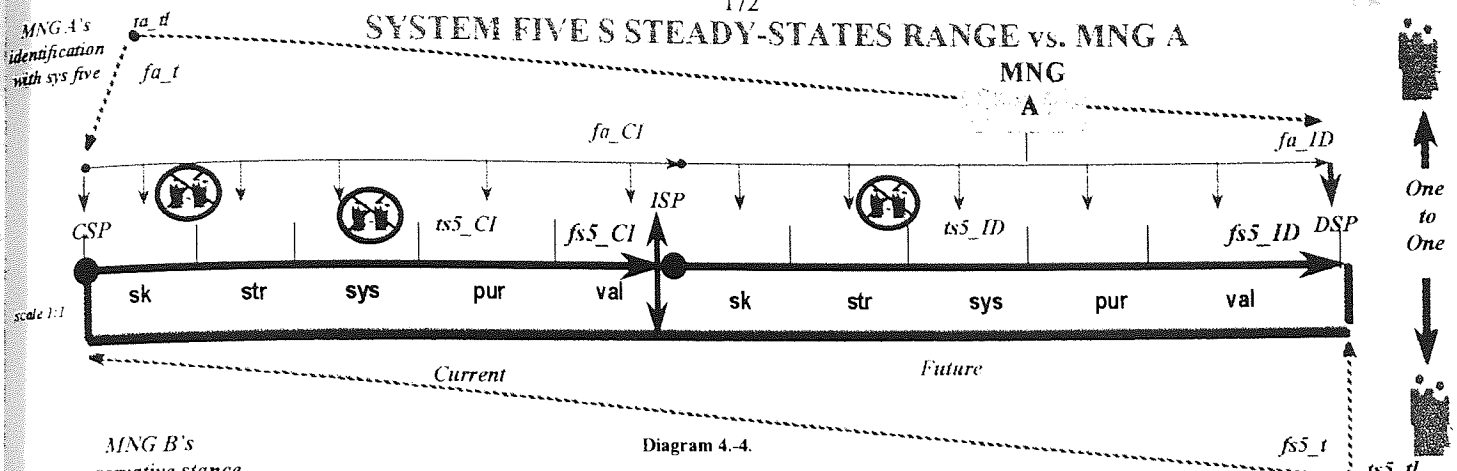
³⁶ "*Vector*: (in science) a quantity which has direction as well as size and which can be represented by an arrow the length of which has direct relationship with the size." (Longman Dictionary, 1984)... *Scalar*: a number without an ASSOCIATED direction (as opposed to a VECTOR)." (Longman Dictionary, 1984).






In addition, the lengths of the vectors are time dependent. The managers will be asked to estimate the time length that their motivations will take to become real in days, months or years. This implies that a force which is perceived to materialise, as to its stated ends, in two months for example, will have twice the length of the same force that is thought to materialise in one month (that would increase the SSR's overall length). The relationship between the size of the motivational forces and the time factor in terms of the organisational steady states range is regarded as proportional. A motivational force in order to sustain its focus in a ever-changing, enormously complex and unpredictable world has to spend more psychic energy than a short one in order to attain its fulfilment. It has to be noted though that the relationship between the size of the motivational forces and the time factor is regarded as proportional in linear terms. This is definitely a simplification and an arbitrary assumption in regard to the proportional relationship made to make the case of the SSR's increase in terms of long-term fulfilment seeking motivations. The application of the SSR in the real world and further research would shed more light on the subject matter. In the previous diagrams the time lengths appear to be equal. This is the case in diagrams 4.-4., and 4.-5., but not the case in diagram 4.-6.. Diagram 4.-6.'s scale is smaller than the other two in order to fit into the A4 (portrait) size. The time factor will be represented symbolically as follows:



When the time factor is considered then the length of the $fs5_t$ increases proportionally.



 - partial agreement
 - disagreement

 - change
 MNG - MANAGER

sk - skills
 str - structure
 sys - systems
 pur - purpose
 val - value

Aggregate SSR
C's + Sys. Five's

It has to be noted at this point that the larger the size of a motivational force (f) the more the management team's specific SSR becomes unstable in terms of the overall future organisational orientation, namely the organisational purposeful behaviour (being the subject of the specific SSR). This happens because the longer into the future a motivation force(s) seeks its gratification the more it runs the risk of regression³⁷ or failure due to 'unforeseen' factors and due to the stakeholder's bounded rationality. If the most powerful stakeholder exhibits regression symptoms then there is the possibility that the system might become pathologically autopoietic. In case where failure occurs due to the workings of bounded rationality or unforeseen factors (lying into the distant future) then the realignment of the organisation's material and informational interests might lead to the loss of organisational closure thus to the abolition of the dominant organisational ideology. This implies that a shorter motivational force will provide the system with more stability in terms of its overall future organisational orientation because the importance of bounded rationality and unforeseen reasons is minimised without excluding the danger of regression though. But in case of a conflict situation over organisational material and informational assets (investigated in the inside view - overall organisation entropic number, elaborated in *chapter six*), a short motivational force (which represents one stakeholder's motivation to control or possess a particular organisational asset in order to enhance his/her material and informational interests) is very powerful because it demands for immediate diffusion. Therefore, the specific SSR's forces represent one stakeholder's strategic vision, namely they answer the "where do I want to go?" question, while the motivational forces over material and informational organisational assets represent one stakeholder's motivation to control or possess (or defend his/her control or possessions) organisational material and informational assets; or in other words they answer the 'how would I get where I want?' question. The relationship between the two types of forces is elaborated in chapter six where a measure of the type of instability in the management team's specific SSR (outside view, elaborated in chapter five) is compared with the overall intensity of the conflicting forces over the organisational material and informational assets (inside view).

Based on the management team's views, expressed in their SSRs, we can proceed in devising a scoring method (elaborated in chapter five). The scoring method is based on the stakeholders points of agreement (marked with a positive number e.g. +10), and points of disagreement (marked with a negative number e.g. -10) regarding the current-intermediate and desired position points. The purpose of the scoring system, being an arbitrary system, is to help us in formulating an ideological cohesion score for the management team as a whole. The addition of positive and negative numbers will produce a score that will be indicative about the existence of agreement or disagreement within the management team. The above scoring and mapping can be used regularly within the management team (because situational factors never cease to change) as an 'early

³⁷ "The term **regression** in psychoanalysis refers to a great variety of symptoms. Freud himself uses the term regression mainly to describe 'a return to the first objects invested with libido, which we know to be incestuous in character, and a return of the whole sexual organisation to earlier stages'. In addition to speaking of 'regression of the libido' Freud speaks of 'regression of the ego' and 'object-regression'. In other psychological literature the term regression has been used more loosely; for instance, any kind of withdrawal from reality to a fantasy-level has been called regression." (Lewin's, 1952). In this thesis the term regression is not used in the Freudian sense but rather in its wider meaning of retiring into the world of fantasy when purposeful behaviour can not materialise

warning system' for detecting *incipient instability*³⁸ (Beer, 1979) in the management team, expressed as ideological conflict.

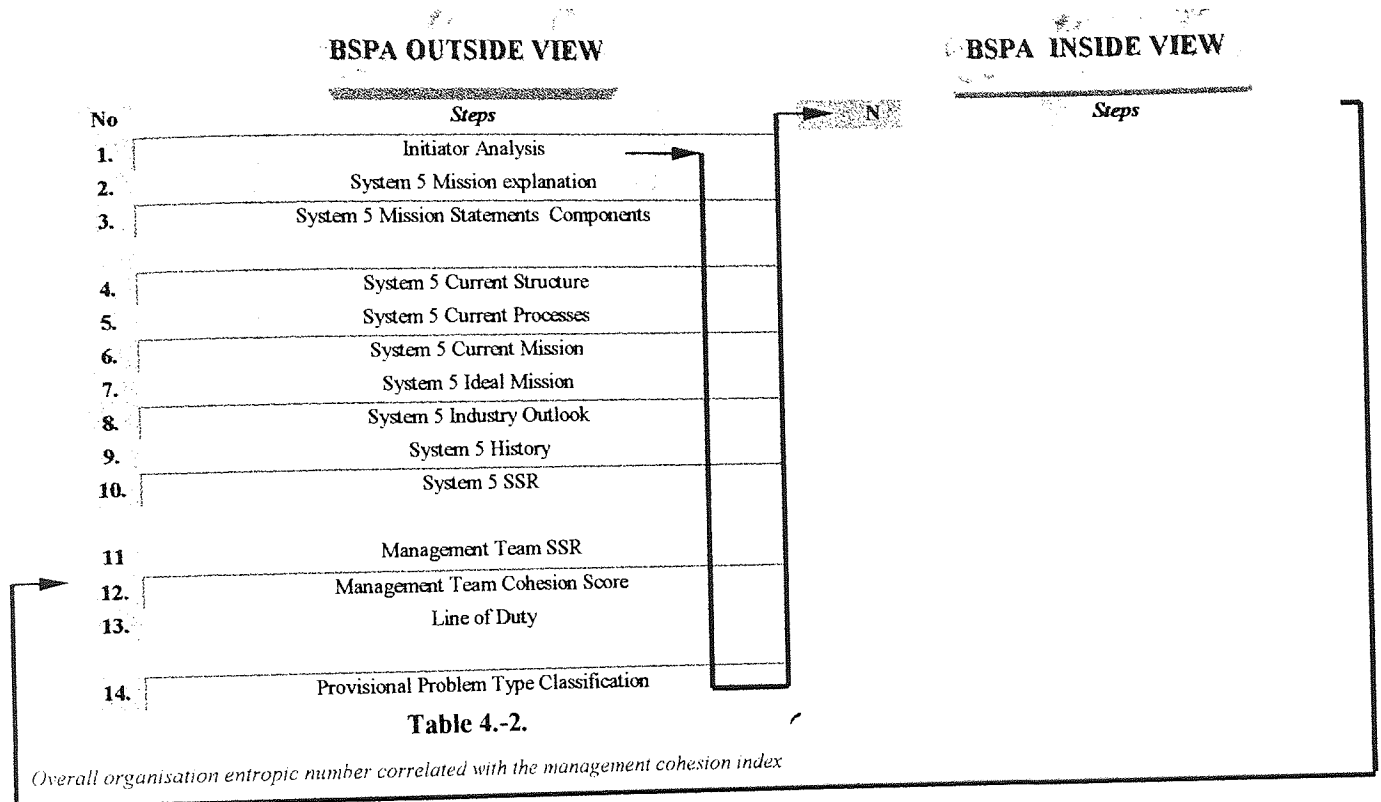
The arbitrary method of the SSR scoring system might be regarded as inappropriate for mapping the phenomenon of management ideological conflict due to its low variety mapping. This may be true! But the mapping of the brain on the *electroencephalogram's* low variety homomorphic model is able to detect brain disorders which of course it cannot explain. And this is exactly the limitation of soft systems approaches as well as the critical systems ones, such as TSI or CSH, as to their material and informational sources (even though they do not employ such scoring systems for the detection of incipient instability). Even if we detect ideological conflict within the management team or the organisation as a whole we can only answer the questions of "what is going on" or "what is about to emerge", but not the question of "why?". This can be made apparent only if we search for the material and informational inputs of the ideological conflict identified in the first place. For example, an "old-fashioned" (centralised processing) EDP (Electronic Data Processing) manager might have a different vision than that of system five who wants a decentralised organisation supported by a distributed system. The reason behind the EDP manager's disagreement might be his fear that a distributed system might loosen his grip on a very important organisational asset thus limiting his power base.

If we examine the system as a relatively objectified system outside view, then we can only draw superficial conclusions about its dynamics. We have to enter the system and examine its HAS content. We only use the outside view as the way to enter the HAS in a structured way.

So far we have answered the questions "what business we are in?" and "where we want to be?". The question "with whom should we collaborate?" is dealt with in the analysis of the outside stakeholders. That analysis is performed based on Porter's (1980) five forces model in a relatively objective and functional way and Galbraith's (1983) concept of the organisational centre of gravity or Mintzberg's core business concept in conjunction with the concepts of organisational integration and diversification strategies (these concepts are explained further in chapter five). The outside view consists of 14 steps listed in table 4.2.. Each step has an output in diagrammatic or table formats. In table 4.2., we depict the outside view linked to the inside view via the single loop learning. In table 4.3., after we have elaborated on the inside view (section 4.6.) we depict all the BSPA steps with the inclusion of both views that appear to be linked via the single loop learning.

³⁸ "*Instability* is the opposite of calm; instability is inimical to the contemplation of the infinite recursion, and therefore to corporate self-consciousness. Then we must be alert to it, rather than to routine reports of the 'I'm all right' variety. There are two features about instability that need a lot of careful consideration. The first is that instability may set in anywhere in the behaviour of the organisation, and at any time. **The second is that there are always pre-symptoms of the fact.** Unfortunately, the typical management information system, in both Three and Four [systems], is repetitiously reporting on stability - it is in fact challenging the manager to find evidence of this crucial instability in the welter of routine data. If, nonetheless, he finds it, he does so because instability has already set in - it is in fact too late to avert it." (Beer, 1979, my emphasis).

BSPA STEPS



4.6. BSPA Inside View

The inside view is an iterative process, unlike the outside view, which is intended to be done in a single pass, although it may be necessary to backtrack at times. As with the outside view, there is a series of steps, each producing graphical output. Seventeen steps have been identified although this does not reflect the number that would be necessary in any application of BSPA, because of the inside view's iterative nature. The inside view works its way down the levels of the business system in sets of four levels. The term "levels" coincides with the official organisational levels depicted on the official organisation chart. The number four (levels) is an arbitrary number that in the "delayed" contemporary organisation of four to five levels represents the maximum participation of all the organisational layers concurrently. If the stakeholders' perception of the official hierarchical organisational levels is different than the official organisational chart, then their views are recorded. While the causes of the differences are investigated in terms of organisational power and politics at the level of conscious motivation as well as at the level of the stakeholder's unconscious motives. Except system five, each stakeholder identified in the official organisational chart has to define the perceived immediate level above and the two immediate perceived levels below in terms of functional activities/tasks as well as in terms of identifying the persons responsible for those activities/tasks. Ideally the perceived organisational chart should be identical with the official one because that would imply that either the system has defined clearly the official areas of responsibility or that there is a low degree of politics in the organisation. We will deal with this matter in chapter six.

In further steps of the analysis the stakeholders are asked to describe the business system in focus in terms of activities of inputs and outputs on the basis of a modified three-dimensional Porterian value chain (diagram 4.-7. - elaborated in chapter six).

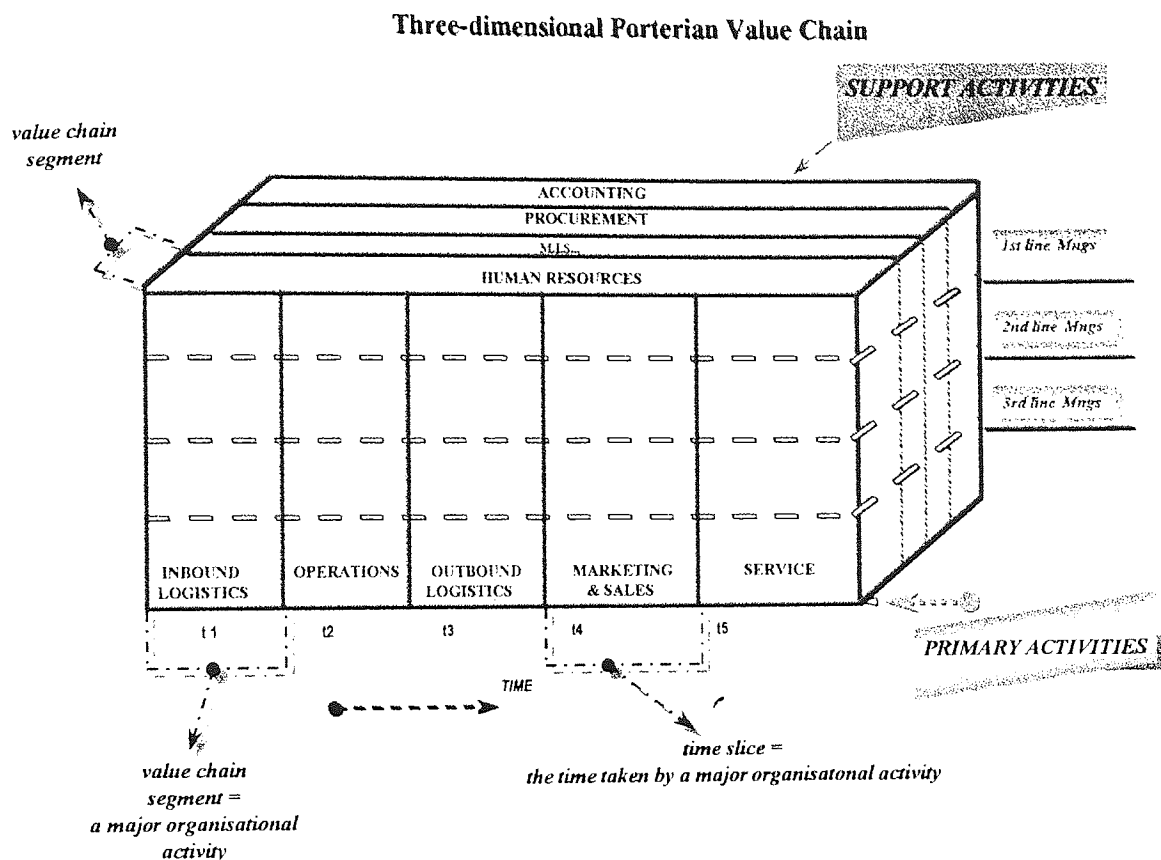


Diagram 4.-7.

They are asked to map the perceived organisational chart onto the modified value-chain, thus defining the areas of control for one perceived hierarchical level above and the two perceived hierarchical levels below from their perceived position on the organisational hierarchy. Finally, the stakeholders are asked to identify the informal organisation and its communication channels. In case where perceptions of control of parts of the value chain overlap then we can say that we have identified the material and the informational inputs of a politics area of actual or potential conflict. The next step is to ask the stakeholders to decompose the major value chain activities, they perceive to exist, into more detailed tasks and to add the perceived communication lines connecting them with other tasks and with activities/tasks of the outside stakeholders. Further they are asked to distinguish the communication links on the basis of their perceived content they convey, namely the object that in their perception is communicated. They are given the choice of three general classes of objects communicated between activities/tasks and the outside stakeholders; these being material, informational and report objects. On the basis of this classification the communication links are distinguished into material, information and official reporting links. Finally, the stakeholders are asked to define which of those activities/tasks and communication links are important, in their opinion, by placing a grade of importance number being basically a rank number. By asking the stakeholders to place grades of importance we lead them

implicitly to define, in their opinion, the type of power possessed by those stakeholders who in their opinion control these *activities/tasks* or *communication links*. In addition, the stakeholders are asked to elaborate further on the subject of the other stakeholders' power bases by distinguishing the type of power other stakeholders are perceived to possess in terms of being *communication nodes*, *reward nodes* or *reward filters*. In the above analysis a special power base is identified as well namely that of the possession of a time asset. The fact that someone controls the timing of an input essential for the workflow of the value chain amounts to a very powerful asset. The influence of outside stakeholders in the organisational game of power and politics is identified explicitly through the identification of communication links (material-informational-report); through the analysis of the informal organisation; and through the identification of one's (stakeholder's) perceived type of power base. In table 4.-3., the factors making up the BSPA homomorphic model are summarised for the inside and the outside views.

BSPA HOMOMORPHIC MODEL – FACTORS

<i>FUNCTIONAL VIEW</i>		<i>CRITICAL VIEW</i>
<i>BSPA OUTSIDE VIEW</i>		<i>BSPA INSIDE VIEW</i>
<i>Mission Statement</i> (based on the Ashridge <i>Mission Model</i>)	<i>Industry Structure & The SSR</i> (based on Porter's Elements of Industry Structure Model Peters' & Waterman's 7Ss framework - Mintzberg's centre of gravity & Galbraith's industry supply chain.)	<i>Based on the Peters' & Waterman's 7Ss framework</i>
<i>Purpose</i> (What business are we in? Why? With whom do we collaborate?)	- <i>Suppliers</i>	- <i>Ideology</i> - Superordinate Goals [7Ss], style [7Ss], rituals, myths.
<i>Strategy</i> (the commercial rational)	- <i>Buyers</i>	- <i>Informal Organisation</i> - staff, skills [7Ss]
<i>Company Values</i> (what senior management believes in)	- <i>Potential Entrants</i>	- <i>Systems</i> [7Ss] - processes, information systems the inside view
<i>Standards and Behaviour</i> (The policies and behaviour patterns that guide how the company operates)	- <i>Competitors</i>	- <i>Mission</i> - the inside view
- <i>History of the organisation</i> (founder, history of profitability, expansion, etc.)	- <i>Substitutes</i>	- <i>Organisational Value Chain</i> - work-flow, communication channels, timing, official organisation chart [7Ss] and perceived organisational chart
	- <i>Stock-holders</i>	- <i>Industry Structure</i> - the inside view
	<i>Structure-Systems-Strategy-Skills</i> [7Ss] - the outside view	

Table 4.-3.

BSPA's analytical framework is distinguished into two major parts, namely the outside functionalist view (chapter five) and the inside critical view (chapter six). BSPA's epistemology was based mainly on principle 9., as well as on principles 1-5., 11., and 16.. The outside view (as well as the inside view) was developed based, basically, on BSPA's principles 13. and 14-17., regarding the "Business Systems Nature" and the BSPA's "Analysis Methodology Concept", respectively. The outside view amounts to a relatively 'objective' and

functional view of the business system in focus. The inside view was developed based, basically, on the BSPA's principles 4-5. and 6., regarding the "Organisational Metaphor" and the "Organisational Purpose".

4.7. Methodology Terms

The analysis effort conducted using BSPA aims to create a profile for every actor (stakeholder) identified. That profile, which is called the *Actor's Profile (AP)*, will include the following information:

- (1) The actor's (stakeholder) ideology described on the basis of the steady states range.
- (2) A description of the stakeholder's socio-economic history.
- (3) A description of the stakeholder's position on the organisational value chain (perceived as well as official) or in the organisational environment (description of his power base in terms of possessing or controlling organisational material and information assets).
- (4) A description of the stakeholder's view of the organisations purpose, and strategy.
- (5) A description of the stakeholder's links with inside or outside stakeholders (regarding the semantics' as well as the pragmatics' aspects of his communication).
- (6) A statement of the stakeholder's perception of himself and the stakeholders with whom he is transacting with, including a statement of expectations.
- (7) A description of the stakeholders with whom the stakeholder in focus is transacting with in regard to their perceived strategies, structures, and systems.
- (8) A statement of the compatibility of the stakeholder's purpose, strategy, structure and systems with the overall organisational purpose, strategy, structure, and systems, as well as a statement with the same factors regarding his immediate meta-system.

4.8. General Methodological steps

The major analytical steps comprising the two views are the following:

a. Outside View

1. Initiator's Analysis

- Identification of the *initiator* of the analysis effort. Conducting in depth interviews with the initiator in order to identify the initiator's motives regarding his quest for help.
- Record his/her personal characteristics with special emphasis in his/her position in the organisation.
- Detailed recording of the problem, as it is perceived by the initiator, including recordings about the people he/she involves in the description of his/her problem/problematic.
- Provisional classification of the problem/problematic.

2. Industry structure based analysis - functional view -

- Draw the objectified system, namely the organisational industry environment, buyers- suppliers, competitors, etc.- on the basis of objectified transactions, namely exchange of goods, services and money. In addition, define any objectified exchanges in the form of official restrictions imposed upon the business system in focus.
- Record the official organisational ideology, as it is stated in the mission statement (purpose, strategy, values and policies).
- Record the organisation's objectified history, e.g. ownership, expansion, profitability over different periods of time, etc..
- Draft a provisional AP for the organisation and its environment and a provisional classification of the business problem/problematic area on the basis of the SSR analysis.

b. Inside View

1. 7Ss based analysis - emancipatory view -

- Draft an AP for each official stakeholder identified
- Identify the informal organisation.
- Superimpose the perceived organisational chart on the perceived value-chain.
- Identify the areas where there is organisational conflict, on the basis of disputes of control over perceived organisational value chain material and informational assets.
- Bring the conflicting stakeholders to the negotiation table. Give each stakeholder's AP to the other(s).
- Draft the consensus AP (if consensus is reached).
- If consensus is not reached record the areas of disagreement and ask the stakeholders to propose solutions based on the definition of problem/problematic area dissolving, resolving, or solving and ask to assign probabilities regarding each solution's success rate. Record the reasons given for the percentages of success or failures. Try to enlighten the stakeholders in regard to the material and informational interests of the proposed solutions (namely, dissolving, resolving, and solving). Bring the conflicting stakeholders to the negotiation table again. If negotiation is not reached again try to facilitate the differentiation process of the system's subsystems, namely its break-up, with the objective of helping the less powerful stakeholders to go through the transition phase with minimum damage.

2. Idealised Design

- If consensus is reached, then the stakeholders have to participate in defining the organisation's mission, purpose, strategy, social responsibilities, structure and functions.
- Compare the proposed system with the existing objectified system.

c. Return to the Outside View

- Apply a. and b. on the outside objectified stakeholders, and the perceived outside stakeholders, if possible. If the outside stakeholders participate, in the definition of the outside view, then the concept of alliance capitalism can be implemented and their status can change from that of being outside actors to being inside actors.
- Outside stakeholders are asked to assess the impact the proposed design will have on the industry structure.
- Use IE to create the BSPA encyclopaedia. Create official feedback loops.

In Table 4.-4., the detailed BSPA steps are quoted:

BSPA OUTSIDE VIEW		BSPA INSIDE VIEW	
No	Steps	No.	Steps
1.	Initiator Analysis	> 1.	Primary and Support Activities, Input-Process-Output
2.	System 5 Mission explanation	^ 2.	Activities of Next Management Level Down
3.	System 5 Mission Statements Components	^ 3.	Command and Communication Links
		^ 4.	Decompose (3) into Material, Information and Reporting
4.	System 5 Current Structure	^ 5.	Transcribe (1) - (4) onto Value Chain
5.	System 5 Current Processes	^ 6.	Communications Nodes, Reward Nodes, Reward Filters
6.	System 5 Current Mission	^ 7.	BSPA Power Value Chain
7.	System 5 Ideal Mission	^ 8.	Unofficial Organisation Links
8.	System 5 Industry Outlook	^ 9.	Actor's Profiles
9.	System 5 History	^ 10.	Define Current Problem and compare with outside view step
10.	System 5 SSR	^ 11.	Ideal Value Chain
11.	Management Team SSR	12.	Repeat (1) - (11) for the Next Two Levels Down
12.	Management Team Cohesion Score	13.	Check Value Chain Overlaps between Levels
13.	Line of Duty	14.	Exchange Actor's Profiles
14.	Provisional Problem Type Classification	15.	Repeat (1)-(14) for One Further Level Down each time
		16.	Universal BSPA Value chain
		17.	Industry Impact

Table 4.-4.

4.9. Chapter Four Summary

In this chapter we described how the proposed methodology, namely BSPA, will provide the organisational information systems with the ability to co-ordinate the organisational activities by enabling the development and maintenance of a single/multifaceted view of purpose throughout organisations. The BSPA methodology leads to the development of an organisational intrinsically motivated information system that produces meaningful knowledge to the extent that it makes its users (business system's stakeholders) reflect and thus inquire about their purpose(s). The stakeholders' continuous reflection exercise, in BSPA, is performed in relation to the business system and the other (perceived) stakeholders, by reflecting both on the sources of motivation and/or deception, namely on their claims over the organisational material and informational

interests, that are contained in their purpose(s); and also on the sources of collective motivation and/or deception that are contained in the business purpose(s) itself.

In this chapter we developed, in the light of our explicit bias, the concepts of the outside view and subsequently the concepts of the Specific SSR. We developed the concepts of the inside view and subsequently the applied OOEN on the BSPA value chain, and the stakeholders' power-types. In addition, we developed the concept of the Actor Profiles in a complementarist manner, as we did with all the other concepts, in a manner that meets as well the validity criteria that were set out in chapter three regarding an intrinsically motivated organisational information system.

In chapter five and six we will elaborate on the inside and the outside view as well as on the detailed development of the Specific SSR and the detailed development of the OOEN respectively as well as on their relationship in the light of the BSPA fuzzy rule (single loop learning).

- Chapter Five -

**BSPA MODEL
- OUTSIDE VIEW -
THE FUNCTIONAL APPROACH**

5.1. BSPA Model Principles

In chapter four we described the BSPA methodology in terms of the general methodological steps as well as the main concepts that the methodology is constituted of and is based upon respectively. In this chapter and in chapter six we will concern ourselves with building the methodology's homomorphic model itself. The BSPA homomorphic model will be based on the following applied principles for the identification of power relationships in the business system:

1. The *Chief Executive Officer (CEO)* is defined as the system five of any business system. This implies that the CEO is the embodiment, or at least he/she should be the embodiment of the system's identity. In this thesis system five is defined as the person responsible for the systemic management of the organisation, who provides the organisational system with closure, namely he/she is the embodiment of its identity ideally (e.g. in an organic organisation operating with democratic processes such as *quality circles*³⁹). In other words as system five we define the top-executive of the business system charged with the above responsibility. This definition of system five does not exclude the possibility that the top-executive could be the owner of the business system as well, as is the case of Microsoft or Virgin.

2. Most important of all he/she is supposed to set the ideological limits within which the lower hierarchical levels function (in organic organisations we mean metasystemic relationships made up of *logical hierarchies*⁴⁰).

In other words system five, by being the embodiment of the system's identity, sets, or it is supposed to set in organic environments, the ideological epigenetic landscape for the lower levels in the official organisational hierarchy which is supposed to be a logical hierarchy. This statement implies that the cyclical nature of the ideological process, which produces and sustains meanings, values, signs, shared realities, cultures, and worldviews or Weltanschauungen, transcends and limits each single stakeholder's perception. In addition it

³⁹ "*Quality circles*: Circles are quality improvement and self-improvement study groups. A circle usually is composed of workers (no more than 10) and their supervisor who functions as a leader. The emergence of circles was a natural consequence of a top-down process of statistical and quality management education that began with senior executives and worked its way down the organisation pyramid to the engineers, supervisors, and shop-floor foremen.... Circles usually are the shop-floor manifestation of a broad range of activities called company wide quality control (CWQC) which gives every employee responsibility for quality. This stems from a philosophy that views each person as having unrealised potential that can be realised through education and study. Improvement of the individual will enable the company to improve. Workers, therefore, are more than a commodity -they are an asset to be developed. The circle process also helps supervisors develop leadership skills" (Juran and Gryna, 1988, my underlining).

⁴⁰ The basic device is to divide the notion of the viable system in two, and to form a *logical hierarchy* of these two parts. One part consists essentially of the operational units... Whatever else is needed to manage the *collection* of operational elements is *METASYSTEMIC* to that. It is something logically beyond (that is, meta) the logic of the operational elements combined. In ordinary managerial parlance, the metasystem thus defined is called 'senior management'; and this term carries the connotation that it is superior to a 'junior management'. But that is only to invoke the language of command, which we have forsworn.... For the moment, the point is to understand the language we are setting forth: the relationship between the total operational system and its metasystem (which, in a sense we shall proceed to display, is to 'look after' it) is a *logical* relationship, whatever social form it is given." (Beer, 1979).

limits its purposeful interest-based behaviour but still is subjected to the stakeholders' purposeful behaviour as well, in a mutual cycle of influence and interdependence.

In an organic organisation system five's ideology is the embodiment of a transcendental ideology, namely the organisational ideology which is supposed to provide the system with closure, homeostasis, cohesiveness, synergy, orientation and with unity into perceiving its business environment and the social world in general. In non-organic organisations though system five's ideological constraints over the lower hierarchical levels is performed only with the employment of "algedonic loops" (Beer, 1990) expressed in the organisation's reward system and it is backed up by coercion or false consciousness.

3. System five's ideology consists of the following elements which will have to be analysed and recorded.

An answer to the question of "what business are we in?" ; this question can be decomposed into the following questions, based on the "Ashridge Mission Model" (Campbell and Tawadey, 1989):

- What is the organisation's strategic domain; what is the organisation's Current-State Position (CSP)?
- What is the Organisation's strategic positioning?; namely the type of competitive advantage sought by being in the above strategic domain defined in BSPA as the Intermediate-State Position (ISP). and
- What are the values that characterise the organisation's operations; (e.g. quality of service, excellent engineering, etc.).

4. In addition system five's ideology should be analysed in regard to its reference to

- A statement of social justification, explaining the organisation's purposeful behaviour in the light of one or more 'higher ideals'. and
- A set of behavioural standards existing to absorb the variety exhibited by the operational units (the organisation's employees) thus facilitating system five's interventions.

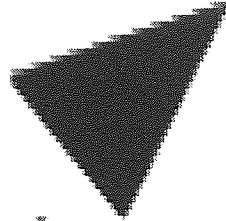
One might argue that the above questions refer to the organisational mission instead of the workings of the organisational ideological process. This is true, but one should take into consideration the fact that the answers to the above questions would be the result of the ideological process's mechanism workings, that a particular stakeholder is subjected to. This way the analyst allows himself to enter slowly the ideological background that makes meaningful the actions taken, or intended, by system five and ideally by the rest of the system, in case where system five is the embodiment of the whole system.

5.2. Outside View

In this section we will define in detail the outside view. The outside view amounts to the functional reasoning of business systems design, and its core are the Specific SSR analysis and the management cohesion index. We can argue that the SSR concept parallels Lewin's (1973) basic change model (applied by Schein in the Korean war prisoners representing the most difficult case of attitude change because usually war prisoners

are subjected to extreme psychological changes for the rest of the lives)⁴¹ describing the management team's ideological *quasi-equilibria* (explained in section 3.4., in terms of Lewin's social field and space phases concepts) at the individual as well as at the group levels.

It is of great practical importance for...

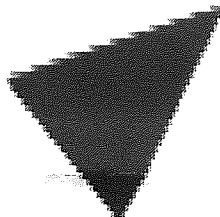


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Lewin gave a business example of his quasi-equilibria concept.

“Similarly when speaking of the production level of a work-team one refers to the ‘flow’ of products. In both cases we are dealing with a process which, like a river, continuously changes its elements even if its velocity and direction remain the same. In other words, we refer to the characteristic of quasi-stationary process. The importance of quasi-stationary equilibria for the psychological problems of individual life has been emphasised by Koehler. In regard to quasi-



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stationary processes one has to distinguish two questions: (1) Why does the process under the present circumstances proceed on this particular level (for instance why does the water in this river move with this particular velocity)? And (2) What are the conditions for changing the present circumstances?'' (Lewin, 1952, my underlining).

The SSR's sophistication though in comparison with Lewin's quasi-stationary concept can be identified in the fact that it is a specific business concept, instead of a more general psychological one. The SSR provide us with the range (and not a single - the point of quasi-equilibrium) within which business perception of problematic and change is made possible and meaningful at the individual as well as at the group levels (namely the management team level) and subsequently at the organisational metasystemic level.

'In other words the constellation of forces which keeps group life on a certain quasi-stationary level may maintain this level in spite of disturbances. In such cases, it might well be possible to measure relatively small changes of the forces which determine this quasi-stationary equilibrium even in situations were the irregular disturbances are relatively large.''' (Lewin, 1952, my underlining).

In the above quote Lewin implicitly accepts that quasi-stationary equilibria can be maintained within a range (small changes, irregular disturbances) despite disturbances, but he does not provide us with the range within which a particular quasi-stationary equilibrium can be maintained despite the disturbances directed against it. In other words in Lewin's river metaphor, quoted above, the main element that is missing is the very 'width' of the river itself, that the SSR provides us with. The width of the river itself will influence the velocity of the river namely the river's steady-state. This implies that the SSR can be used to answer Koehler's question about the water's velocity that demands for an explanation beyond the simple identification of the forces that produce a particular quasi-stationary equilibria level. Therefore, we can argue that the SSR provides us with the ability to identify the limits of the unfreezing aspect of change at the psychological as well as at the group levels.

In BSPA the SSR is regarded as a behavioural model that can indicate the probability of change or in other words the probability of unfreezing and moving beyond the individual's and the group's ideological limits. Lewin (1973) himself argues that real change has to deal with a group's ideological and power arrangements.

"... The studies of group life in various fields suggest a few general principles for changing group culture.

(a) The change has to be a change of group atmosphere rather than of single items. We have discussed this problem already. Technically it means that the change cannot be accomplished by learning tricks. It must be deeper than the verbal level or the level of social or legal formalities.

(b) It can be shown that the system of values which governs the ideology of a group is dynamically linked with other power aspects within the life of the group. This is correct psychologically as well as historically. Any real change of the culture of a group is, therefore, interwoven with the changes of power constellation within the group.'' (Lewin, 1973, my underlining).

Therefore, we can argue that the use of SSR as a single tool for social or business change, can not start a process of unfreezing the stability of the behaviour of the individual stakeholder, or of the management group, or of the business-system as a whole. Being a behavioural model, as Lewin's unfreezing-moving-freezing change model is, can be effective only when it is coupled to the BSPA's inside (critical) view. In BSPA's inside view the reasons explaining the organisational quasi-stationary equilibria are explained in terms of material and informational interests and not only in psychological terms, thus providing the stakeholders with the awareness of their ideological limits and thus starting the process of real, and not superficial unfreezing, aiming towards reducing the organisational material and informational sources which create asymmetrical power relationships between the stakeholders.

5.2.1. Mission Statement Analysis

All the above questions (in section 5.1.) are descriptive of the organisation's mission statement. Ideally system five's business ideology should be the embodiment and the manifestation of the organisation's mission statement, because ideally (in organic organisations) system five's business ideology should be reflected in the mission statement. System five should define the organisation's Specific SSR within which the lower levels of the hierarchy will have to operate. In this thesis we will start with the ideal case of the organic-metaphor or the open system view in order to identify and measure organisational conflict and politics. It has to be made clear that though system five is our starting point for the reasons quoted above it is certainly not the sole point of focus of the analysis. In an objectified business system, system five, the boss, can be identified officially from the organisational chart.

In the official mission statement should be recorded all the outputs of the organisational ideology (namely the elements of the *Ashridge mission model and skills*). A good⁴² mission statement, according to Campbell and Tawadey (1989), should contain all and it should be clear in regard to the description of those outputs. If clear descriptions exist regarding every element (purpose, strategy, values and behaviour standards and skills) in the mission statement then the analyst can record the official organisational strategic domain and position, values, standards and purposes. In case that the mission statement is not clear then the analyst should start the analysis by asking system five to interpret the mission statement. The purpose of defining clearly the components of the mission statement is to identify any incompatibilities between its elements. It has to be mentioned again at this

⁴² "Despite the large scale use of missions by managers, little guidance is available on what constitutes a high quality statement. Our work has given us a definition of mission, and we have turned this understanding into a questionnaire titled 'Do you have a *good mission statement*?'. The questionnaire is based on four elements of mission -purpose, strategy, values and behaviour standards." (Campbell and Tawadey, 1989).

point that the elements of the mission statement should be compatible because incompatibilities imply either an organisation experiencing conflict or an organisation being deceptive about its real purpose(s) thus being deceptive to the organisation's stakeholders. In other words the four elements of mission in BSPA are regarded as a gestalt.

5.2.1.1. System Five Mission Statement Analysis

But who is to say that the four elements of the systemic mission are incompatible between themselves? If we say the analyst as an outside observer then we are introducing positivism into BSPA's epistemology. The analyst, being a stakeholder himself, will have an opinion of his own that he/she will have to record, as we will define later on, but the same applies for system five and the rest of the management team. If we record system five's views regarding the mission statement elements, along with the views of the rest of the management team, in a manner explicated later, we will be able to identify the divisions within the management team, if any exist. Thus we will be in a position to assess, in general terms, the ideological cohesion of the management team using as reference system five's Specific SSR, which influences, or it is supposed in principle to influence, the whole system. A point that we have to clarify is that when the mission statement is not clear then we will have to ask system five to explain, in a structured manner, what the statement implies. In other words he/she will have to answer the question that the mission statement implies in regard to the strategic domain the organisation, he/she believes is in. In addition system five will have to express his/her view in regard to the official organisational mission as being representative of the business that the business system in focus, he/she believes, it is actually in. The final question will concentrate on system five's ideal mission, namely what business, in his/her opinion, the organisation should be in. With the above questioning system five is led to expressing his/her views about the mission statement and his/her perception of the current strategic domain as well as the future, desired one. Incompatibilities between the mission statement's components can be identified as inconsistencies in their coupling into a coherent logical framework for the stakeholders upon and within which organisational action materialises and becomes meaningful. For example an organisation that in its mission statement promotes environmental friendly values (a component of the mission statement) should employ environmental friendly skills and standards (components of the mission statement including skills) regarding the organisation's operations and manufacturing. In the opposite case incompatibilities exist. Inconsistencies in the components of the mission statement are an early indication of false pretences regarding the organisation's actual mission.

Next, system five has to express his/her views about the current organisational structure and functions as well as his/her perception about their compatibility with the official mission. Our purpose is to structure system five's views in order to compare them with the rest of the management team. Therefore we should ask him/her to fill the following Current Strategic Domain Table (Table 5.- 1.) as follows:

CURRENT STRATEGIC DOMAIN TABLE

date:

STAKEHOLDERS NAME:

MISSION STATEMENT STATED:

(what business are we in? why? with whom do we co-operate?)

PURPOSE (Company goal)	POSITION: STRATEGY (strategic domain)	VALUES (to serve in number of order)	STANDARDS (policies and standards)	SKILLS (skills that characterise the organisation)
<i>Growth:</i>	<i>Core :</i>		<i>TQM⁴⁴</i>	Skill a:
<i>Profitability:</i>	<i>Integration</i>	Higher Ideal:	<i>(a concept compatible with Maslow's good society concept)</i>	Skill b:
<i>Expansion:</i>	Market a: Market b:	Public Image: belief:		
	<i>Core :</i>	Stock-holders:		
	<i>Diversification</i>	Consumers:		
	<i>Related:</i>	Employees:		
	Market a: Market b:			
	<i>Unrelated:</i>			
	Market a: Market b:			
	<i>Cost Leadership:</i>			
	<i>Differentiation</i>			
	<i>Focus:</i>			
	Stuck in the Middle ⁴⁵ :			
	Not clear:			

The same factors are examined below

MISSION STATEMENT INTERPRETED:

(what business are we in? why? with whom do we co-operate?)

Statistics - Total number of disagreements

PURPOSE	STRATEGY	VALUES	STANDARDS	SKILLS
0	0	0	0	0
PERCEIVED CURRENT STRATEGIC DOMAIN - the business we are actually in -				
NO	SUBSET	SUPERSET	YES	DEFINE

-fill the appropriate box with an "X"; in the define box define your selection if different - only one box can be filled with an X -

Table 5.-1.

In the above table - No -means we are not in this line of business, contrary to the mission statement.

- Yes - means we are in this kind of business, namely the *perceived current strategic domain (CSP)* coincides with the one recorded in the official mission statement.



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- *Subset* - means that the current strategic domain recorded in the mission statement is a subset of the perceived strategic domain. For example, the railroad business (mission statement strategic domain) is (defined by the stakeholder) a subset of the transport business (perceived strategic domain). If this a case then the stakeholder places an X in the subset column (no other placements of Xs are allowed).
- *Superset* - means that the current strategic domain recorded in the mission statement is a superset of the perceived strategic domain. For example, the men's cosmetics business (mission statement strategic domain) is a superset of the razors business (perceived strategic domain). If this a case then the stakeholder places an X in the subset column (no other placements of Xs are allowed).
- *Define* - the stakeholder is asked to define the strategic domain if different than the one stated.

In the case of the Body Shop mission statement, quoted in section 2.2.4, could be interpreted by the stakeholder X and recorded as follows in table 5.-2. :

CURRENT STRATEGIC DOMAIN TABLE

date: dd/mm/yy

STAKEHOLDERS NAME: X

POSITION: Marketing Manager

MISSION STATEMENT STATED: <i>(what business are we in?: why?: with whom do we co-operate?)</i>	PURPOSE <i>(Company goal)</i>	STRATEGY <i>(strategic domain)</i>	VALUES <i>(to serve in number of order)</i>	STANDARDS <i>(policies and standards)</i>	SKILLS <i>(skills that characterise the organisation)</i>
<p>"BODY SHOPS MISSION STATEMENT</p> <p><u>Who</u> We are a British cosmetics company selling our own naturally-based skin and hair products"</p> <p><u>What</u> We offer products that cleanse, polish and protect the skin and hair.</p> <p><u>Where</u> We trade in 20 languages in 40 countries</p> <p><u>Why we are different</u></p> <ol style="list-style-type: none"> 1. We respect the environment - Reuse, Refill, Recycle 2. We are against animal testing for cosmetics - Cruel, Unnecessary - Misleading 3. We have a non-exploitative approach to trade - Equality, Employment, Trade not aid 4. We meet the real needs of real people - No idealised images, No extravagant claims 5. We campaign for issues we believe in. 	<p>To meet the real cosmetic needs of real people</p>	<p><u>Core :</u> Cosmetics Integration</p> <p><u>Market a:</u> Europe</p> <p><u>Market b:</u> United States</p> <p><u>Diversification Related:</u> Market a: N/A Market b: N/A</p> <p><u>Unrelated:</u> Market a: N/A Market b: N/A</p> <p><u>Cost Leadership:</u> <u>Differentiation:</u> <u>Focus: On both</u> Stack in the Middle: Not clear:</p>	<p><u>1. Environment:</u> Respect</p> <p><u>2. Society</u> a.Non exploitative trade b. Actively participating</p> <p><u>3. Customers</u> a. To service & satisfy</p>	<p><u>TQM:</u> Plant-based products</p>	<p>Skill a: Environmental friendly manufacturing</p> <p>Skill b:</p>

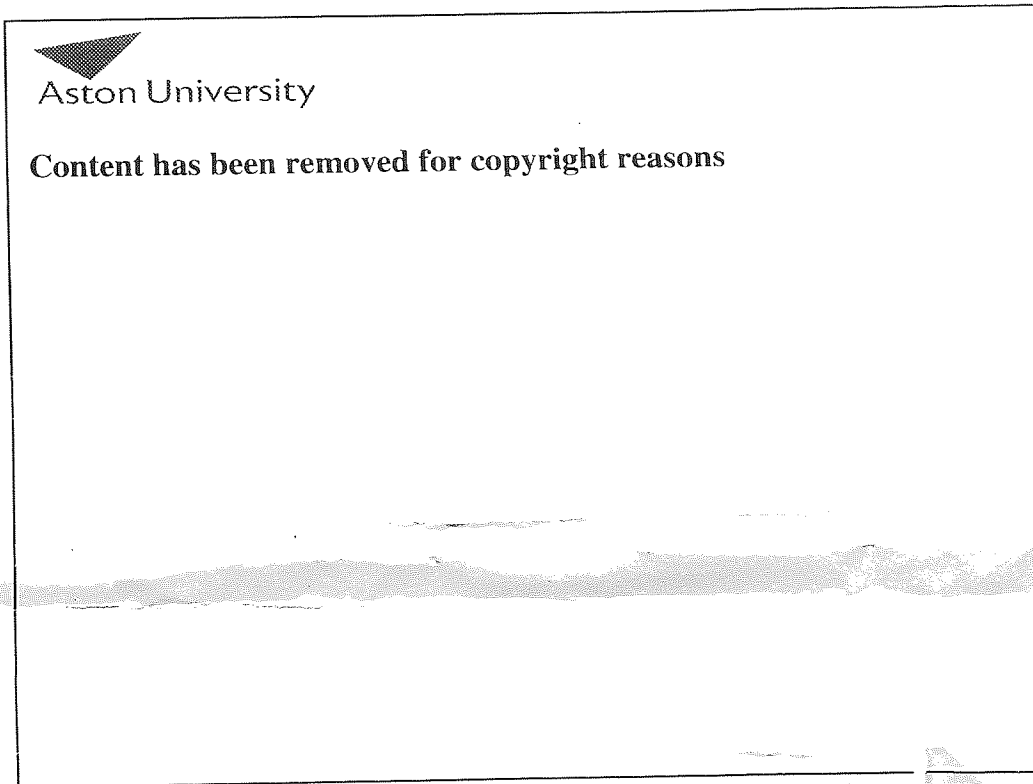
same factors are examined below

MISSION STATEMENT INTERPRETED: <i>(what business are we in?: why? with whom do we co-operate)</i>	PURPOSE	STRATEGY	VALUES	STANDARDS	SKILLS
--	---------	----------	--------	-----------	--------

Table 5.-2.

In the above table we have captured manager X's views of which could be different than those of manager "Y". In addition it is made obvious from the above example that other aspects of the mission statement are there, compared to our mission- model, and others are missing or they have to be interpreted. Since our focus is on making comparisons between the different views of the management team we will have to make use of a language format that will enable us to record those views in terms of their syntactic as well as to their semantic and pragmatic contents. Therefore, we will record the management team's views using Structured English (De Marco, 1979). Structured English is used in order to avoid the weaknesses of the English language (and any other natural language) in terms of specifying, in a rigorous manner, the management team's views regarding the organisational mission elements, as well as the organisational processes and structure. The translation into the Structured English format will be performed by the analyst, who has the expertise in using correctly the Structured English format, but in a process of continuous interaction with the stakeholders who will have to approve the output of their views in Structured English as being representative of their statements and their

intentions. De Marco (1979) argues the following in regard to the use of *Structured English* for specification purposes:



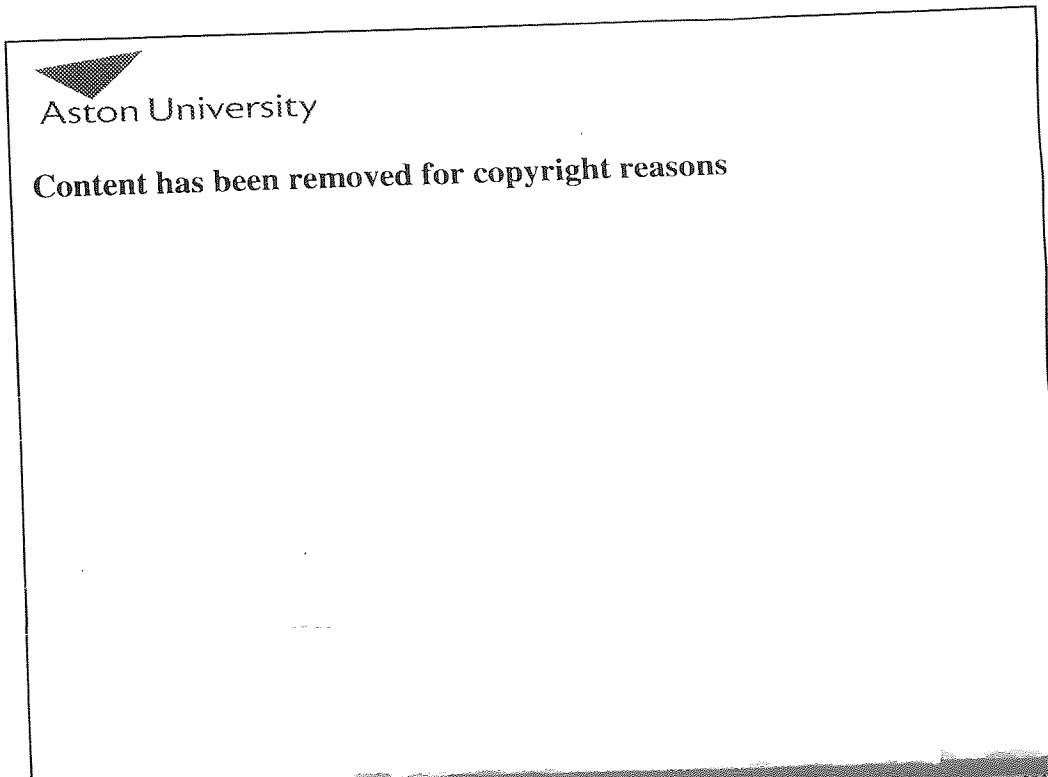
Structured English according to FitzGerald and FitzGerald (1987) uses procedural logic based on structured programming⁴⁵ and a restrictive syntax and vocabulary of the English language.

“Structured English is derived from structured programming; it uses procedural logic of structured programming (IF, THEN, ELSE, SO, REPEAT, UNTIL) along with English language that is restricted in vocabulary and syntax. It consists only of imperatives verbs data dictionary terms, and the logic terms mentioned above.” (FitzGerald and FitzGerald, 1987, my emphasis).

In BSPA we use both methods namely non-linguist and linguistic specifications. Structured English is chosen for the recording of the linguistic specifications. The use of Structured English in BSPA does not conform fully to DeMarco’s definition though. In this thesis we employ the procedural logic of Structured English (if, then, else, so, repeat, until) and we restrict the English language’s vocabulary into imperative verbs but we avoid the use of synonyms when we record system five’s views; in order to avoid any losses regarding

⁴⁵ *“Structured Programming*: An approach to programming that adheres to such practices as limited program control structures, top down design, structured walkthroughs, and a number of other methodologies.” (De Marco, 1979).

the semantic meaning the stakeholders attribute to a particular verb or object. By using Structured English we aim to dealing with the syntactic as well as the semantic levels of linguistic communication but not with the pragmatic level at this stage. These three stages are introduced under the term "semiotics". Ulrich explains semiotics as follows:



With the use of Structured English we deal as it was mentioned above with the syntactic and the semantic levels that can be used for comparing the management team's interpretations (understanding) of the organisation's mission statements. For example, manager X's (system five's) definition of values can be defined as:

Manager X's (system five's) Values (Recorded using Structured English)

- version 1 (recording without the use of imperatives verbs) - first step -

1. PROTECT THE ENVIRONMENT BY Reusing .AND.

Refilling .AND.

.IF. Country Facilities exist

.THEN. Recycle

.ELSE.

Import all recycled materials .AND.

Campaign for the recycling issues

END IF.

The recording of the stakeholders' views using Structured English is defined as an iterative process where the analyst tries to refine a stakeholder's views (in co-operation with the stakeholder) in accordance with the Structured English principles. In the first step of this process the analyst translates the mission statement into the Structured English procedural logic. The first step can be defined as an iterative process itself. In the second step the analyst tries to restrict the English language's format with the use of imperative verbs only. The second step is an iterative process as well. Therefore, the - version 1 - first step - , manager X's views, quoted above will be modified as follows in - version 2 - second step -.

Manager X's (system five's) Values (Recorded using Structured English)

- version 2 (with the use of imperative verbs) - second step -

1. PROTECT THE ENVIRONMENT : Reuse .AND.

Refill .AND.

.IF. Country Facilities exist

.THEN. Recycle

.ELSE.

Import all recycled materials .AND.

Campaign for the recycling issues

.END IF.

In the BSPA encyclopaedia each action underlined in the above definition will be recorded using Structured English as well. For example the refill action can be recorded as follows (-version 1 -first step-):

Refill Action (Recorded using Structured English)

- version 1 - first step -

Refill : 1. **FOR** bottles \geq 1000cc we outsource to a local Company .AND.

we offer monetary incentives to the consumer \geq 10% \leq 15% of the retail price

2. **FOR** bottles $<$ 1000cc we send to our factory in England .AND.

we offer monetary incentives to the consumer = 5% of the retail price

The other components of the mission statement can be recorded, in the BSPA *encyclopaedia*, in the same manner as above. This will allow the users, with the aid of the analyst, to articulate, in a rigorous manner, their views regarding this high level of abstraction. But most important of all by doing the same thing for the organisational processes and structure, as we will see later on, they will be in a position to compare the compatibility of the mission statement components with the organisational structure and processes. In addition

they will be in a position to compare their views with system five's views in semantic terms and not only in syntactic ones. Since the stakeholder's are asked to compare their views against system five ones then this way they are asked to compare their views in semantic terms as well. One can not 'agree' or 'disagree' with somebody else's views if he/she has not reached a certain degree of understanding (in semantic terms - subjective) of the other's views in the first place. In BSPA the possibility that no semantic comparison takes or can take place is classified under the heading 'not clear'. The stakeholders are given the chance not to compare (for their own reasons) their views in semantic terms with system five's ones. Lack of semantic comparisons in BSPA is treated either as a very serious symptom of communication distortions or as an expression of the stakeholders' strategic actions.

The very process of comparing though the management team's views vis-a-vis system five's will not be a *linear* one but rather a *fuzzy* one. According to the cybernetic principle of closure, mentioned above, that system five provides the system with closure, we can argue that the comparisons of the rest of the management team's views can be described in terms of *degrees of containment* (the subethood principle) in reference to the system five's views. In other words we can introduce a general scale of comparison for every mission element (*purpose-strategy-values-standards*) and the *skills* element where *total agreement* with *system five* is represented by 100%; *total disagreement* with -100%; and *partial agreement* with three values, 75% for *moderate agreement*, 50% for *split agreement* and -75% for *moderate disagreement*. Intermediate stages of course exist but for start general approximations are necessary. The very definition of the percentages (100,75,50,-75,-100) will be left to the stakeholders themselves.

By using the above format, which allows us to perform comparisons between different views regarding the elements of the mission statement, we will be able to produce statistical information (means, standard deviations, etc.,) as well. One might argue that strictly speaking (in mathematical terms) we can not calculate the mean or the standard deviation as we are not using an interval scale. Or in other words there is no guarantee that the difference between a score of 25 and one of 50, is in any sense 'the same' as between one of 50 and one of 75. This is true! It is true because we have not dealt at this point with the pragmatic level of 'agreement' or 'disagreement'. The pragmatic level will be dealt in the inside view where the strength of conflict over organisational material and informational assets, in BSPA, is regarded as the expression of the pragmatic level of 'agreement' or 'disagreement' between the organisational stakeholders. In chapter six we will be introducing measures (the overall organisation entropic number - being a measure of the pragmatic level of 'agreement' and 'disagreement') that will be compared with the statistical information of the outside view thus providing us with the needed interval scale. That will be used as it is argued later in chapters five and six for the development of an intrinsic motivated organisational information system where the differences in the outside view will be treated as 'early indicators' of material and informational differences located upon the organisation's value chain.

In addition, one might argue that not every mission statement will be as clear as the Body Shop's one thus leading to recording problems. This might be true, but the whole focus of the analyst in the outside view is to

examine with each particular stakeholder (management team) the mission statement many times over if necessary, until the stakeholder(s) articulates his/her views using Structured English. Iterations aiming towards producing improvements to an original mental design are not something new in systems design, as a matter of fact, according to DeMarco (1979) it is a natural process of the human brain:

“The human mind is an iterative processor. It never does anything exactly right the first time. It is particularly good in making an imperfect implementation of a given task, and making significant improvements to it. This it can do over and over again, coming up with better results each time. Since we work this way quite naturally, why fight it?” (DeMarco, 1979).

This process will structure his/her understanding (semantic level) as well as system five's understanding as well. In case where no mission statement exists we will proceed with helping the stakeholder to articulate a mission statement on the basis of BSPA's mission-model.

Therefore we can claim that by using Structured English we limit the chances of misunderstanding and we lay the foundations for the development of a learning organisational information system. In addition, we lay the foundations for the development of feedback mechanisms corresponding to an information system that does not facilitate the whole system into acquiring mechanisms for internal control of its operations only but mechanisms for intrinsic motivation as well. In other words we are setting the foundations (in very general terms) for a simple fuzzy system (evolving into a neural system - its training of which will be based in the beginning on positive/negative reinforcement that the system will derive from the comparison between the data of the outside view and the inside view's overall organisation entropic number) based on basic and very general fuzzy rule that:

BSPA's General Fuzzy Rule

- .IF.** *incompatibility* (measured in terms of the *subsethood principle* - having as reference point *system five's* views) exists between the mission elements (*purpose-strategy-values-standards*) **.AND.**
the skills element **.AND.**
between strategic domain (CSP - DSP) and strategic positioning (ISP) [elaborated in the *Specific SSR* (section 5.2.2.2. and 5.2.2.4.; and the *Management Cohesion Index (MCI)* elaborated in section 5.2.2.3.)]
.THEN.
conflict [located on the organisational *value chain* (elaborated in *chapter six* and measured with the introduction of the *overall organisation entropic number* - elaborated in section 6.8.)] exists for the control of the organisation's material and informational assets
- .ELSE.**
- .IF.** *compatibility* exists **.OR.**
.THEN. the organisation is organic **.AND.**
false consciousness
coercion exist.

The stakeholders' pragmatic level of their views (namely 'what matters' to them in terms of Habermas's knowledge-constitutive interests) is dealt in the inside view (see chapter six) where conflict is located upon the organisation's value chain; as well as with the articulation, in the same manner as above, of their ideal mission and its elements and the articulation of the ideal value chain as we will see in chapter six. In other words the stakeholders' ideal missions and subsequently their ideal designs will be focused on those elements which matter most in terms of their material, informational or emancipatory interests.

In order to aid the recordings and the comparison of the stakeholders views (having as standard system five's views), in the most structured manner possible, we will use non-linguistic aids as well. For this reason we will introduce the stakeholders to a list of generic-organisational structure-types (see Appendix A1) along with their diagrammatic representations; as well as with a list of generic-organisational-processes-types based on Porter's value chain model. The above lists of generic structure-types and process-types can be used to structure the enquiry without prohibiting the interviewee from assuming his/her own definitions. It has to be noted though that the main focus at this point is not the accuracy of recording the processes specifications details, but the focus is on recording the perception of compatibility between the four elements of mission (plus the skills element); as well as on the perceived compatibility of the organisational structure and functions between themselves and the mission elements. The following lists are not intended to be complete lists that's why we include the "own structure type", in the current structure table and the "own process type" in the Current Process Table.

System five will be asked to define his/her views regarding the structure and the processes of the system (namely what type of structure and processes the organisation currently employs) as well as their compatibility with the organisation's strategic domain and positioning, embedded in the organisation's mission statement [what business are we in? (Current strategic domain and positioning)- why - with whom do we collaborate?]. For example the system five of a European-retailer perceives that the current pan-European organisational structure to be a functional structure. System five goes on to rate this structure as 'not compatible - 100%' with the current strategic domain (what business are we in? -being a pan-European retailer), embedded in the mission statement that defines the retailer as a full-range one (what business are we in? - type of competitive advantage - current strategic positioning). Namely a pan-European retailer that takes into consideration cultural and consumer buying habits differences across Europe (why - to serve the diverse cultural and buying needs of the European consumers) and aims to collaborate with local manufacturers and producers (with whom do we collaborate?). Instead he believes that the territorial structure will be compatible with the mission statement's current strategic domain; due to the fact that the territorial structure places emphasis on the local markets thus responding successfully to the consumers' diverse cultural behaviour and buying habits. But the system five of a 'hard' pan-European discounter with limited product-mix and standardised store-format might define the organisation's functional structure as compatible with the organisation's mission.

This information would be captured in the following tables. The "Current Structure Type Table" 5.-3., and the "Current Process Type Table" 5.-4..

CURRENT STRUCTURE TYPE TABLE

date _____

STAKEHOLDERS NAME:

STAKEHOLDERS POSITION:

Type of Structure (generic types)	Compatible (25%-50%-75%-100%)			Not Clear (√)			Not Compatible (0%)			Reasons (using Structured English)
	2d	3d	n-d	2d	3d	n-d	2d	3d	n-d	
1. Functional										
2. Territorial										
3. Product										
4. Customer Departmentation										
5. Market Oriented										
6. Service Departmentation										
7. Matrix										
8. Project										
9. Business Unit										
10. Mix	type a:*	type b:....	type n:	type a:	type b:	type n:	type a:	type b:	type n:	What part of the org.
11. Own structure type										

Statistics

- Total number of disagreements regarding compatibility
- Compatibility's standard deviation & mean

0

0

0

Comments

*Type (a), (b), or (n) correspond to types of structures that are found in the generic "Type of Structure" List. In the "Reasons" part we have in addition to record that part of the organisation where this particular type of structure applies. For example "Project" in the R&D department and "Customer Departmentation" in the Marketing department.

Table 5.-3.

2d, 3d or n-d, mean two, three or n dimensional matrix. If he/she can not identify with any of the above types then he/she is asked to define his/her own structure type. The definition of the types of structures is based on the general management classification. Before being asked to define the structure of the organisation the interviewees would be given diagrammatic explanations of the different types of organisational structures in order to structure their views for comparability reasons. If their views do not correspond to those that are included in the lists of the generic types that they are provided with then they will be asked to draw their own structure-types and define their own process-types. The organisational structure types, diagrammatic explanations are taken from Koontz *et al* (1991) and they are quoted in Appendix A1:

In the same spirit as above we define the organisational processes as follows:

The value chain's generic activities are used as major classifications of the processes identified by the stakeholders. The classification into the generic types will enable the users to organise the processes that they identify within the Porterian value chain framework. But the very definition of a process as primary or support will be left to the stakeholders to define.

date _____

CURRENT PROCESSES TYPE TABLE

STAKEHOLDER S NAME: _____

STAKEHOLDER S POSITION: _____

PROCESS (generic types)	COMPATIBLE (25%-50%-75%-100%)	NOT CLEAR (N)	NOT COMPATIBLE (0%)	REASONS	Define (using Structured English)
1. Firm Infrastructure					
2. Human Resources					
3. Technology development (R&D)					
4. Procurement					
5. Inbound Logistics					
6. Operations					
7. Marketing					
8. Sales					
9. Services					
10. Capital Allocation (Accounting/Finance)					
10. Own process type					
Total	0	0	0		

Porter's Value Chain Support Activities (1985)

Porter's Value Chain Primary Activities (1985)

In BSPA the stakeholders define a/the process(es) as support or primary

The above process-types are based on Porter's (1985) value chain activities plus the capital allocation activity which is not included in the Porterian value chain activities as a distinct activity.

Table 5.-4.

The descriptions of processes would be recorded using Structured English. We can illustrate the use of Structured English in process description by borrowing a few examples from Porter's "Competitive Advantage" (1985) book. Porter identifies the differences between two airlines with different strategies based on the analysis of their value chains. The comparison is made between the so called "trunk airlines" which offer full-services and the so-called "no-frills" ones that do not offer full-services. From Porter's description we quote only the "Ticket counter operations" which for our example are regarded by manager X (system five) as the

organisation's inbound logistics while the "Aircraft Operations" is regarded by manager X as the organisation's operations.

Competitors	Ticket Counter Operations	Aircraft Operations
<i>Trunk Airlines</i>	Full Service	Purchase new aircraft Union pilots
<i>No-Frills Carriers</i>	Secondary Airports and terminals No ticket counter (or check-only) Purchased tickets on board the aircraft or from machines No interline tickets Few fare options	Used aircraft High-density seating Non-union pilots Smaller crews and more flying hours per day

(taken from Porter, 1985)

The above examples could be recorded in the BSPA encyclopaedia as follows:

TICKET COUNTER OPERATIONS - PROCESS = INBOUND LOGISTICS

version 2

A. **Trunk Airlines** : 1. Provide Full Service

Full service would be analysed further using Structured English

B. **No-Frills Carriers** : 1. Provide Secondary Airports .AND.
Terminals .AND.
Few ticket-options. .AND.
Check-in .AND. .NOT.
Ticket-counter

Ticket options would be analysed further using Structured English

Purchase Tickets On board the aircraft .OR.
From machines. .AND. .NOT.
Interline tickets

AIRCRAFT OPERATIONS = OPERATIONS

version 2

A. Trunk Airlines : 1. Purchase New aircraft .AND.
Allow Union pilots

B. No-Frills Carriers : 1. Purchase Used aircraft .AND. .NOT.
Allow Union pilots

1. Increase Density of seating .AND.
Flying hours per day .AND.

Decrease Crews size.

The limits of
increase or
decrease would be
recorded as well.

The above examples illustrate the case for using Structured English to record the stakeholders' views about the organisational structure and processes. In addition, it is made apparent from the above examples that we can structure and compare (based on the subsethood principle) the views of different stakeholders in regard to their strategic thinking and organisational design based on the concepts of the value chain, industry structure (5 forces model), the Ashridge mission-model, the centre of gravity concept, and the organisational structure-types classification, explicated above. One might argue that there seems to be a vast amount of work involved here! This might be true but that work would not be very much more than the work conducted by an IE analyst who tries to model the organisational structure and processes for the development of an information system especially if one takes into account that IE "progresses in a top-down fashion through the following stages: Enterprise strategic systems planning, Enterprise information planning, business area analysis, system design, construction, cutover." (Martin, 1989). The main point where BSPA follows IE is the creation of the BSPA encyclopaedia, which is filled with the information captured in the table format, quoted unnormalised, as the work progresses from the outside to the inside view. The table formats quoted are not only visual aids for the readers but they represent the basic (unnormalised) formats of the tables that will make up a relational database encyclopaedia though they are some way short of that level of detail. The development of such a database system will become the basis for the development of *Executive Information Systems*⁴⁶ (EIS) and *Decision Support Systems*⁴⁷ (DSS) (being a subschemas⁴⁸ of the fuzzy system), depending on the stakeholders position on

⁴⁶ "Executive information..."



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the organisation's logical hierarchy thus allowing the stakeholders and the analyst for fast comparisons between the different views while they will provide them with information and quick feedback. Martin argues the following for regarding the development of the IE encyclopaedia:

"As it [IE] progresses through these stages [the IE stages quoted above], IE builds a steadily evolving repository (encyclopaedia) of knowledge about the enterprise, its data models, process models, and system designs." (Martin, 1989).

Based on the above analysis we can summarise system five's views about the compatibility of the current strategic domain and positioning, value, purpose, structure, skills, and processes with the official mission statement in the following table, named as the "System Five Current Mission Matrix" (5.-5.):

System Five Current Mission Matrix							
Name:	date: _____						
Strategic Domain	What Business are we in? _____	Integration _____					
	Why? _____						
Domain	With whom do co-operate? _____	Diversification _____					
		Define	Compatible	Not Compatible			
		(%)	(%)	Not Clear*			
			(0%)	(√)			
	<table border="1"> <thead> <tr> <th>Description</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>			Description	Type		
Description	Type						
Purpose							
Strategic Positioning							
Value							
Skills							
Structure							
Processes	<u>Primary</u>	<u>Support</u>					
(description using structured, English; process types, are defined as primary or support)	F.I.: H.R.: I.D.: P.R.: L.L.: O.P.: M.K.T.: S.L.: S.R.: C.A.:	F.I.: H.R.: I.D.: P.R.: L.L.: O.P.: M.K.T.: S.L.: S.R.: C.A.:					

*There will be a memo field in the database in order for the stakeholder to define exactly what he/she is not clear about

Table 5.-5.

⁴⁸ "Subschema: An application program's view of the database... Schema: A description of the overall structure of the database" (Pratt and Adamski, 1987).

In the above table we distinguish processes in two types; the primary processes and the support ones based on Porter's (1985) definitions of *primary* and *support activities*. Porter defines primary and support activities as follows:

"Primary activities,.....are the activities involved in the physical creation of the product and its sale and transfer to the buyer as well as after-sale assistance....Support activities support the primary activities and each other by providing purchased inputs, technology, human resources, and various firmwide functions." (Porter, 1985, my underlining).

According to Porter the primary activities are "Inbound Logistics", "Operations", "Outbound Logistics", "Marketing and Sales", and "Service". Support activities are defined as "Procurement", "Technology Development", "Human Resources Management", and "Firm Infrastructure". In BSPA the definition of an activity (process) as primary or support would be left to the stakeholders to define. Differences in the definition of an activity(ies) between different stakeholders as primary or support may amount to serious differences in the perceptions of the organisation's mission and strategic domain due to conflict regarding the control of the organisation's material and informational assets. For example, the definition of the statistical process for a research company that regards itself as a data provider (meaning that its strategic domain is the data-providing business) might be defined as primary but for a research company that regards itself as a business consultancy might be regarded as support (because for example statistical-input is used for the development of value-added services sold to a business client as a decision-support product).

So far we have tried to capture system five's views regarding the organisation's mission, current organisational state in terms of strategic positioning and organisational design (structure and functions). But we have to capture his/her views about the way the strategic and organisational factors, identified above, should ideally be. In order then to discover his/her strategic and organisational vision we ask system five to express his/her opinion about the strategic domain the organisation should be in, the strategic positioning and the values that it should ideally assume, as well as the structure and the functions that the organisation should employ ideally in order to achieve its purposes. We capture his/her views in a table similar to the "System Five Current Mission Table" (5.-5.). We will call this table "System Five Ideal Table" (5.-6.). Table (5.-6.) is similar with table (5.-4.) except of the "compatibility" column which is replaced with the "change" one. Under the "change" heading we will record system five's disposition, in regard to changing an existing factor, in order to make it compatible with the "ideal strategic" domain (in case where the ideal domain is different from the current one). The degree of "change" will be measured in terms of the following percentages: 0% for no change; 25% for superficial change; 50% for considerable change; 75% for major change; and 100% for total change. The definition of the degree of change as total, major, considerable, superficial, or no change will be left to the stakeholders to define it. It has to be noted here that in the ideal mission all the elements of the organisational mission (including the skills element) will be compatible between themselves because they are designed teleologically by the stakeholders, on the basis of the strategic domain chosen. In case where we discover that the current organisational mission elements are not compatible between themselves we will avoid

to exert any critique as to the causes of this phenomenon because incompatibilities of the mission statement components in BSPA are regarded as surface phenomena being basically indications of deeper organisational problems. Only in the inside view we will be in a position to discover 'why' a particular stakeholder perceives incompatibilities in the mission statement elements thus providing us with the ability to apply critique as to the causes of the phenomenon. The critique applied though will not originate from the analyst but from the stakeholder himself who will be enlightened about the material and informational causes of his/her perception regarding the organisational system, as well as his/her strategic and organisational vision. The "System Five Ideal Mission Table" will have the following form:

System Five Ideal Mission Matrix				
Name:		date: _____		
Strategic	What Business are we in? _____	Integration _____		
	Why? _____			
Domain	With whom do co-operate? _____	Diversification _____		
	Define	Change	No Change	Not Clear
	_____	(%)	(0%)	(√)
	Description		Type	
Purpose				
Strategic				
Positioning				
Value				
Skills				
Structure				
Processes	<u>Primary</u>	<u>Support</u>		
(description using structured, English; process types, are defined as primary or auxiliary)	F.I.:	F.I.:		
	H.R.:	H.R.:		
	I.D.:	I.D.:		
	PR.:	PR.:		
	LL.:	LL.:		
	OP.:	OP.:		
	MKT.:	MKT.:		
	SL.:	SL.:		
	SR.:	SR.:		
	C.A.:	C.A.:		

Table 5.-6.

Usually the ideal mission would be justified by system five in the light of his/her perception of the organisational environment. Perceived changes in the environment might demand for changes in the

organisation's strategic domain and positioning as well. This does not imply that system five's perception regarding the organisation's environment would be valid as a proactive or as a reactive stance only, but it can be valid as an interactive stance as well. Therefore, the ideal mission, or better his/her vision about the future will be complete when he/she justifies it in the light of trends that he/she anticipates in the industry's environment (proactive/reactive stance) or he/she is planning to bring to bear upon the organisation's environment (interactive stance). The following table called "System Five Industry Outlook" (table 5.-7.), will be used for the justification of system five's vision. He/she might invoke all or some of the factors of Table 5.-6., for the justification of his/her vision, that's why he/she will be asked to attribute a rank number of importance to the factor(s) identified. The job of the analyst, at this stage, is confined into the role of biasing the stakeholder(s) to think through all the factors, quoted in the next table, and express an opinion.

The factors included in the table are based on Porter's industry structure factors (5 forces model) as well as on Gilbert's and Strebel's (1986-1987) Industry Life cycle model. Gilbert and Strebel though, are missing in their model for no apparent reason, the industry decline stage. The decline stage is rather important because it demands for the death of many business systems. Therefore the decline stage in the table 5.-7., would correspond to Porter's definition of a declining industry.

"Although deceptively familiar as a phase of the product life cycle, declining industries have not received much study. The decline phase of a business is characterised in the life-cycle model as one of shrinking margins, pruning product lines, falling R&D and advertising, and a dwindling number of competitors... Industries differ markedly in the way competition responds to decline; some industries age gracefully, whereas others are characterised by bitter warfare, prolonged excess capacity, and heavy operating losses." (Porter, 1980).

In addition, in the last part of table 5.-7., we deal with Porter's five forces model concentrating on the actual forces that drive industry competition (power relations with the external stakeholders residing in the organisations objectified environment) namely the bargaining power of buyers (i.e., the power of retailers over manufacturers), the bargaining power of suppliers (i.e., the power of the oil-producers over the car-drivers), the threat of potential entrants [i.e., the threat of the retailer's VAN (Value Added Networks) operators, such as IBM or AT&T, entering the marketing research field], and the threat of substitutes (i.e., the use of Internet services instead of using telephone services). The fifth force namely the rivalry among existing firms is dealt in the upper part of the table. In this table we try to capture the stakeholders' perceptions regarding the strength of the forces themselves in terms of a "high-medium-low" scale. We add the "stockholders power" as well because the power of the *institutional investors*⁴⁹ can shape whole industries. The intensity of the forces themselves though it falls within the domain of the subjective, in an objectified industrial environment, can be 'objectively'

⁴⁹ *"Institutional Investors.* Pension funds, trust departments of banks, life insurance companies, mutual funds, and other large commercially managed investment portfolios" (Francis, 1988).

assessed in terms of the industry's profitability (namely in term of changes measures with the money-medium) as Porter argues:



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Therefore, in the last row of table 5.-7. we will include the profitability as it is quoted in the published annual reports for the ≤ 1 and the average forecasted, by government or private agencies, industry profitability. This will help us to make comparison between the degree of the intensity of perceived forces (L-M-H), the "rank no of importance" (being a measure of the stakeholders' subjectivity), the industry's growth stage, and the "objective" measure of a particular industry profitability, thus identifying the main factor that is perceived by the stakeholder to be the core of the industry's instrumentality. A high profitability number compared with a low importance number (e.g. 1) corresponding to a high (degree - 'High') intensity supplier's power, will provide us with insight as to the possible strategic actions that a particular stakeholder might undertake within his/her perceived epigenetic environment, namely his/her industry's perceived boundaries. For example a nuclear-power electricity producer, operating in a highly profitable industry, in order to preserve its 'low' buyer power might try to suppress or mislead the public as to the side-effects of radiation on people and the environment.

SYSTEM FIVE INDUSTRY OUTLOOK										date _____	
Name:		Years in this Position:				Education:					
Other titles:		Previous Positions:									
← Geography		Local		National		International		Global		Reasons & Rank No. of importance	
← Factors		current =<1yr.	future > 1 yr.	current =<1yr.	future >1 yr.	current =<1yr.	future >1 yr.	current =<1yr.	future >1 yr.	Rank No. 1>7	Reasons (Structured English) 1-7
1. Competitors		y/n	y/n	y/n	y/n	y/n	y/n	y/n	y/n		
2a. Competition basis Cost											
2b. Competition basis Differentiation											
3a. Market emergence		y/n	y/n	y/n	y/n	y/n	y/n	y/n	y/n		
3b. Market growth											
3c. Market maturity											
3e. Market decline											
4. Buyers' Power (Low-Medium-High)		L-M-H	L-M-H	L-M-H	L-M-H	L-M-H	L-M-H	L-M-H	L-M-H		
5. Supplier's Power (Low-Medium-High)											
6. Potential Entrants											
7. Stock-Holders Power (Low-High-Medium)											
Industry Profitability (ROI %)		%	%	%	%	%	%	%	%		
STATISTICS		(comparison between Rank no- ROI-industry forces intensity)									

Table 5.-7.

5.2.1.2. System Five's Specific SSR

All the above effort was aiming to identifying system five's ideological Specific SSR (an applied form of the basic SSR concept will be developed later in this chapter). At this point before we proceed further we have to answer some possible criticism, regarding the work so far.

One might argue that the term ideal design corresponds to IP's (Ackoff, 1981) uncritical approach and is totally inappropriate to be used in a critical systems methodology. This is due to the fact that by definition, as Ackoff himself states it, it downgrades the effects of power and coercion in the organisations. The use of the idealised design concept is used as part of the effort of identifying system five's ideological Specific SSR. The range will spread from the ideological plus point, in this case being the ideal strategic domain defined in the Specific SSR as the Desirable State Position (DSP), and the ideological minus, in this case being the current strategic domain and defined in the Specific SSR as the Current State Position (CSP). The choice of the plus and minus signs is not made arbitrarily. They are used to express graphically the business system's in focus organisational closure (Maturana, 1991a) that allows for structural change which is conditioned and limited by organisational ideology (organisational spontaneous activity). The plus sign, or rather the DSP, represents the limit of structural change that does not threaten the business systems organisation or in other words the dominant ideology. We have to make it clear that when we talk about the business organisation that is defined by organisational ideology we mean the relationships between the organisational material and informational interests that define and specify a system as a composite unity and determine its properties as such a unity. This means that different strategic domains can be chosen as long as they do not seek to destroy the dominant stakeholder(s) existing relationship(s) between their organisational material and informational interests. The minus sign (CSP) for the current strategic domain represents the present consolidated structure being always at a disadvantage because it is always embedded in a dynamic process or better in a state of quasi-stationary equilibrium as Lewin (1952) argues. The minus sign is chosen to represent that very disadvantage, namely the fact that every consolidated structure runs the risk (by being in a dynamic environment) of becoming pathologically autopoietic thus turning the system into a closed one meaning that it becomes not only organisationally closed but structurally closed as well. The argument of organisational closure is based on Mingers' argument (based on Maturana's and Varela's studies on autopoiesis) that autopoietic systems are open structurally but closed organisationally. The arguments we are making in support to the choices of the plus and minus signs parallels Mary Parker Follett's (1995) concept of *circular response* as well that regards the functional and ever changing relating between two social entities has a plus value.

"We have now, to repeat in summary, three fundamental principles to guide us in our study of social situations; (1) that my response is not to a rigid, static environment; (2) to an environment which is changing because of the activity of the boy going to school may change the activity of the boy going to school. Or it might be put thus: that response is always to a relating, that things that are varying must be compared to things that are varying, that the law of geometrical progression is the law of organic growth, that functional relating has always a plus value. The

social sciences must learn to deal with that plus, to reckon literally with it. A dynamic psychology gives us instead of equivalents, plusvalents.” (Mary Parker Follett, taken from Drucker, Kanter and Graham, 1995).

In BSPA, we believe that the circular response’s plusvalents (that corresponds to the concepts of spontaneous activity and organisational closure), regarding the social relating between the stakeholders and their business social environment has a limit. That limit is defined by the organisational ideological process and leads to a quasi-stationary equilibrium. Therefore, the plus sign in the SSR represents the limit of plusvalent while the minus sign represents the current consolidated structure that can remain intact only in case that it disregards the process of circular response by turning the organisation into a closed system.

One might argue though that the use of Maturana’s and Varela’s autopoiesis concept, explicated in section 3.3., for the description of business systems might lead to “*deep ontological problems*” (Mingers, 1995). For example in a purely self-producing (autopoietic) system all its part should be self-produced by the system. This implies that business systems should self-produce the HAS content as well, namely in principle the people’s biological existence as well. Therefore in this thesis we use the autopoietic concept not in its strict sense but rather, as Mingers (explicated in section 3.3.) and Morgan (1986, taken from Mingers, 1995) argue as a metaphor for the organisation’s operation.

110 | *U.S. History: The American Revolution* | *Chapter 1: The American Revolution*



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Therefore based on the autopoietic metaphor we can argue that any structural transgression of the ideological-produced limits will lead the current business organisation to distraction and it will be resisted by ideology itself. When we are talking about structural changes in the Specific SSR we mean the actual business structure and processes as well as the skills, values, and purpose that are attached to these factors and become meaningful within the dominant organisational ideological-produced framework.

One might argue though that the strategic intention expressed with the plus sign (DSP) can not be an expression of the system five's ideology. This argument can be regarded as false in the case where system five's strategic intention is justified and backed-up in the light of perceived environmental changes based on the framework provided in the "System Five's Industry Outlook" table. For example, the intention to become a transportation firm expressed in the sentence "we want to become a transportation firm" amounts to a simple statement of intention but it becomes an ideological-produced statement when it is expressed as follows: "we want to become a transportation firm, instead of a railroad one, because we have the skills and we believe that the railroad business will be fragmented in the next five years". Statements like the above express a business ideology, namely system five's business ideology, and they are not just simple statements of intent. System five sets the direction, ideally, where the rest of the system will have to move towards. But one might ask where is the middle point between the plus and the minus signs, or in other words between the future (desired) and the current strategic domains. The middle point (0) is defined as the current strategic domain (what business are we in currently?) (CSP), which demands for a different strategic positioning (change in the type of competitive advantage) and it is called the "Intermediate State Position" (ISP) representing the middle point between the ideological limits. For example, the ideological-produced statement "we are remaining in the railroad business and we plan to become the cost leaders in regard to railroad freight" amounts to important structural changes well within the limits of the dominant organisational ideological-produced framework where meaningful organisational action can take place. The ISP is identified as the limit of the possible structural changes within the current strategic domain or in other words it is identified as the ideological limit of the current strategic domain. Any point beyond the ISP will demand for a new strategic domain, which will serve better the existing material and informational interests as well as the existing power arrangement between the organisational stakeholders. For this reason the ISP is defined as the middle-point between the organisational DSP and CSP points. Any transgression of the organisational strategic positioning will lead the stakeholders to abandon the current strategic domain and seek a new strategic domain thus increasing the SSR's length and making the organisational steady-steady range more unstable. In case where the current and the ideal strategic domains and strategic positioning remain the same, then the steady states range is reduced dramatically then the plus (DSP) and the minus signs (CSP) coincide. This implies that the other components of the mission or the system's structure and processes can only be subject to superficial changes only. For example the following statement is representative of this case: "since we are staying in the railroad business and we are still committed to low fares for the freights, we do not have to change anything else. Except that we have to reduce our operational costs, or improve our service standards, etc.". In a situation like this the planning process is replaced basically by well defined and uncritical action, or in other words as Porter (1996) argues operational efficiency is this case is mistaken for strategic planning.

When the plus and the minus signs are very close indeed then we can claim that the organisation is either pathologically autopoietic, meaning that the organisation disregards or continuously misinterprets environmental stimuli because it behaves as a closed system; or that it has been very successful in a relatively 'stable' environment thus running the risk, as Porter (1990) argues, to lose the flexibility to adjust though that

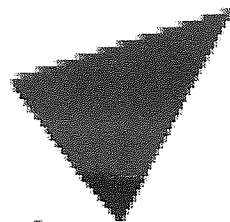


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The organisation's historical analysis, regarding the organisation's successes or failures, as they are perceived by its stakeholders, will lead us to the causes of this self-destructive organisational behaviour. For example, IBM's enormous success in the *PC market*⁵⁰ was followed by failure in the particular market when the threat of the compatibles-market was downgraded or underestimated.

One might argue though that what we have done so far is to take for granted system five's views regarding the system's mission, which in reality might tell us nothing about the system as a whole. First of all we have to repeat BSPA's adherence to the cybernetic principle, which advocates that in organic situations (resulting from real democratic procedures), where according to Mintzberg (1983) a well-established organisational ideology exists, system five embodies the identity of the system. This of course implies a conflict and coercion-free environment. Because we do not know that the system is conflict or coercion-free we examine system five's views first as being the embodiment of the whole system. In either case we have to examine system five's views



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because as we argued in chapter two system five is a very important stakeholder. We simply do not know if he/she is the peak-co-ordinator of the system or a leader or an executive or just a figurehead, we will only find out when we 'enter' the system and examine it critically in the inside view. Or to put it in better terms we hope that system five will be made aware, in a self-critical manner (BSPA's inside view), of his/her organisational material and informational interests.

In addition, BSPA adheres to the Organisational Cybernetic principle of hierarchy and control. Organisational Cybernetics refers to logical (metasystemic) and not physical (bureaucratic) hierarchies found in organisations. In the outside functionalistic view we assume that logical hierarchies coincide with the physical ones, because this will admit us into the system's internal (inside) workings in a 'structured' manner.

One might argue though that there are no assurances that system five, namely the President, the CEO, the General Manager, etc., of the organisation, defines the organisational mission and not a team of planners, or even a powerful first line manager, or etc.; and therefore wonder who defines organisational mission. This is a very good question, but the answer is obvious at this stage of the business system's analysis. We do not know yet! We are still examining the system from the 'outside'. According to BSPA's outside view, system five embodies the identity of the objectified system, namely the President, the CEO, the Prime-Minister, the Archbishop, the Chief of the Army, etc..

But one might question the whole use of the outside view, especially if we consider the fact that business organisations are full of power relationships, conflict and politics. The outside view, besides being necessary for the examination of the organisation's instrumental purposes, can help us to 'enter' the system in a 'structured' manner. When we start our analysis with the official (objectified) system five, we have a clear point of reference. That means that system five's ideology, sets the limits (at least ideally) of the next level in the hierarchy and the organisation as a whole. By examining in the same manner as above the next level's ideology(ies), namely the first line of management, we can come to a conclusion about the management team's ideological cohesion. But even in case we discover no differences in the management team, we would not stop at that point. We will try to depict and connect the changes advocated by system five in regard to the system's strategic domain and strategic position on the business system's value chain, thus identifying those changes in terms of changes regarding the control over the organisational and information resources. If that step is successful then we will bring to the surface the points of conflict and their causes, as well as we will be bringing to the surface the *informal organisation*⁵¹. In addition, by examining the official system itself (namely the objectified system), we aim to include in our analysis the influence of bureaucratic power, namely legitimate power, expressed through official rules upon the lower organisational hierarchical levels, or through the reward system (algedonic control).

⁵¹ "*Informal organisation...* generally, patterns of human behaviour and relationships existing parallel with or lying outside the formal organisation structure." (Koontz *et al*, 1991). This definition is elaborated further in chapter six.

Finally, one might argue that we confine the analysis of system five or the management team as a whole, as we will see later, on pre-defined analytical models. This is true, and as it was explained in the BSPA principles it is part of our explicit bias in regard to building the BSPA model. But the selection is not made arbitrary because we believe that the model's inevitable loss of richness would not inhibit our search for the organisational areas of conflict and coercion. In philosophical terms it is part of BSPA's explicit statement of a priori truth.

Before we proceed into mapping the system five's Specific SSR we should record the history of the organisation as it is perceived by system-five itself. We will have to record system five's perception of past successes and failures (the definition of successes and failures is subjective and corresponds to system five's views). Then we will compare the successes and failures as they are stated by system five to see if they will coincide with periods of official organisational profitability or not. We will try to see if system five's definition of the 'successes' or 'failures' is correlated with the 'objective' profitability of the organisation. The idea is to uncover system five's value system regarding profit maximisation. The findings will be compared with the stakeholders values in the Current Strategic Domain Table (5.-2.) in order to draw inferences in regard to the stakeholders commitment to the values stated. For example, a high comparison number [calculated as if it was a comparison number] (≥ 0.75) between organisational perceived successes and objective profitability will imply that in the values column of the Current Strategic Domain Table there should be a high ranking entry regarding the share-holders returns. This will be found in the mission statement in the way that is quoted in the Zale Corporation's mission statement (quoted in Campbell and Tawadey, 1989) as follows:

" Zale Corporation: summary statement of the company mission.

Our business is speciality retailing. Retailing is a people-oriented business [first value] We recognise that our business existence and continued success are dependent upon how well we meet the responsibilities to several critically important groups of people. [first value continued - people oriented and responsible to more than one group of people]

Our first responsibility is to our customers. [Second value - satisfy our customers because they are essential for the very viability Zale corporation] Without them we would have no reason for being. We strive to appeal to a broad spectrum of consumers catering in a professional manner to their needs. Our concept of value to the customer includes a wide selection of quality merchandise, competitively priced and delivered with courtesy and professionalism.

Our ultimate responsibility is to our shareholders. [Third value - the group of people we ultimately serve by satisfying our customers are our shareholders] *goal is to earn an optimum return on invested capital through steady profit growth and prudent, aggressive asset management* [Third value continued - serve the shareholders by maximising the profit on their investment]. *The attainment of this financial goal, coupled with a record of sound management, represents our approach toward influencing the value placed upon our common stock in the market.*

....." (Campbell and Tawadey, 1989, my emphasis).

Therefore, we can argue that a Zale Corporation stakeholder, that identifies totally with the organisation's official values (being a product of the organisational ideology) as it is stated in the organisation's mission statement, should make the entry of "the shareholder's profit maximisation" with a rank number ≤ 3 (meaning that the order given above could differ between different stakeholders) in the values column of the Current Strategic Domain Table. In addition, in the "Organisation History Table" the same stakeholder will exhibit high comparison numbers regarding organisational 'successes' and 'objective' profitability. If this is not the case then we have an indication of this particular stakeholder's non-qualification with the organisation's official value system (or in other words there is no ideological subjection) or we are dealing with a strategic action oriented stakeholder with emphasis on latently strategic action (systematically distorted communication) who 'deliberately behaves in a pseudoconsensual manner' (Habermas, 1984). In the case of the Body Shop stakeholder quoted in table 5.-2., if the stakeholder named X provided us with a high comparison number between organisational success and objective profitability in the "Organisation History Table" then he/she most likely will be a strategic-action oriented stakeholder. In the inside view, where his/her material and information interests will be identified we will be in a position to enlighten this particular stakeholder as to the causes of his/her behaviour. The "Organisation History Table" 5.-8., will have the following form:

ORGANISATIONAL HISTORY TABLE							
NAME:	Retrospection Period Starting :	Witness From Period to Period					
		period: a.					
		b.					
	Retrospection Period Finishing:	Positions held over the witnessing					
		period: a.					
		b.					
a/a	Period dd/mm/yy	Success Factors	Reasons no of importance Environmental turbulence/ strategic aggressiveness	Failures	Reasons no of importance Environmental turbulence/ strategic aggressiveness	Objective Profitability (from published accounts)	Comment
		a.	Profitability				
		b.	Growth				
		c.	Expansion				

Statistics	a. Comparison between success, and objective profitability	a. Comparison between failures and objective profitability	a.
	b. Comparison between type of success and objective profitability (comparison will be measured as the rate of subjective successes or failures, in distinct time periods, to the official successes or failures, namely objective profitability)	b. Comparison between type of failure and objective profitability	Comparison between witnessing and profitability and success or failure.

Table 5.-8.

The stakeholders will rank in order of importance the success factors picked (survival-growth-profitability). These factors are chosen because according to Mintzberg (1983) that CEOs usually main focus ranges from the survival goal to the growth one, with the profit goal being linked to the organisation's ownership. According to

Mintzberg the focus on one objective does not necessarily exclude the other but growth seems to emerge as the dominant goal of the management.



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If more than one goals are regarded to exist simultaneously, they will have to be justified, by the stakeholder, in terms of two parameters the following: "*Environmental turbulence* [that] is a combined measure of the Changeability and predictability of the firm's environment"; and "*Strategic aggressiveness*" (Ansoff and McDonnel, 1990) that is described by "*The degree of discontinuity* from the past of the firm's new product/services competitive environments, and marketing strategies" and the "*Timeliness* of introduction of the firm's new products/services relative to new products/services which have appeared on the market." The matching of aggressiveness to turbulence is a good measure of organisational achievements because according to Ansoff and McDonnel empirical data shows that strategic success can be achieved when the following three conditions are met:

1. *Aggressiveness of the firm's strategic behaviour matches the turbulence of the environment.*
2. *Responsiveness of the firm's capability matches the aggressiveness of its strategy.*
3. *The components of the firm's capability must be supportive of one another.*" (Ansoff and McDonnel, 1990).

But most important of all it will be an indication as to the organisational myth system. For example, high growth rates experienced in a discontinuous and unpredictable environment by developing very innovative products which open new market opportunities indeed should be reproduced by a myth system where aggressive product innovators are celebrated. Ansoff and McDonnel provides us with a measure of the above matching as follows:

Therefore, the comparison between system five's subjective successes or failures (the levels of turbulence and strategic aggressiveness) and the objective profitability will help us to draw inferences about his/her perception criteria and value system. In addition, we will be in a position to draw early inferences about the organisation's value system in general. In other words we try to uncover if the organisational instrumentality expressed in its 'objective' profitability is the sole determinant of its value system instead of growth or survival. The fact that we ask the stakeholder to substantiate his/her definition of successes or failures in the light of environmental complexity and requisite strategic aggressiveness lead us to uncovering the ideological background used for the legitimisation of the definition itself. In case where system five has not witness the successes or failures he/she is talking about then he/she might be reproducing the organisation's mythology system. This is an extra indication that he/she is the embodiment of the organisation's dominant ideology. In case system five responds to the analyst's questioning with an "I do not know, I was not there" sort of answer then that would be an indication that the organisational ideological myth system is not strong enough for the stakeholder to be subjected to it; or that the stakeholder disagrees with the organisational ideology (at least with the dominant ideology in particular historical periods) and he/she tries to avoid rather diplomatically the questions.

In addition, system five's professional and education background, already recorded, will have to be compared with his/her definition of successes or failures in order to draw inferences for his/her overall value system. For example an accountant usually, as experience teaches us, will be more likely to correlate (through his/her accounting perspective of the organisation) perceived organisational success with 'increases' in the company's profitability, while an engineer (through his/her engineering perspective of the organisation) with the production of 'excellent' products. One might argue though that this is an inadequate method to uncover system five's value system. It certainly is; but its purpose is to gather information and to perform comparison(s) for the subject from different points of view and in unsuspected times. In the "System Five's Mission Table", we do not only ask the simple question "where are you?" and "where do you want to go?" in terms of strategic orientation. First, we try to see if the stakeholder has thought through the structural changes that any strategic change implies. Does he/she believe that he/she has the necessary skills for the change, or he/she is motivated by incompatibilities he/she sees to exist in the coupling of the organisational mission's elements into a coherent framework of organisational action? Does he/she perceive any structural or functional incompatibilities with the existing systemic mission? What is the motivation factor behind the drive for change. In addition, in case he/she is having just a vision in his/her head we try to help him/her to articulate it into a structured framework. The table formats we use are thought as necessary for capturing information in a structured format.

5.2.1.3. Management Cohesion Index

In the next diagrams 5.-1., 5.-2., and 5.-3., manager A is depicted (5.-1.) as agreeing with system five about the current strategic domain (CSP) and the desired strategic domain (DSP) but he/she does not agree totally with the system five's views regarding the current systems and the current skills. In addition he/she disagrees about the system's future structure. The points of difference could be superficial, stemming from

differences originating from the limited systemic view of the lower hierarchical levels, but they could be areas where material and informational interests are conflicting. For example, a disagreement about the current skills might mean that manager A's position could be threatened in the new design. Who is to know? If we limit our analysis effort only in the examination of both managers' Weltanschauungen we would not be in a position to know why manager A believes that he/she has the skills for the present as well as for the future strategic domains, but system five thinks otherwise. If his/her position is threatened then there is a great possibility that he/she will use his/her power-base to resist change or to influence system five to the contrary. In order to find out we will have to discover his/her organisational material and informational possessions, namely his/her grip on the organisational value chain. But what if he/she lies about his/her agreement or disagreement with system five's views, one might ask? This is a real possibility especially in case where system five exercises strict control or coercion over the lower levels in terms of bureaucratic regulations or through the reward system. But, as we said before, we can not know unless we 'enter' the system to examine from the 'inside' its HAS content.

Manager B is depicted (5.-2.), as disagreeing about the future orientation of the organisation, but he/she believes that he/she should remain firm into the current strategic domain. He/she does not agree with system five's definition of systems, but in order to perform his/her changes in the strategic position he/she is seeking to perform some changes in the current systems. In this case manager B might not be conscious of the changes which he/she might bring about, in systemic terms. He/she might be pushing consciously for the changes because he/she believes that he/she can gain more control over the organisation's destiny, or he/she might... etc..

In diagram 5.-3., we deal with the possibility of a stakeholder, namely manager C, agreeing with the current definition of the strategic domain but he/she has a different vision about the future and he/she disagrees about the type of competitive advantage that the organisation will have to assume in the future. In this case his/her future vision (DSP) will extend to the left [the choice of left was made in order to depict C's SSR as a continuous meaning coherent strategic action extending to the future versus the marginal man (explained later) that his (her) strategic action seem to be discontinuous vis-a-vis system five's] of system five's current strategic domain (CSP).

Finally, in case where there is disagreement about the current and the future strategic domains then the manager X's current and future ranges will be depicted on the left of system five's current position leaving a space between the two CSPs represented by a line connecting the two current positions. The connection line will be called the buffer zone and its length will be equal to the average of the two stakeholders Specific SSRs; thus depicting diagrammatically the way that two stakeholders have to 'travel' in order to agree at least about the current strategic domain.

Disagreements regarding the current strategic domain and the elements of the SSR's current part (skills, structure, systems, purpose, value), will be regarded as partial agreements and not as disagreements (without excluding the case of perceived total disagreement though) and they will be depicted on the Specific SSR with the



following symbol: . The orange background of the partial agreement symbol is used metaphorically to resemble the traffic lights' orange colour which implies an eventual 'stop' [red light = total disagreement (in BSPA)], or an eventual 'go' [green light = change (in BSPA)]. Disagreements will be treated as partial agreements because they might originate from differences in the systemic views between system five and the lower levels. In other words they will be treated as degrees of agreement ranging from 100% to 0% representing the case of split agreement in the scale between +100% [total agreement] to -100% [total disagreement explained below]. Namely in regard to the 'half-full' or the 'half-empty' glass dilemma we take the half-full side.

The case of -100% agreement (namely total disagreement) might represent a stakeholder's total different view from the system five's one, or as it was mentioned before, might originate from differences in systemic view and it will be depicted on the Specific SSR. In the inside view we will be in a position to answer this question. The symbol used to depict total disagreement on the Specific SSR (namely -100% agreement) will be



the following: . In addition the symbol used for the expression of a stakeholder's intention to change the current strategic domain or positioning, or an element(s) of system five's current part will be



depicted on the Specific SSR with the following symbol: . The scale used for the degrees of agreement and change will be the same as in section 5.2.2.1.. In other words agreement, disagreement and change are defined by the stakeholders themselves in terms of a basic fuzzy scale based on the subsethood principle which uses as reference point system five's views.

SYSTEM FIVE S STEADY-STATES RANGE vs. MNG A

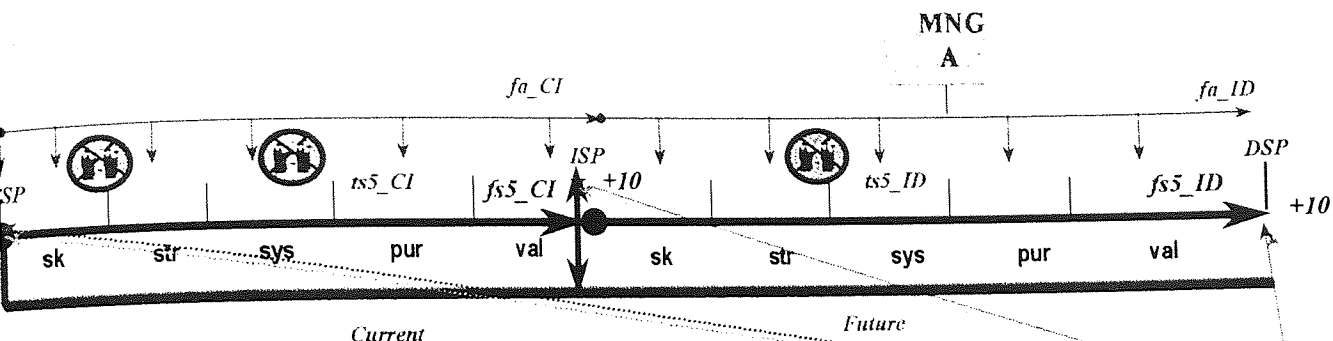


Diagram 5-1.

SYSTEM FIVE S STEADY-STATES RANGE vs. MNG B

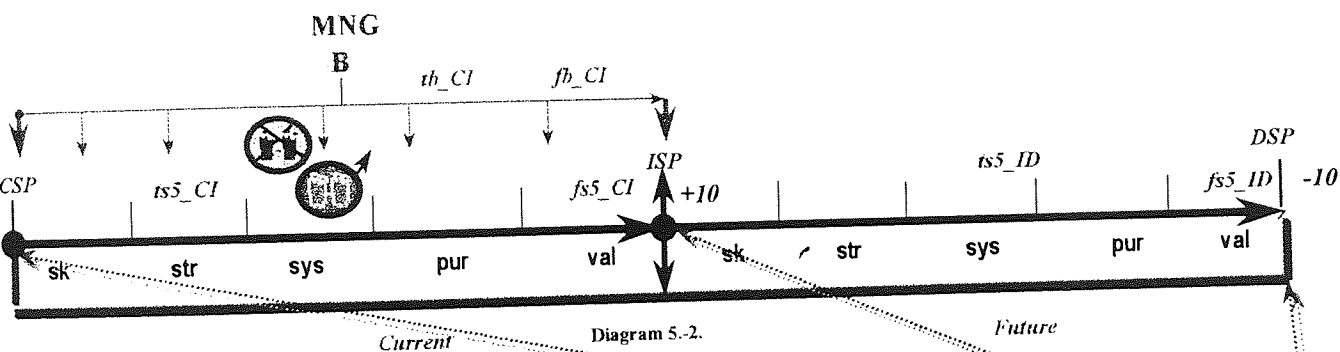


Diagram 5-2.

SYSTEM FIVE S STEADY-STATES RANGE vs. MNG C

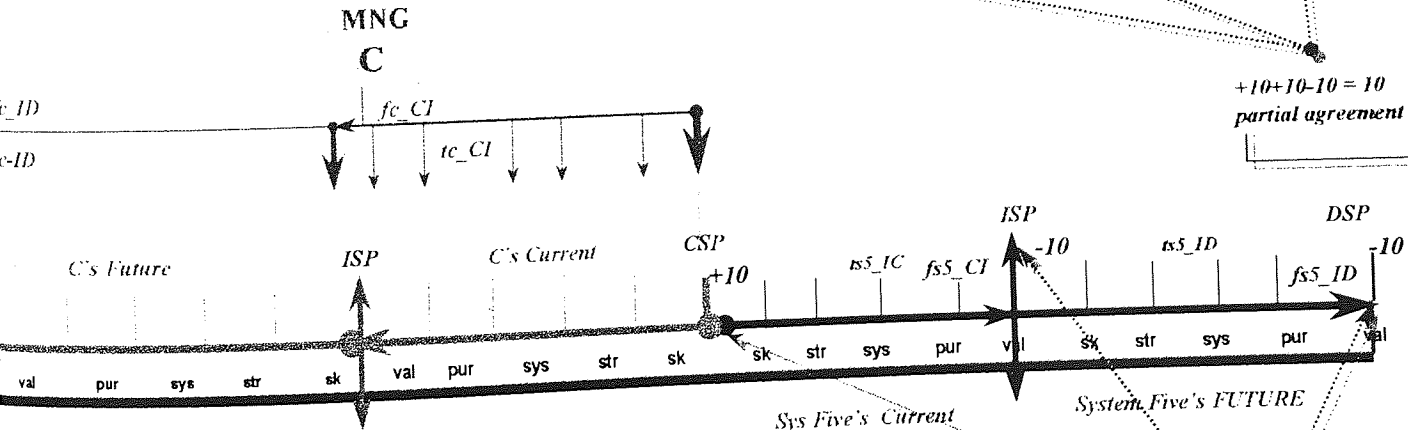




Diagram 5-3.

 - partial agreement
 - disagreement

 - change

MNG - MANAGER

sk - skills
 str - structure
 sys - systems
 pur - purpose
 val - value

$+10+10+10 = 30$
agreement

$+10+10-10 = 10$
partial agreement

$+10-10-10 = -10$
disagreement

One important case of disagreement though is the case where one stakeholder (e.g. manager D) agrees with system five about the current strategic domain but he disagrees about system five's DSP because he/she desires a different strategic positioning in the future. Therefore, this stakeholder's Specific SSR will be depicted relative to system five's Specific SSR, as the joining of two opposing forces namely the stakeholder's f_{CI} will be opposing his f_{ID} .

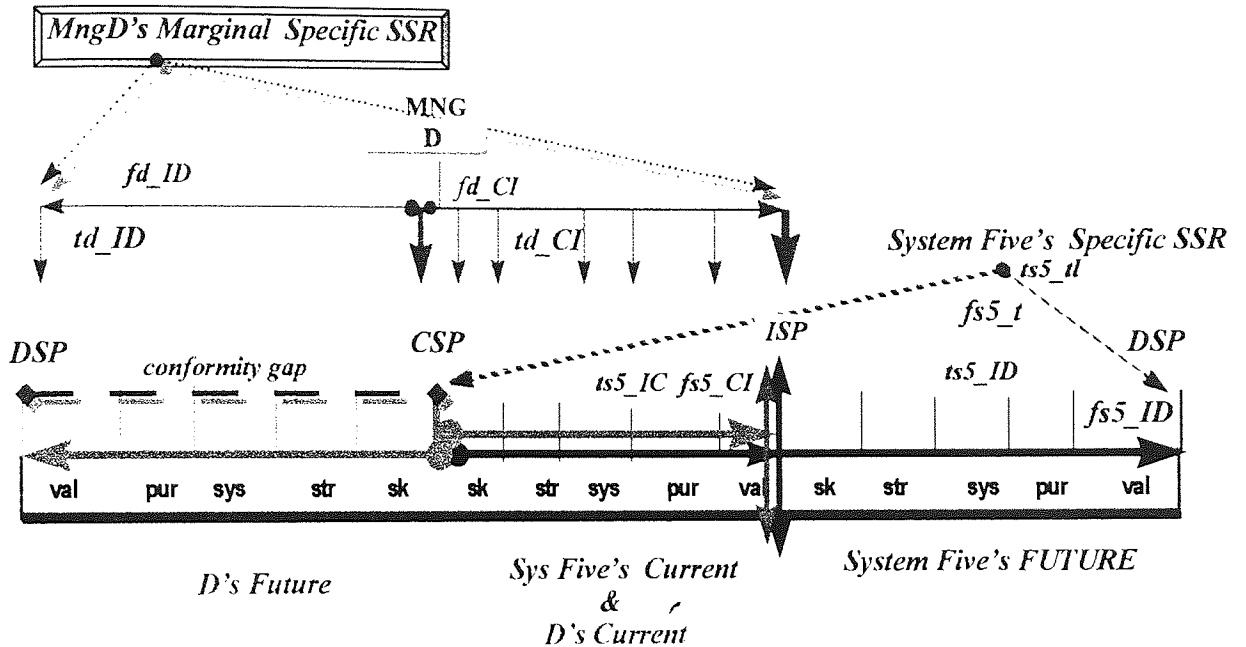


Diagram 5.-4.

Manager D's behaviour can be regarded as self-contradictory. Before we explain why D's behaviour is self-contradictory we have to explain a very fine point regarding the changes that the ISP represents. As we argued in above, the ISP represents the ideological limit of the CSP. In other words by remaining in the current strategic domain a stakeholder seeks to change the type of competitive advantage in order for the organisation to become more efficient within the CSP only. This implies that the ISP is connected to a particular strategic domain and it represents border-point changes focused on efficiency. In case though system five or any other stakeholder expresses his/her desire for change in regard to the strategic domain in the future, meaning that he/she wishes to go beyond the ISP's border-point, then the ISP represents the type of competitive advantage that the stakeholder will seek in the DSP. In other words the ISP in this case represents the efficiency criteria of the DSP and not the CSP.

Therefore, we can argue that D's behaviour is self contradictory relative to system five's Specific SSR (diagram 5.-4.) because D's agreement with system five regarding the ISP comes in contrast with D's DSP due to the fact that the former ISP belongs to the system five's DSP. One might wonder though what happens in case that system five seeks in the short run changes in the type of competitive advantage for the current strategic domain and in the long run he/she seeks changes in the strategic domain as well as changes in the type of competitive advantage. We regard this case as extreme because the planning horizon becomes very

distant. But in case where there are very long-term strategic plans indeed, then system five's Specific SSR will be split in two SSR's connected with a buffer zone its length of which will be equal, in this case, to the estimated time that will lapse until the second stage of the strategic plan starts.

D's behaviour can be regarded as very important in epistemological terms. It parallels the behaviour of the marginal man (Lewin, 1952) who is not sure where he stands by being at the boundary of two different groups (defined by group membership - namely being a member of a group or not). Lewin defines the *marginal man* as follows:

"The marginal man is a person who stands on the boundary between two groups, A and B. He does not belong to either of them, or at least he is not certain about his belongingness. Not infrequently this situation occurs for members of an underprivileged minority group, particularly for the more privileged members within this group. There is a strong tendency for the members of the underprivileged group to cut loose and to try to enter the majority group. If the person is partly successful in establishing relationships with the privileged group without being fully accepted, he becomes a marginal man, belonging to both groups but not fully to either of them. The fact of being located in a social 'no man's land' can be observed in very different types of minority groups -for instance, racial groups or the hard-of-hearing, which is a marginal group between the deaf and the normal group. Characteristic symptoms of behaviour of the marginal man are emotional instability and sensitivity. They tend to unbalanced behaviour, to either boisterousness or shyness, exhibiting too much tension, and a frequent shift between extremes of contradictory behaviour." (Lewin, 1952).

Therefore, manager D could have been a member of a minority group of managers opposing system five, or he/she might be system five's most important opponent (in terms of being perceived as powerful) that system five has succeeded, or is in the process of succeeding in turning around. In other words manager D could be the person who system five has 'bought-out' or he is in the process of 'buying-out', by improving his/her material position in the organisation (possibly 'better pay', 'better position', 'better bonuses', etc.). In addition, manager D might be a manager severely coerced by system five to the point of diluting his/her perception regarding his/her organisational material and informational interests, of which the last (manager D) has not lost sight yet. Finally, manager D might be a shrewd 'political player' (namely an astute strategic oriented stakeholder) who plays or wants to play the role of the mediator between conflicting groups within the management team. Therefore we will have to discover with who else (from the management team) manager D agrees with, in regard to his/her DSP, while in the inside view we will discover his/her material and informational interests thus drawing inferences about his/her stance as a marginal man.

So far we have depicted the case where manager D, being a marginal man, agrees with system five in regard to the CSP and to the ISP but disagrees with system five's DSP. In that case, depicted in diagram 5.-

4., manager D in order to conform has to reduce to zero the conformity gap, depicted with the purple dotted line, thus "falling in line" with system five.

But in case where manager D, agrees with system five in regard to the DSP but he/she disagrees about the CSP (depicted in diagram 5.-5.) then the conformity gap increases dramatically; because the buffer zone, featured as the interim space between the two CSPs, increases dramatically. Moderate disagreements (-75%), or total disagreements (-100%) regarding the current strategic domain imply very serious disagreements (in terms of organisational politics) indeed between two stakeholders of managerial status. This implies a serious material and informational clash which makes rather unlikely the case of the two stakeholders working together to bring about the same desirable feature. Ackoff would argue that that would be a very likely scenario since the stakeholders will be united in the light of a higher ideal or a mission based on higher ideals. But in BSPA we are not talking about higher ideals, but the CSP, ISP, and DSP, represent rather the stakeholders' arrangements or re-arrangements of material and informational interests. One cannot easily imagine for example a 'pure' Capitalist and a 'pure' Marxist working together, without first transcending their ideological limitations, to build a better world of 'freedom' and 'justice'. At this stage where the emancipatory inside view has not taken place the conformity level seems to be increasing; implying that if the stakeholders are not made aware, in a self-critical manner, about their organisational material and informational interests, then it is very likely that the conformity gap will be reduced only with the application of coercion or false consciousness exerted or developed by the most powerful stakeholder. Therefore, the most likely scenario is that manager D might be making a political statement in order to alleviate the pressure exerted on him by system five. The inside view will enlighten us as to the real causes of the apparent conflict.

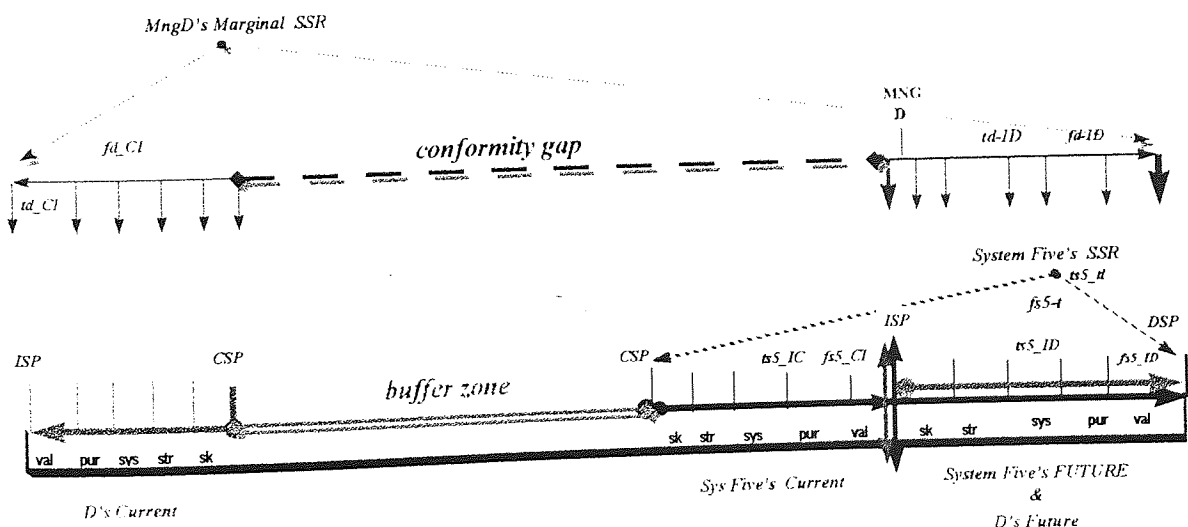


Diagram 5.-5.

From the above graphical SSRs we observe that the steady-state range increases when disagreement between the stakeholders exists. This implies, according to the BSPA philosophy, that the longer the steady-state-range the less the group's ideological cohesion. But we need a measurement in order to measure the

cohesion itself. In other words we need some sort of an index that will be used to measure the management team's *ideological cohesion*. Therefore, at this point we will attempt to introduce an arbitrary measurement of *ideological cohesion*, some sort of a numeric index, which is based on the following logic:

We will grant

- 10 ideological points for the current strategic domain.
- 10 ideological points for the strategic positioning and
- 10 ideological points for the future strategic positioning (see diagrams 5.-1., 5.-2., and 5.-3.).

The choice of number 10 and -10, instead of 1 and 0 or ticks and crosses, it is made in order to leave open the option for the stakeholders to attribute sub-scores to the SSR parts (namely the skills, structure, systems, purpose, value parts), and even sub-scores within these sub-scores if they decide to decompose them further. For example we could attribute 5 ideological cohesion points to the SSR parts.

Based on this pointing system we can argue that a particular system five that believes he/she should change its current strategic domain and strategic positioning the score would be 30. Therefore, for a management team of 5 managers, who totally agree with system five, the score will be $(30*5)+30 = 180$ ideological cohesion points. The average score for this particular group would be 90 points. The lower point would be less than $90/2$ and the higher would be greater than $90+(90/2)$. All the above views which fall outside system five's Specific SSR are granted the same score but with a minus sign. For example, a manager who disagrees with the strategic domain, and he/she proposes a different strategic positioning and a different strategic domain all together, he/she will score -30 . When that score is added on the score of system five it gives 0. In the case where system five believes that we should remain at the current strategic domain but we should modify our strategic positioning then his/her score will be $10+10=20$. If he/she wants to change nothing then his/her score would be 10. Therefore, in the following example we depict the form that the management cohesion index (MCI) should have, table 5.-9.:

MANAGEMENT IDEOLOGICAL COHESION SCORE

STAKEHOLDER	TABLE			
	CURRENT	STRATEGIC	FUTURE	AGGREGATE
	STRATEGIC	POSITIONING	STRATEGIC	
DOMAIN	DOMAIN	DOMAIN		
1. SYSTEM FIVE	+10	+10	+10	+30
2. MANAGER A	+10	+10	+10	+30
3. MANAGER B	+10	-10	-10	-10
4. MANAGER C	+10	-10	-10	-20
TOTAL	+40	0	0	+30

STATISTICS: MAX. COHESION POINTS 120, AGGREGATE 30, COMMENT: RATHER LOW

MANAGER C: -20 HIGHEST NEGATIVE SCORE, MANAGER A: HIGHEST POSITIVE

GENERAL COMMENT: The management team is rather divided in regard to the issues of "strategic position" and in regard to the "future strategic domain".

Table 5.-9.

From the above table we can infer that manager C is on a collision course with system five and manager A. This implies that we are witnessing a division in the management team. The first thing we have to check is manager B's future strategic domain to see if it is compatible with that of manager C. In case it is the same then we might be witnessing an ideological cleavage within the management team. This means that we have to analyse it in terms of its material and information implications.

In the above example we are dealing with the linear case of the management team's consensual process (agreement/disagreement); namely we have dealt with the cases where the managers, making up the management team, either totally agree with system five (total agreement 100% - in terms of the subethood principle) or they totally disagree with system five (total disagreement -100%, instead of 0 for calculation purposes explicated in the next page). But in the fuzzy system we are proposing these two cases will represent the limits of the management's consensual process. Intermediate stages will be represented with the use of the partial agreement/disagreement percentages as weights of two relative scales (relative agreement and relative disagreement scales) making up the overall fuzzy scale (see next page). Therefore, as weights of the total agreement/total disagreement case we will use the partial agreement percentages, namely 75% for moderate agreement, 50% for split agreement (instead of 0% that represents the middle point in the overall fuzzy scale), and -75% for moderate disagreement (or 25% agreement in the overall fuzzy scale). Therefore, our calculations in a fuzzy system will be performed as follows:

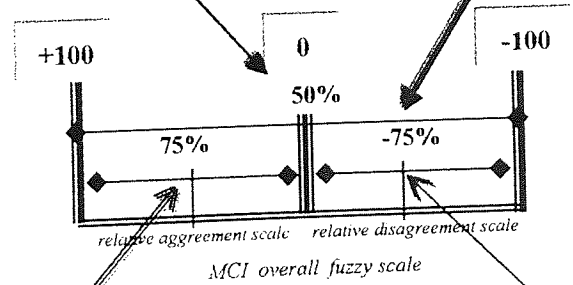
Management Cohesion Index's Fuzzy Weights

1. Total Agreement	100%	$+10 * (100\%)$	= + 10 ideological cohesion points
2. Total Disagreement	-100%	$-10 * -100\% $	= -10 ideological cohesion points
3. Partial Agreement	75%	$+10 * (75\%)$	= +7.5 ideological cohesion points
4. Split Agreement	0%	$+10 * (50\%)$	= + 5 ideological cohesion points
5. Moderate Disagreement	-75%	$-10 * -75\% $	= -7.5 ideological cohesion points

We use |-100%| (a positive number instead of a negative one) which when multiplied with the negative total disagreement's score will produced a negative score.

We use a 50% weight instead of the 0% one that represents split agreement in the light of the original values of +10 and -10. This way split agreement values do not produce zero results when they are multiplied with the original values. The positive value of the split agreement case is used to represent the half-full instead of the half-empty point of view.

We use |-75%| in order to get a negative score



Represents the middle point in the relative agreement scale but 75% agreement in the overall fuzzy scale

Represents the middle point in the relative disagreement scale but -75% agreement (or +25 agreement) in the overall fuzzy scale

Towards agreement

The same weighting will be used for the Specific SSR's parts calculations as well (skills, structure, systems, purpose, value) for which we will attribute to each part, as it was mentioned above, 5 ideological cohesion points for total agreement and -5 ideological cohesion for total disagreement.

One might argue at this point that the arbitrary nature of the ideological cohesion index (MCI), as well as the fact that it is an arithmetic index makes it totally inappropriate for the mapping of the management team's

ideological cohesion. It is true that a simple arithmetic index can not capture the 'richness' of the management team's ideological interaction. In other words MCI does not employ the requisite variety for the analysis of the management team's ideological interaction. But the management cohesion index is not used for this purpose. One should consider the fact that the SSR's homomorphic model is used to detect incipient instability in regard to the management team's ideological cohesion only and its mapping is confined to this relatively low variety task. But one might argue that the SSR's approach is flawed because it is difficult to compare strategic views and on the top of that to actually quantify their differences. For example, who would be in a position to define what is a superficial difference from a real one? It is certainly not going to be the analyst, but the stakeholders themselves. The stakeholders themselves will define the current and desired strategic domains and the organisation's strategic positioning. In addition, in the interviews the stakeholders will be asked to express their views or better compare their views against those of system five, and they would be asked to express the differences they themselves perceive to exist; if any exists of course. At this point the analyst does not have to reveal the fact that the views they are comparing theirs against are the system five's ones, in case they are not already aware of them. If the stakeholders ask whose views are these then the analyst will have to reveal the truth.

But one might argue how it would be possible to account for the differences being a superset or the subset of the strategic domain defined by system five. The analyst should not try to ask the stakeholders only a simple question like "what business are the organisation is in?"; or "what business the organisation should be in?". On the basis of BSPA's teleological approach the analyst will provide the stakeholders with a framework which includes all the components of mission as well as the elements of the 7Ss framework. In other words the stakeholder(s) are provided with a framework to think deeply and in a structured manner before he/she answers any questions. The only exception could be regarded the case where he/she thinks that a particular strategic domain, being the superset or a subset of system five's definition, then that's that. If he/she justifies his/her choice according to his/her own 'logic' then his/her opinion will be carried unchanged on the SSR. One should not forget that industry divisions are man-made divisions themselves. One very important point, that BSPA's application in the real world will provide us with, is the mapping between the superset/subset and the fuzzy scale of agreement/disagreement. It would very interesting to discover if the stakeholder's perceive such differences as being rather superficial (e.g. partial disagreement) or as more serious (e.g. moderate disagreement).

5.2.1.4. System Five's Extended SSR

So far we have only answered, with the use of the Specific SSR, the questions regarding system five's perception about "where we are?", and "where we want to be?". We have not answered the question "with whom do we collaborate?" and "with whom should we collaborate?" as well. Therefore, the SSR concept should be extended in order to answer this vital question. Therefore, the current and the desired strategic domains will be elaborated with the concept of "centre of gravity" as well as the concepts of strategic integration and diversification.

In the **Extended SSR** depicted in diagram 7.-6., **integration** is depicted with



vertical brown line

a intersecting the Specific SSR at the point of the future strategic domain (and a vertical brown line intersecting the Specific SSR at the point of the current strategic domain represent the current organisational integration). The brown line is clearly divided into the industry chain stages (in diagram 5.-8., the stages of a manufacturing industry are depicted). Therefore, when system five defines the future strategic domain, will have to define the industry chain stage that he/she desires to move into. In diagram 5.-6., the future strategic domain is defined as of the "product manufacturer".



blue horizontal line

Related diversification is depicted in diagram 5.-6., as a intersecting the Specific SSR at the point of the future strategic domain (a blue horizontal line intersecting the Specific SSR at the point of the current strategic domain represents the current organisational related diversification). The blue line is divided into clearly identified "industries". The fact that the blue line intersects the Specific SSR's future strategic domain implies that diversification will revolve around the company's centre of gravity.

related diversification



blue line parallel

Linked diversification is depicted in diagram 5.-6., with a to the line of the related diversification. This line is divided into clearly identified industries as well.



green lines

Unrelated Diversification is depicted in diagram 5.-6., with two horizontal starting from the future strategic domain (as well as two horizontal green lines starting from the current strategic domain) which in this case is defined as the centre of gravity from which any acquisitions will be planned and financed. In case where no integration or diversification strategy is to be undertaken but system five envisions a number of alliances with other companies then those companies are depicted with the BSPA's outside actor-business organisation symbol and they are positioned in one of the lines (brown, blue, green), as it is shown in diagram 5.-6.. This way the nature of the collaboration is defined as well. For example, if system five believes that we should collaborate with company X, in the paper industry (us being in the soap industry), instead of performing a linked diversification strategy; then we place the outside stakeholder-business organisation symbol at the appropriate line and in the appropriate industry. In case system five does not seek any collaborations but only diversification or integration strategies then only the names of the industries are

quoted. The division of the blue lines into more than one industry is made to cover the possibility of diversifying into more than one industry. But the divisions are not made arbitrary. The divisions are made on the basis of an upstream/downstream logic. In other words system five will have to define in terms of the future strategic domain (being the dominant or the initial centre of gravity) how they are related to it.

Finally, after system five has defined all his/her integration, diversification and collaboration strategies, defined in this thesis as his/her perception of the organisation's strategic network and depicted with a closed



red line, we will ask him/her to define the strategic emergent attribute(s) of the strategic network. In other words we will ask him/her to tell us how and why this network should be set-up? What should be the synergies? The strategic network itself amounts to the industrial closure (namely the industry's identity) necessary to preserve a particular stakeholder's material and informational interests.

The same analysis as above can be performed for the current strategic domain as well, so the differences with the future strategic domain can be made specific. On the basis of the Extended SSR we can record the points of difference in order to calculate the new MCI. It has to be noted that in the MCI system we record agreement or disagreement for integration, related, linked and unrelated diversification, with plus or minus ten points respectively representing the cases of total agreement and total disagreement respectively. In addition, we will perform the same calculations as above for the fuzziness of agreement or disagreement (moderate agreement, split agreement and moderate disagreement).

But we will record agreement or disagreement for the strategic network with plus or minus twenty points respectively (representing the cases of total agreement and total disagreement respectively). Because the strategic network is regarded as a systemic measure for the aggregate of integration, diversification or collaboration strategies that will shape not only the future of the business system in focus but possibly of a number of other industries. The fuzziness of the agreement or disagreement will be dealt in the same manner as in section 5.2.2.3..

Before we proceed we should make explicit BSPA's bias regarding the degree of ideological cohesion and their perceived freedom in the light of the algedonic loop it is embedded within, namely the reward system used by system five to control the lower organisational hierarchical levels. In case where the management team exhibits a high score on the basis of the specific and Extended SSR analysis then we will have to search for the following possible causes:

- if the management group is pathologically autopoietic,
- if the group is subject to false consciousness; and
- if the group is coerced by system five or by any external entity to uphold these views.

The above causes will only be made explicit in the inside view.

Linked Diversification

Upstream

Related Diversification

Upstream

Integration

Upstream

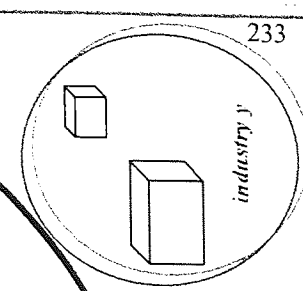
Upstream

Upstream

integration

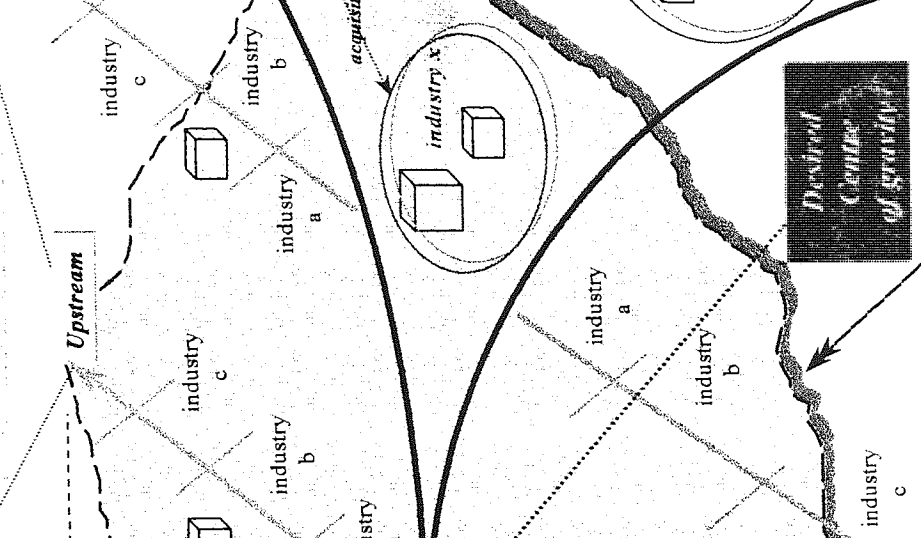
unrelated diversification

related, linked diversification



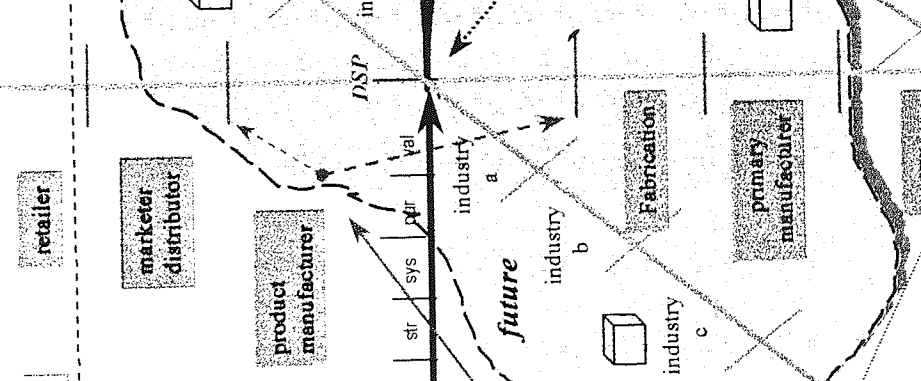
Unrelated Diversification

outside stakeholder business organisation



Desired Centre of Gravity

alliance capitalism network's emergent property industrial closure



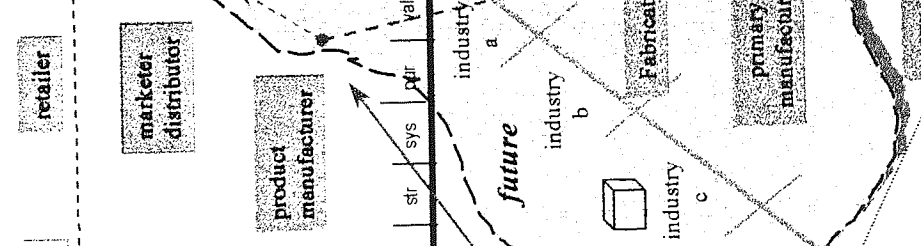
future

present

Downstream

Downstream

Downstream



retailer

marketer distributor

product manufacturer

Fabrication

primary manufacturer

raw materials

What business are we in?
Who do we collaborate with?

organisation's centre of gravity

Diagram 5-6.

5.2.1.5. Line of Duty and Managerial Freedom

The Cohesion Index analysis applies in the case where organisational pluralism exists at least some degree. In case where the score is very low (<½ of the max. ideological cohesion points - the <½ of the max., is defined to represent ideological cleavage within the management team because it corresponds to the split agreement threshold) we have to identify the divisions and then proceed to discover the material and the informational roots of the apparent conflict. For this reason we will have to record system five's views as well as the management group's views regarding the perceived degree of freedom and rewarding. The definition of freedom is defined cybernetically as follows:

"Freedom is in principle a computable function of systemic purpose as perceived. That is the explosive conclusion. It is explosive precisely because it sounds heartless, whereas the dear question of freedom is full of heart. The trouble seems to be that people do not like to believe that any matter of passion for them could possibly be bound by scientific rules, forgetting that the passion itself is limited by the scientific rules of their own physiological capability to endure it." (Beer, 1979)... "The continuous process of liberating our minds from the programs implanted in our brains is a prerequisite of personal evolution. We can embark on that process of liberation only by constantly and consciously testing the ways in which our personal variety has been and is being constrained by the very things we tend to hold most dear. But freedom is not pure anarchy. We are not free if we are dumped in the middle of the Sahara desert, despite the absence of walls and bars on the non-existent windows. We are free when the doors of our intellectual suite of rooms are unlocked, and we walk outside to breathe some new and fresher air. But we still need maps." (Beer, 1994, my underlining).

In this thesis the definition of freedom (underlined above - 'freedom is in principle a computable function of systemic purpose as perceived') will coincide with Beer's one. In addition, Beer's liberation paradigm will be used as central to BSPA's critical enquiry aiming to helping people to liberate themselves from the intellectual traps created by their material and informational interests. Mitchell (1982) defines the process of rewarding as follows:

"After performance evaluation comes the administration of rewards. Somehow the organisation must develop a system which provides compensation to its employees that is considered sufficient in some absolute sense and fair as well. Compensation is the basis of the original contract between the individual and the organisation. It is the agreement as to what the organisation gives in exchange for its employees' services. If the system of rewards is poorly designed, other factors such as selecting the right people, placing them in the right jobs, and fairly evaluating their performance may be irrelevant. Unless rewards are perceived as being attractive and linked to what we do, motivation is likely to be comparatively low.... There are really two main types of rewards that an individual receives on the job. Those rewards which are part of doing the job itself are frequently described as intrinsic rewards. We discussed these types of rewards

in our chapters on learning and motivation, and they include more intangible types of things such as feelings of competence, completion, or self actualisation. While the organisation can have some control over intrinsic aspects of one's job, they are infrequently discussed as part of the reward or compensation system. The second type of rewards are described as being extrinsic; they are tangible external factors that are controlled by the organisation. In terms of compensation systems these rewards fall into subcategories: pay (and promotions) and other benefits. The latter includes (1) legally required benefits, such as unemployment compensation, disability insurance, or Medicare hospital benefits; (2) private health and security benefits, such as a retirement plan and life insurance; (3) employee services, such as discounts, meals, or transportation; and (4) compensation for time not worked, such as vacations, sick leave, jury duty, or lunchtime." (Mitchell, 1982).

In table 5.-10., under the heading "Fringe" we include Mitchell's "other benefits". Under the heading "Other", we include the intrinsic rewards. And finally under the heading "Monetary", we include "pay". In BSPA we are biased to believing that there is a comparison between the degree of perceived freedom in the working environment, the perceived benefits of the reward system and the degree of cohesion, as well as the degree of conflict within the group. This bias originates from the definition of the contemporary social world as objectified. Therefore, system five will be asked to articulate his/her opinion regarding the following:

- Briefly the nature of the line of duty for each of his/her first line managers, using Structured English for the recording of his/her views. At this stage of the analysis work the description of the line of duty should be short, expressed in bullet-point format, in order to enable the analyst to perform comparisons with the views of his/her subordinates.
- To define the degree of freedom he/she believes that his/her subordinates dispose-of in regard to pursuing the task(s) he/she identified above; and
- Finally he/she will be asked what does he/she thinks the rewards are and ought to be (in terms of monetary, fringe, or other benefits) when the subordinates achieve success in their duties, he/she him/herself identified. The questioning will be captured in the following table:

LINE OF DUTY TABLE										
<i>Manager's Name:</i>				<i>Position:</i>						
				<i>Years in this Position:</i>						
Definition of the Line of Duty (use of Structured English) e.g. 1. Space Management Services .AND. Category Management Services .AND. .NOT. Logistics										
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> The definitions of the duties identified will be recorded as well with the use of Structured English </div>										
	Manner of Reporting			Degree of Perceived Freedom				Reward System		
	Official (x)	Unofficial (x)	Both (x)	High (H)	Med. (M)	Low (L)	Not Clear (NC)	Mone- tary	Fringe	Other
								F	N	DK
								F	N	DK
1. Duty A e.g. Space- manage- ment	X	-	-			X		x	x	
2. Duty B										
Overall										

Table 5.-10.

The above table will be used as the basis for a more detailed recording, where the interviewee(s) is allowed to describe his/her views in more detail. But it has to be noted here that the focus at this stage is on the recording of the perception of freedom, namely the 'feeling(s)' of freedom that the boss has for his/her subordinates and vice-versa in regard to their line of duty. The same applies to the organisation's reward system as well where we ask system five (as well as his/her subordinates) general questions regarding the perceived fairness of the system's rewards in the light of the stakeholders' line of duty. For this reason we do not want the interviewee(s) to think in detail, and analyse to themselves their feelings. Therefore, the general questions on freedom, are confined into three choices, namely high-medium-low, and the general questions on rewards, are confined into three choices as well, F=Fair, NF=Not Fair, and DK=Don't Know. One might dispute the definition of the terms fair and freedom. One might argue though that what is perceived as fair by one person is not necessarily perceived in the same manner by another person; or in other words that the very definition of freedom and fairness is rather subjective. This is absolutely true! But we have to caution the reader that in BSPA we are not concerned with defining an 'objective' definition of freedom and fairness. We just want to discover the feelings of fairness as they lie embedded within their subjectivity. BSPA adheres to the

psychoanalytic paradigm, meaning that in the BSPA methodology we will not try to label things. Somebody who claims that overall the reward system is 'unfair' and that his/her overall degree of freedom is low, can be classified as a dissatisfied stakeholder. He/she might be telling the truth; he/she might be lying because he/she plays a game of politics (strategic oriented stakeholder); he/she might be 'confused', or he/she might think that things are 'bad'. Basically, there might be a lot of reasons why he/she is having specific feelings of being 'independent' and that he/she is being treated 'fairly', or vice-versa. Of course we cannot get into his/her mind to uncover the truth, though we will have an opinion as analysts. What we will try to do will be to uncover the material and informational roots of his/her statements, at a later stage, and then let him/her assess the situation for him/herself.

After we record system five's views we will do the same for the managers as well. Incompatibilities in the definitions of the tasks (of a particular line of duty) regarding the boss and the subordinates or the lack of tasks in one of two statements will amount to possible distortions in communication (with which we deal in the inside view). Finally, the group ideology can be supplemented with the stakeholder's overall perceptions about the degree of operational freedom (meaning freedom to perform a particular line of duty) exercised within the management team and the degree of overall fairness of the reward system thus becoming the basis upon which we will base our provisional AP (actor's profiles) drafting. This being the last task of the BSPA's outside view. This type of recording will help us to identify any comparison between the ideological cohesion index and the degree of freedom and fairness for every member of the top management team. It would be just a small folder for every member of the top management team containing a summary of the above factors identified, and an appendix with all the tables recorded for each particular stakeholder.

5.2.1.6. Provisional Problem Classification

At this point we will try to perform a provisional classification of the problem stated by the initiator of the analysis work in order for the analyst to gain an understanding as to the type of role he/she is asked to play by the existing power structures. First, we will try to match the problem types as they were stated in the "Problem Types Table" (4.-1.), with the initiator's AP(s). Basically we will have to correlate the initiator's actor's profile, with the group's overall ideological cohesion and with the definition of one of the problem types. Therefore, if the cohesion index is low then we can provisionally classify the problem-stated as the result of an open conflict demanding for resolution within the aggregate range of the Specific SSR and the Extended SSR. That of course implies that the stakeholders will seek either to coerce other stakeholders in order to achieve their ends, or to compromise when power is more or less equally distributed among them; especially if the analyst has indications about the strategic actions of many powerful stakeholders. Special attention will be paid to indications of strategic actions undertaken by the initiator of the analysis work.

If the management cohesion index ($\geq 3/4$ of max. cohesion points - above the $1/2$ that represents ideological cleavage) is reasonably high or high and the business system is losing money then a solution reaffirming the existing status-quo will be most welcomed. But, if we are faced with a very suppressive system indeed then the

analysis effort might spark-off a rapid differentiation process, marked by fierce open conflict. If the management cohesion index is at the middle-point ($=1/2$) then the management team experiences ideological cleavage. In order to assess the intensity of the conflict we will have to examine the conflicting forces (over organisational material and informational assets) time-length. The less the conflicting forces time-length the higher the conflict's intensity because the short time-length represents forces that demand more immediate diffusion. The intensity of the conflicting forces will be measured in terms of the organisation's overall organisation entropic number (elaborated in section 6.8.) and it will be correlated with rank numbers of importance placed by the stakeholders on the organisational and material and informational assets; embedded in the conflict areas and identified upon the organisational value chain. In addition, the overall organisation entropic number will be compared with the management cohesion index. We will do the same in the case where the management cohesion index is very low ($<1/4$) with emphasis on assessing the intensity of the political arena. We can depict these assumptions diagrammatically in the diagrams 5.-7., and 5.-8., as follows:

PROVISIONAL PROBLEM TYPE CLASSIFICATION

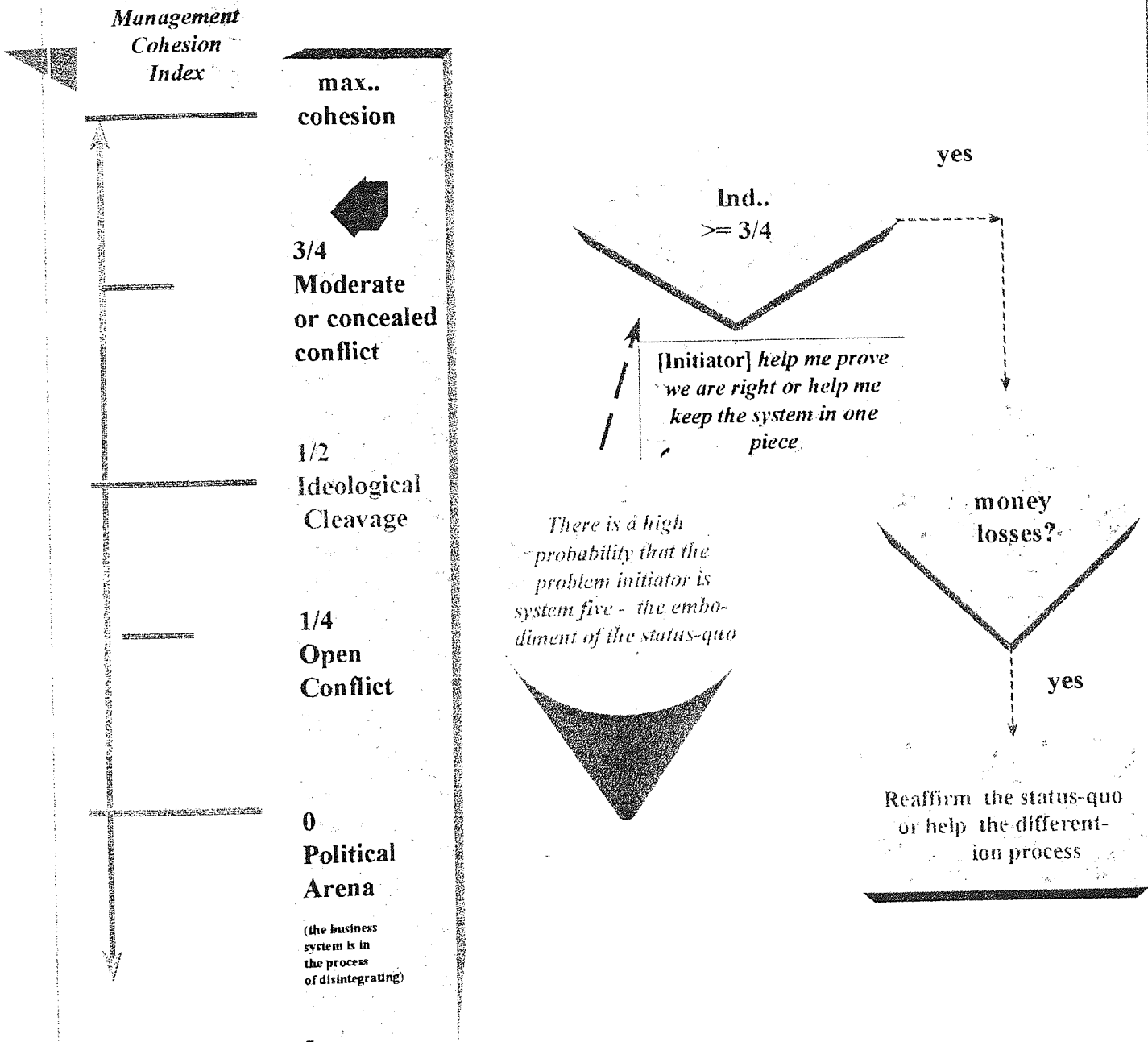


Diagram 5.-7.

PROVISIONAL PROBLEM TYPE CLASSIFICATION

Management Cohesion Index

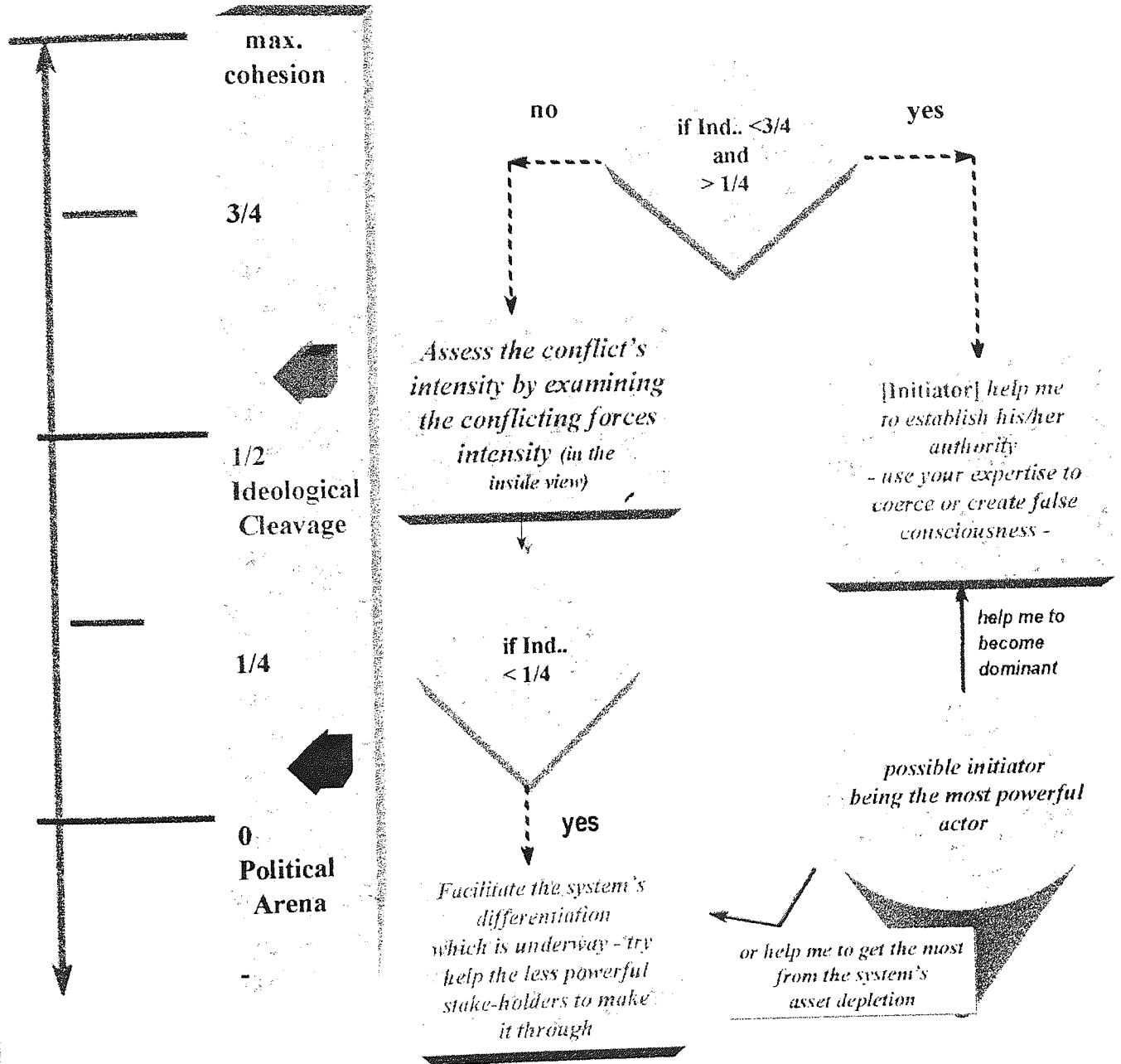


Diagram 5.-8.

One might argue though, that by simply having the power the most powerful stakeholder can block or initiate the analysis work. There is the possibility that the analysis-work initiator will not be the most powerful stakeholder especially in a problematic area setting where it is not clear which is the most powerful stakeholder. But we are biased into believing that basically there is a high probability that the most powerful stakeholder would be the initiator as well. If he/she is not, then the initiator could be the representative of a coalition of less powerful stakeholders.

One might wonder then how a critical and radical methodology, like BSPA, will ever be given a chance to be applied by a powerful stakeholder, especially in the case where the most powerful stakeholder is the initiator as well. The solution lies in BSPA's problem-free epistemological approach. With BSPA the analyst makes an initial classification of the problematic area in order for the analyst to be made aware of the role he/she will be most probably asked to play by the initiator of the study. Despite that the analysis avoids to concentrate on the problem expressed (problem-free) by the initiator and instead tries to create the necessary conditions for the stakeholders, including the initiator, to acquire self-knowledge regarding his/her problematic within a systemic epistemological framework. One might argue though that it is 'naive' to believe that in real life a powerful stakeholder, or a coalition, will ever let themselves become subject to the scrutiny of a critical systems methodology. If we accept this view then we are facing the problem of justifying the practical application of psychoanalysis upon which the BSPA's epistemology is based. When a neurotic person initialises a psychoanalytic process, by seeking help from a psychoanalyst, he/she subjects him/herself to the scrutiny of the psychoanalytic methodology. The fact that he/she goes along with the process until he/she acquires self-knowledge in regard to the causes of his/her neurosis depends on the methodology's ability (applied by the analyst) to overcome the obstacles that would terminate the process prematurely. That of course does not imply that every analytical effort would be successful or it would not end prematurely.

5.3. Summary of the Outside View

Coming to close the outside view of the system let us summarise what we have achieved so far:

1. We approached the official system five of the objectified system, which is supposed to embody the system's identity; according to the principles of organisational cybernetics.
2. We performed a mapping of system five's strategic vision based on the belief that the spontaneous activity of the system would be preconditioned by system five's business ideological-produced strategic vision. This implies that since we cannot get into the head of system five to read his/her mind then we should infer the limits of his/her ideology expressed in his/her strategic vision.
3. Based on the cybernetic principle, which advocates that the metasytem will set the limits for the lower hierarchical levels -namely that the metasytem would define the epigenetic landscape of the lower hierarchical level's activities - we tried to map the ideological cohesion of the management team as a whole. The mapping

was done in reference to system five's ideological limits, which are supposed to be the limits of the lower hierarchical levels as well. It has to be reminded at this point that the mapping itself was done based on the opinions of the stakeholders themselves and not according to the opinion of the analyst. That of course does not imply that the analyst so far has been a neutral observer. He/she has recorded silently his/her own opinion, but most of all he/she has made his/her influence explicit by preconditioning the stakeholders' towards a pre-defined, structured framework of inquiry. Namely that of the specific and Extended SSRs.

4. Based on the findings of group psychology, which advocates that group-cohesion is proportional to ideological cohesion we tried to introduce an arbitrary measure of ideological cohesion, based on logical assumptions, in order to draw provisional inferences regarding the state of organisational conflict and that of incipient instability in the management team.
5. We tried to assess the degree of conformity exhibited by the management team in regard to system five's ideological limits. We tried to record the overall feelings of freedom regarding the line of duty, and the feelings of fairness regarding the reward system.
6. On the basis of the above analysis we have drafted provisional AP(s) , and we tried to make a provisional classification of the problem-stated according to the BSPA's generic problem type classification of organisational problematic areas.

At this stage of the analysis work then we can only draw logical assumptions about the system's conflict and politics because we are simply dealing with the behavioural aspects of the system. Namely the management-team's worldview(s) regarding the system's strategic domain and positioning within a particular strategic domain. We do not know if a worldview stated by a manager is the result of coercion, false consciousness, or self-knowledge. We do not know if the manager lies or makes political statements. Maybe the managers themselves do not know either! Therefore, we have to 'enter' the HAS content of the system to uncover the material and informational roots of those worldviews. One might ask then why we have to perform first the outside view and do not inquire the HAS content immediately. "What is the outside view's use?". The answer lies in the psychoanalytic paradigm that BSPA adheres to. In order to enlighten and emancipate the stakeholders, we have to contrast our (including the analyst's) behaviour with its usually unconscious roots, that tend to distort communication in regard to reaching a coercion-free consensus. Finally, on the practical side of the stakeholders' behavioural inquiry we try, as a psychologist will do, to use a multiplicity of factors that appear to us to be logically coherent in order to limit the chances of a stakeholder concealing his/her true intentions or deceiving us into our inquiry of the system. On the same subject we can justify our problem-free enquiry (namely independent of the problem-stated by the initiator), in the sense that we try to approach organisational politics not through the filter of the problem stated, which we are biased to treating it as a symptom of a deeper cause(s). Any criticism regarding our limited ability to make inferences about the system as a whole based only on the outside view can be regarded as justified since we have not 'entered' the

organisation's HAS. The outside view is subject to the same limitations as those of the soft systems approaches, though its approach is different. It is these very limitations that BSPA tries to overcome with the inside view.

- *Chapter Six* -
BSPA MODEL
- **INSIDE VIEW** -
THE EMANCIPATORY
APPROACH

6.1. Inside View

One might ask then how could we identify the material and informational interests, that are the inputs to the stakeholders' ideological process, and subsequently the stakeholders' worldviews? As we stated before we will have to 'enter' the system and identify the stakeholders' material and informational possessions. The vehicle to do that will be the stakeholders themselves. The very definition of control over material and informational resources would not be the analyst's definition but it would be the definition given by the stakeholders' themselves. The perception of "what processes I control and how?"; or "what processes I should control?", is subjective; meaning that is unique in every situation. Conflict is the result of the claims made upon organisational processes (material as well as informational), by more than one stakeholder. Our definition of conflict parallels Lewin's (1952) referring to his force field analysis. Lewin's perceives conflict as the overlapping of at least two force fields creating forces which pull towards opposite directions:

'Conflict refers not to one force field but to the overlapping of at least two force fields. 'Frustration' has the same dimension as conflict. A systematic survey of the possible types of frustration or conflict should, therefore, inquire how force fields can overlap in such a way that equally strong but opposite forces result at some points of the field. Such analysis permits a systematic treatment of the conditions and the effects of conflicts. The concept of equilibrium has the same dimension as conflict; it refers to certain constellations of overlapping force fields.'
(Lewin, 1952).

In BSPA we treat conflict areas as the areas where overlap of perceived control (control is meant in its wider sense and includes ownership, legitimate administration, and influence), or intended control over organisational material and/or informational assets exists between at least two stakeholders. The conflicting stakeholders could be internal stakeholders or external (outside entities) ones, as the other party perceives them. Therefore, the whole effort would be directed towards uncovering these claims for control. For example, the marketing manager who is 'losing sales' because his/her outlets are left without stock might want to control the operations of the production department. The sales manager might want to control the 'marketing planning' himself because he/she thinks that he/she has the skills to do so and/or because he/she believes that the marketing manager is incapable of doing so. In this game of conflict then, the stakeholders' weapons are their power bases. Control over links with the outside stakeholders (important clients, stock-holders, suppliers, etc.), bureaucratic control over an important process, control over the informal organisation, etc.. Other types of power bases could be a stakeholder's unique skills for example, or support from somebody higher in the organisational hierarchy, etc.. At this point we have to make it clear that in this thesis the so called *functional conflict*⁵² is regarded as strong argumentation and not as conflict. This implies that the *interactionist view*⁵³ of

⁵² "**Functional conflict.** Conflict that supports the goals of the group and improves its performance.
...**Dysfunctional Conflict.** Conflict that hinders group performance." (Robbins, 1993).

⁵³ "**Interactionist View of Conflict.** The belief that conflict is not only a positive force in a group but that it is absolutely necessary for a group to perform effectively.....John Akers at IBM subscribes to the current view of conflict -the interactionist perspective. While the human relations approach accepted conflict, the interactionist approach encourages

conflict carries strong positivistic connotations and raises a number of ethical issues. There is a very 'thin line' separating conflict engineering and manipulation; and this 'line' becomes even 'thinner' if one takes into account the fact that conflict areas (as it is elaborated later in this thesis) are subjectively perceived and defined. An organisation should create a culture where people are intrinsically motivated towards change and they are not being induced to it externally with functionalistic methods such as the interactionist view of conflict. Therefore, we can infer that when we identify the areas of subjective control we should be in a position to identify the origins of the stakeholders' power itself. The analysis should be done always in the framework of 'four levels' of hierarchy in the official chain of command (official organisational chart), except in the beginning where the focus of the inquiry is on the system-five him/herself. The decision to enquire four hierarchical levels at the same time, in the inside view, is based on the following logic: The one level above (excluding system five that is the highest level in the organisation's hierarchy) as well as the one level below, from the focus level, are chosen because conflict areas are likely to exist as sources for the control of organisational resources that are connected to the official hierarchy (e.g., managerial positions vs. executive ones); as well as for the control of the reward systems connected to the official hierarchy. The fourth level, namely two levels below from the focus level, is chosen because its behaviour is regarded as important in a conflict situation where the immediate higher level(s) (of the level in focus) is/are fighting their own higher(level) or other stakeholders at the same level (of the immediate higher level of the level in focus) between themselves. For example, even junior executives are likely in a marketing department to support the marketing manager in his/her conflict with the sales manager (being at the same level as the marketing manager) or the production manager, or even get into an alliance with them in order to overthrow the marketing manager. The cohesion of a functional group (namely the marketing group, or the production group, or a project group, etc.) within the organisation is indicative of the dynamics of the group's behaviour originating from their organisational material and informational interests. In cases of inter-group conflict one junior executive could be asked to collaborate with his/her immediate higher level to overtake higher levels than his/her immediate one, or he/she could be asked to collaborate with levels higher than his/her immediate higher one in order to undermine his/her immediate higher level. Mintzberg (1983) argues that the nature of the exercise of organisational power changes in regard to the way the stakeholders' use their power bases as well as the options open to them. Mintzberg (1983) identifies five types of power bases which he calls the 'personal control system', the 'system of ideology', the 'system of politics', the 'system of expertise', and the 'bureaucratic system' and he depicts their use connected to the organisation's hierarchical levels as follows:

'Figure 9-1 [diagram 8.-1.] seeks to summarise this discussion of the managers of the middle line. It shows their overall power and reliance on the different systems of influence as a function of their level in the hierarchy. Obviously, the power of a particular line manager will vary markedly from one situation to another. But on average, we see the following: In contrast to the

conflict on the grounds that a harmonious, peaceful, tranquil, and cooperative group is prone to becoming static, apathetic, and nonresponsive to needs for change and innovation. The major contribution of the interactionist approach, therefore, is encouraging group leaders to maintain an ongoing minimum level of conflict -enough to keep the group viable, self-critical, and creative.'" (Robbins, 1993).

CEO above who can rely first and foremost on the formal power of the control systems, and the operations below who are often forced to fall back on the informal power of politics (as well as expertise, where possible), the line managers came closest to striking a rough balance in their use of these (and the other systems of influence).

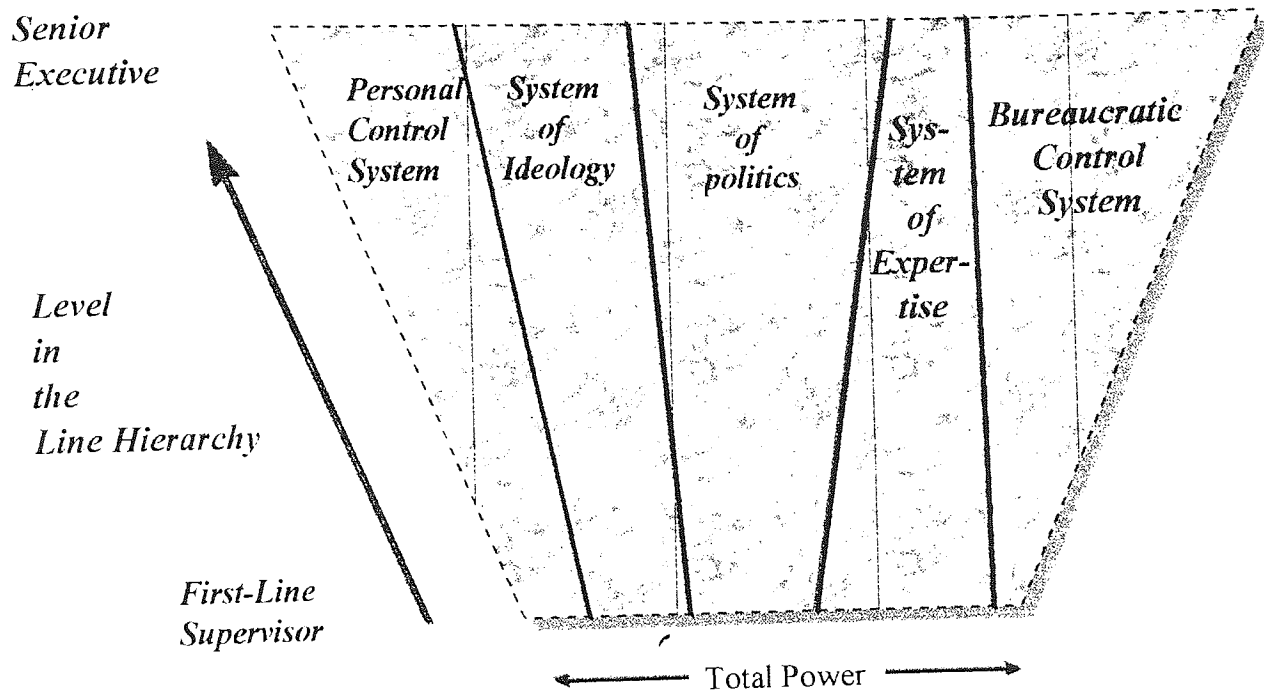


Diagram 6-1.

In general, the relative reliance on politics is shown to increase at lower levels (although its actual influence decreases). The same is shown for the reliance on expertise - here actual as well as relative - since the technical knowledge and skills of most organisations tend to rest low in the hierarchy. But the use of the two components of the System of Authority - personal and bureaucratic controls - decreases markedly. This is especially true of the bureaucratic controls, which serve primarily the higher-level managers as well as the analysts, often at the expense of the lower-level managers. As for the System of Ideology, its use diminishes only slightly (in the actual sense, and increases in a relative sense), since it serves all of the members of the organisation more equally than any of the other systems of influence. Finally, the overall figure is shown to narrow toward the base, to represent the fact that total power diminishes as we descend the middle line.' (Mintzberg, 1983).

Therefore, the analysis-work will be performed, in this thesis, based on the simultaneous enquiry of four hierarchical levels of the official chain of command except in the beginning where the focus of the inquiry is on the system-five him/herself. In this case only the first three official levels are included. This approach will provide us with the opportunity to deal with organisational power in systemic terms. The choice of the set of four official organisational levels will enable us to analyse organisational power in systemic terms, for the

reasons quoted above, but it has to be made clear that that very choice still remains an arbitrary number. Empirical data, from the application of the BSPA, will help us to draw conclusions about the validity of this particular choice. One might argue though that it is rather odd to focus on four levels in the age of flatter management hierarchies. It has to be noted at this point that the choice of the four levels set in the BSPA is regarded as the limit of the number of levels that should be included in the organisational enquiry. If the organisation employs less than four levels that would not be an obstacle for the effective employment of the BSPA methodology. To the contrary it will simplify the whole enquiry greatly. The framework of the inside view's organisational level inquiry is depicted on the "Inside View Organisational Level Inquiry" diagram 6.-2.

Inside View's ORGANISATIONAL LEVEL INQUIRY

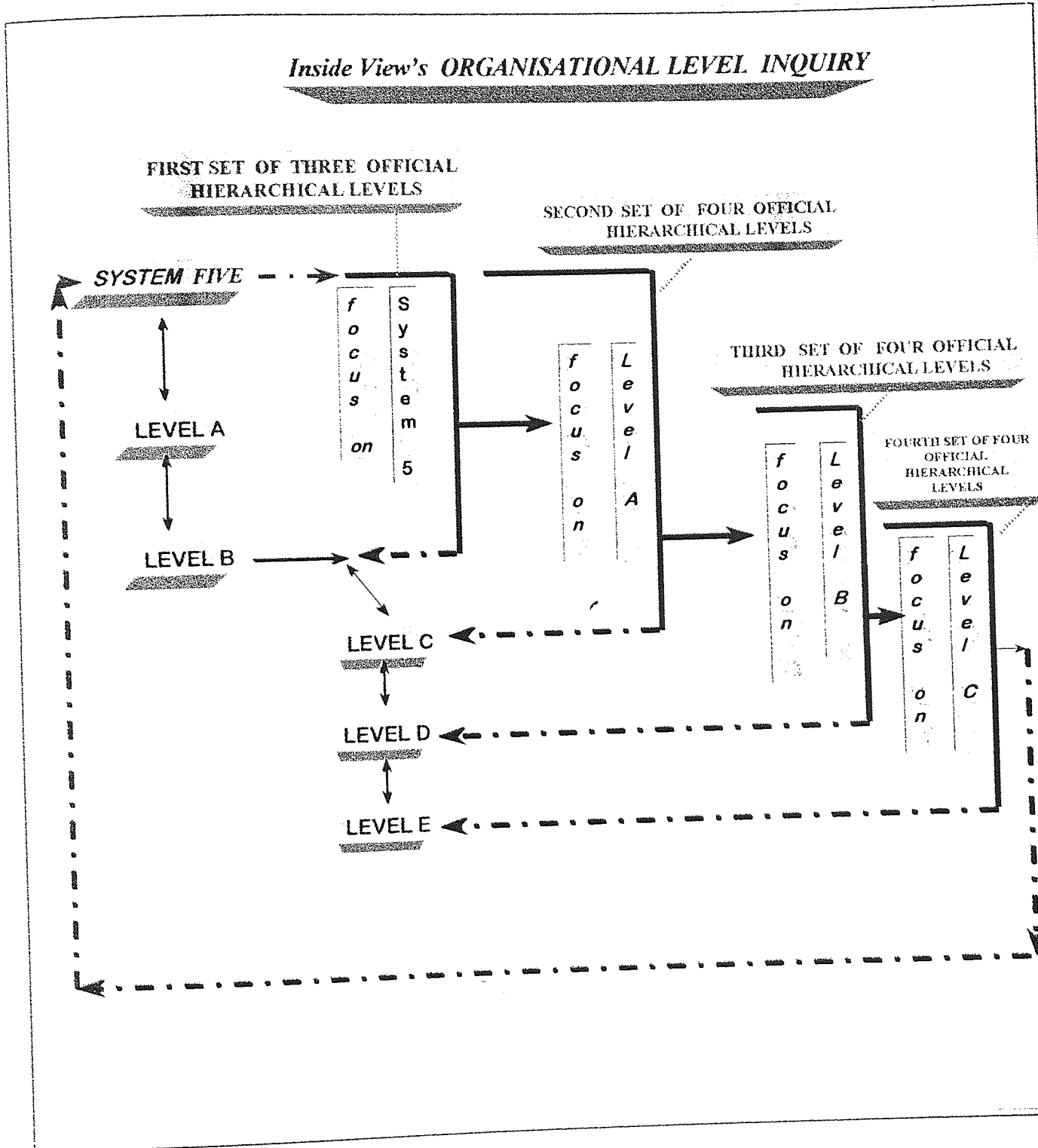


Diagram 6.-2.

6.2. Official Organisational Hierarchy versus the Unofficial Organisation

One might ask then, how could we identify the levels of organisational hierarchy? Our first job is to use the hierarchical breakdowns of the official organisational chart. But that would not be enough. One might argue that organisation charts are nothing else but a "joke" in some organisations. That might be true, especially in organisations in crisis! Therefore, in order to overcome this problem and in order to identify problems in communication as well as the *informal organisation*⁵⁴ we will have to ask the stakeholders in Level X to define his/her subordinates and his/her superiors himself. In BSPA we are biased to believe that great deviations from the official organisational chart might amount, in terms of control over the organisation's material and informational assets, to areas of conflict where official bureaucratic control clashes with the informal organisation. For example, in a functional organisation the questions "who is your boss?" and/or "who is your subordinate?" are very important indeed. Koontz et al (1984), argues the following in regard to the problems of *functional authority* in organisations:

"If a company had, as some do, executives with functional authority over procedures in the fields of personnel, purchasing, accounting, traffic, budgets, engineering, public relationships, law, sales policy, and real estate, the complications of authority relationships could be great indeed. A factory manager or a sales manager, might have in addition to an immediate line superior, five, ten, or even fifteen functional bosses. In one case, a factory superintendent was found to be subject to functional authority from eighteen functional bosses. When asked whether, on occasion, some of these instructions became conflicting, he responded, 'Every day'. When he was asked what he did when this happened, he said that he followed the 'decibel', system of management by paying attention only to those persons who made the most noise" (Koontz, O'Donnell, and Wehrich, 1984).

One might argue though that the functional organisation depicted in diagram A1.-1. (see Appendix A1), is 'rather simplistic' in comparison with the above statement. We have to make it clear at this point that the diagram A1.-1., depicts diagrammatically a functional organisation as it should be while the above statement implies a functional organisation in crisis originating from its overemphasis on functional structures. Basically the organisation described above exhibits all the disadvantages of a functional organisation, as they are identified by Koontz *et al*, in their extremity. Namely the above organisation seems to suffer from "overspecialisation and narrow viewpoint of key personnel" as well as from "low co-ordination between functions".

⁵⁴ "Barnad regarded as informal organisation any joint personal activity without conscious joint purpose, even though possibly contributing to joint results. As thus defined, all manner of groups fall within the sphere of informal organisation, including an aeroplane load of passengers and people walking down a street. **Pursuing this thinking, informal organisations - relationships not appearing on an organisation chart**- might include the machine-shop group, the water cooler clique, the production engineering group, the sixth floor crowd, the Friday evening bowling gang, and the morning coffee 'regulars'." (Koontz et al, 1991). In BSPA, *informal organisations* are produced from the group formation of individual stakeholders who perceive commonness in regard to their organisational and informational interests.

Therefore, we will start our analysis by inquiring the official system five; then we will move to the first line managers based on the official organisational chart; and then to the second line managers, etc.. But for our analysis to be complete we will have to ask system five to define, in his/her opinion, the tasks of his/her first line managers and his/her first line managers' subordinates (namely the second line managers), by placing them on the organisational value chain; thus defining their area of 'responsibility' and 'control' as well as the nature of control (namely type of control, e.g. bureaucratic, functional, etc.).

The next step would be the identification of the official and unofficial lines of communication (namely official and unofficial communication links) that system five believes has with his/her subordinates as well the content of their exchange (namely information, goods, reports, etc.). In addition, system five will have to state his/her beliefs about the overall communication lines, in the above sense, namely that his/her first line managers are connected to the rest of the internal stakeholders as well as the external ones. In addition, he/she should have to define the communication links of his/her first line managers' subordinates, as well as the way he/she believes that these lines are connected in regard to the unity of command (namely in reference to the official as well as to the unofficial organisation).

After system five has expressed his/her views we will have to ask the first line managers to define their tasks, their perceived areas of control and their communication links in regard to system five and the other internal and external stakeholders. They will be asked to do the same for the two immediate hierarchical levels below. The use of defining the two hierarchical levels below is made in order to draw inferences about the extent of the use of the functional reason's principles in the management of one's subordinates; namely the use of the black-box approach. The less one stakeholder can define the processes or the communication links of the lower hierarchical levels the more he/she will concentrate on the management of the processes inputs and outputs only (according to the principles of the black-box approach), thus neglecting its HAS content. The definition of one level above (from the focus level) is regarded as necessary because will reveal distortions in communication, as well as the perception of a particular stakeholder regarding organisational freedom, coercion, fairness and the organisational reward system.

In addition, the managers (starting with system five) will be asked to define their ideal designs, as it was stated in the specific SSR, in regard to all the factors stated above (positioning on the value chain -formal and informal communication links- subordinates, etc.), for the two official hierarchical levels below and the one above (from the focus level). Basically, with this type of analysis we seek to identify first of all the areas of perceived control overlap upon the organisational value chain in terms of material and informational possessions or claims made by different stakeholders. By asking the stakeholders to engage in idealised planning, we ask them, basically, to deal with issues of communication and control as well as process and structure design. The word idealised implies that the stakeholders will be asked to define the organisational processes and structure in terms of gaining and relinquishing control over informational and material resources free from the obstacles that currently might inhibit them from bringing about their desired designs. In other

words the stakeholders will be asked to produce those organisational designs (process-structure-communication links) that will serve best their material and informational interests.

In the next step the stakeholders are facilitated by the analyst to acquire self-knowledge about their power bases as well as the way they use these power bases (consciously or unconsciously) to “maximise” (in case of strategic-oriented stakeholders) their material and informational interests in a particular organisational setting. In other words they will have to gain self-knowledge by answering themselves questions of the type “are my skills unique?”; and “does this provide me with the ability to increase my rewards?” for example; “Am I an information node in the organisation?”; “is my career in the organisation regarded as very successful?” and “have I been using this success to scrap the boss’s plans to make the organisation more decentralised”; “do I have control over resource allocation?” and “thus I have been threatening a junior-executive, who criticises the marketing plan publicly, with the loss of his bonus”; “do I control those organisational processes upon which other managers dependent for material and information input?” and “thus have I been sabotaging the other managers’ plans to change the status-quo?”; “who else has control over these processes?; and “can I undermine him in order to become CEO”, etc.. These are some of the questions that will reveal the stakeholders’ perceived power bases.

As we move down the organisational hierarchy the scope of systemic change will be getting ever more limited and ever more specific by moving from the strategic level to the operational one. But by examining four hierarchical levels at each time we try to provide the lower levels of the hierarchy with the ability to be heard in regard to the definition of their future. It has to be noted again at this point that the hierarchy itself would be defined according to the perceptions of the stakeholders themselves. A stakeholder’s perception of hierarchy, and his/her perception of control or claims over organisational processes and communications links, is of the utmost importance.

6.3. The Concepts of Value Chain and General Systems Theory

The inside view will start with the definition or rather the building-up of a common stock of knowledge, between the analyst and a particular stakeholder(s), in order to avoid any misunderstandings. The analyst will have to explain Porter’s concept (1981) of value chain and clarify the difference between primary and support activities. In addition, the analyst should supplement the idea of value chain with the inputs-process-output concept of general systems theory. In other words the analyst will be asking the stakeholder (system five in the beginning of the analysis work) to view his/her businesses as a system that can be described in terms of inputs-processes-outputs (I-P-O), on the basis of Porter’s value chain paradigm (which is regarded in this thesis as a systemic framework of the organisation’s operations). The system’s boundary (namely the very definition of the business system) and the definition of its I-P-O would be left to be defined by the stakeholders themselves. Another important point we have to mention as well is that the value chain concept encapsulates implicitly the “Time Factor” as well. The time factor is deemed (in the BSPA) to be very important in the stakeholders’

communicative action. There is, as we mentioned before, a relationship between time and power that we have to take into account in the analysis of the business system.

We have to clarify at this point that in case where system five is not familiar at all with the Porterian theories another approach of presenting BSPA should be undertaken. This approach will be more simple and it will avoid making references to the BSPA's theoretical background as a whole. The approach will concentrate into presenting organisations as workflow systems that are made up of distinct and mainly sequential activities. These activities can be split into two categories, namely those that produce the organisation's output(s) (primary activities), and those activities that 'support' the primary ones (support activities) to produce the organisation's outputs. The primary activities will be depicted diagrammatically in a sequential order starting from left to right where the first (the very left) primary activity will be the one which receives the organisation's main input (e.g., the inbound logistics activity) leading to the activities that produce the organisation's main output (e.g., the production activity); make the sale of the organisation's output possible (e.g., the marketing activity); and sell and support the product after the sale (e.g., the sales activity). The support activities are depicted on the top of the primary ones spanning the whole range of the primary activities.

Therefore, system five and the first line managers will be asked to describe holistically the whole system, while as we move down the official organisational hierarchy the stakeholders will be asked to describe systematically their slice of the value chain. In addition they will be asked to express their perceptions about the organisation's value system, strategic domain, purpose, and standards, the way the management team was questioned; though their systemic view of the whole system is getting narrower the more we move down the organisational hierarchy. If the majority seems to agree with system five's views, and no control-overlap areas have been detected, then we can claim that the business system in focus is ideologically cohesive, and that system five is the true embodiment of the system's identity. But we will remain vigilant about the existence of false-consciousness produced possibly by the most powerful and rather sophisticated stakeholder.

The recording of the above views would be done in a structured manner, as it was mentioned above, in order to be captured on a computer-based database system in the future. As it was explained in the outside view, the analysis of the management team's ideological cohesion was based on the team's strategic vision. In addition, as it was mentioned above, the more we go down the organisational hierarchy the ideological cohesion will be based on more tangible things corresponding to the tactical and operational organisational levels' ever limited systemic view. But a second-line manager will be asked to express his/her views as well about the mission of the organisation he/she is part of. This inquiry aims to define the overall ideological cohesion of the business system in focus. One might argue though that the ideological cohesion of the team that the second line manager is responsible for is a different thing. This is true! The ideological cohesion at this hierarchical level can be defined only on the basis of compatible views between a subordinate(s) and his/her immediate boss (namely the second line manager) in regard to the nature of the official task(s) undertaken by the second-line manager's group. If disagreement exists between the second line manager and the group's

official individual members then there is a great possibility that differences will exist regarding the organisation's overall reward system while possible distortions in the organisation's communication links will exist as well. Therefore the analysis of the organisational HAS content will be performed as follows:

System five will be asked to define first of all the terms inbound logistics, operations, outbound logistics, marketing & sales, and service for the organisation he/she is working for. He/she will be asked to give a core definition of the above terms, meaning a short brief one, which will be recorded using structured English, as well as a more elaborate one. System five will be asked to name the person who is in his/her opinion is responsible for a particular activity and he/she should give a short description about his/her (namely for the person responsible for a particular activity) skills and about his/her perceived competence; in regard to the tasks (of a particular activity) he/she has to perform in the organisation. System five will be asked to define his/her immediate subordinates' (namely the first line managers') task(s) making-up a primary or a secondary activity (which in the BSPA value chain is defined as a value chain segment - elaborated later in this chapter). This way system five defines a first line manager's position on the organisational value chain. In case that system five believes that that a particular individual, identified to be responsible for a particular activity, is identified as to be responsible for more than one activity as well, of the organisational value chain, then he/she will be asked to define his/her type of responsibility (line, or staff, or functional authority) over the other segment(s) as well. In addition, system five will be asked to provide us with an indication of the importance he/she places on a particular value chain segment in terms of the viability of the whole organisation relative to the other value chain segments. Finally, system five will be asked to make a statement regarding his/her perception of the history of a particular value chain segment, e.g., the category management activity was established in 199x, in an effort to replace the distinct activities of marketing and sales.. etc.. Category management is used in this example because it represents the contemporary systemic cross-functional activities that demand for organisational changes and produce often a lot of political conflicts (see diagrams 6.-4., and 6.-5.). The Food Marketing Institute defines the *category management* as follows:

“Category Management is a distributor/supplier process of managing categories [product categories e.g. like the shampoo category, the white spirits category, etc.] as strategic business units, producing enhanced business results by focusing on delivering consumer value.... Category management is based on a holistic approach to managing a category as a strategic business unit vs. A more narrowly focused buying-selling transaction. The reality of managing multiple categories with finite resources leads both suppliers and distributors to make strategic resource-allocation choices on an intercategory and intracategory basis... The core components of category management -strategy and business process - need and external interfaces for a distributor and its suppliers. For many companies, organisational structures are based on functional or product specialisation with little emphasis on the design of the work processes themselves. A process-based organisational structure is predicated on how is done - the development of category business plans - rather than on specific areas of functional expertise. The category management business process is cross-functional in nature. For example, it details

the development of demand-side strategies, supply-side strategies and relationship strategies. These processes cut across traditional functional lines and benefit from cross-functional solutions. The cross-functional process orientation of category management, therefore, benefits from the development of a process-based organisational capability. This has implications for roles and responsibilities, skill requirements, organisational structure, performance measurement and compensation.'' (Food Marketing Institute, 1995).

Basically, what the analyst is asking system five, in the beginning of the inside view, is to define the I-P-Os of the system within Porter's slightly modified value chain's framework. In addition, the analyst asks system five to define the areas of responsibility for each of his/her first line managers, and to provide him/her with an indication of the importance he/she places on the value chain's different activities in terms of the overall survival (viability) of the whole system. The last inquiry aims towards identifying his/her focus and his/her value system. If system five believes that the service activity is the most important activity for the system's overall survival (viability) then service ethics will be 'imperative' for the whole organisation; and the individual identified to be responsible for the service segment will be important by definition in this particular organisation.

The data generated by the above inquiry would be captured in the "System Five's Value Chain-Primary Activities Table" (6.-1.), and in the "System Five's Value Chain-Support Activities Table" (6.-2.) as follows:

SYSTEM FIVE S VALUE-CHAIN PRIMARY ACTIVITIES TABLE							
NAME:							Date _____
Primary Activities *	Core Definition (Structured English)	Elaborate Definition (Structured English)	Part of or independent	Head	Other Responsible	Relative Importance (Rank Number from 1 to 99)	Reasons (Structured English)
Inbound Logistics					Name: Position: (official)		
Operations					Type of Responsibility (Structured English)		
Outbound Logistics							
Marketing & Sales							
Service							

Table 6.-1.

- In a computer-based BSPA the definitions of the value chain concepts, as well as the concepts of the primary and support activities, etc., would be supported by pop-up menus and hyper-text facilities.

The definitions of the 'core' and the 'elaborate' are very important indeed because they can reveal inconsistencies in the stakeholder's perception. The core definition corresponds to the stakeholder's perception of things but the elaborate one is subject to the stakeholder's investigation that aims to confirm his/her initial perception of things. Joiner (1991) regarding the link between quality and productivity gives an interesting example.

- Inside View/The Emancipat

Core
Definition
unstructured

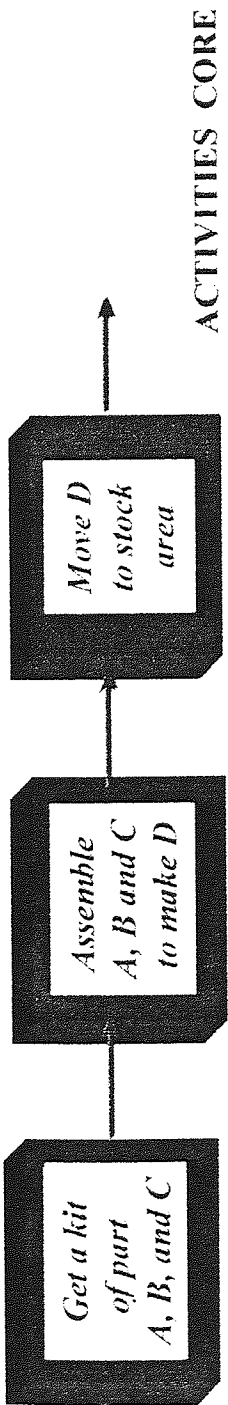
"A beautifully simple example of the link between quality and productivity comes from Tim Fuller, who managed a large department that assembled electronic devices. [see diagram 8.-3.]

..... The diagram above [next page diagram 8.-3.] shows how the assembly operation was supposed to work: get a kit of parts, put them together, then move the assembled product to the stock area. (The real assembly had 100 parts, not 3 as shown, but the diagram gives an idea of what was involved.) Tim knew that each of the 100 parts had a 98% chance of being there where needed. That sounds pretty good, doesn't it? Well, as Tim found out, at least 75% of the time one or more parts would be missing; in other words, 75% of the kits were incomplete when the employees began the assembly operation. So the work actually went like this: [see diagram in next page]. Employees would use what parts they had, complete a partial assembly, log it into the computer, and then store it on a shelf. When a part arrived, they'd go to the computer, find all the partial assemblies that were missing that component, retrieve them from the shelves, and complete the assemblies- or return them to the shelves if other parts were still missing." (Joiner, 1991, my underlining).

Elaborate
Definition
unstructure

The above example provides us with evidence about the use of Structured English for the description of organisational processes (activities) even at a high level of abstraction. The parenthesis used by Joiner (1991) to explain that the A, B, C parts used, in their turn, for the description of one hundred products is representative of the use of Structured English for different levels of abstraction. The underlined text provides us with an example of a verbal statement made by a stakeholder for the description of a process at a high level of abstraction. In addition, we can argue that the formulation of the elaborate definition can help the stakeholder(s) to focus and describe a process in a structured manner that can be used as a feedback to the core definition (defined initially) until they are both compatible. One should not forget that the formulation of these definitions could, or rather, should be the result of an iterative process aiming at refining in a rigorous manner the core as well as the processes elaborate definitions. When both definitions have been drafted and recorded using Structured English then they will be used for different purposes. The core definitions will be used for comparisons between different stakeholders and system five's definitions (in terms of the fuzzy comparisons described in chapter five). The elaborate definitions will be used for the development of the organisational information system, after consensus (regarding those definitions) between the stakeholders has been reached.

Structured English
 1. Get Kit parts
 2. Assemble D
 3. Move D to stock area.

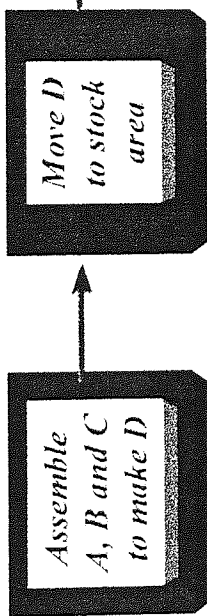
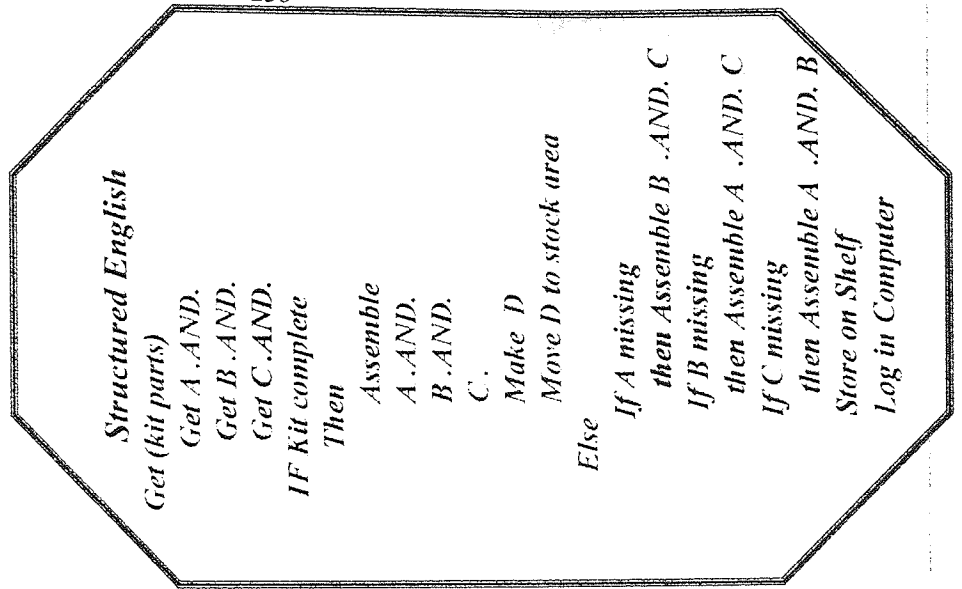


ACTIVITIES CORE

The Way It was Supposed to Work

ELABORATE DEFINITIONS

Diagram 6.-3.



Structured English

Get (kit parts)
 Get A .AND.
 Get B .AND.
 Get C .AND.
 IF Kit complete
 Then
 Assemble
 A .AND.
 B .AND.
 C.
 Make D
 Move D to stock area
 Else
 If A missing
 then Assemble B .AND. C
 If B missing
 then Assemble A .AND. C
 If C missing
 then Assemble A .AND. B
 Store on Shelf
 Log in Computer

The Way It really worked

SYSTEM FIVE S VALUE-CHAIN SUPPORT ACTIVITIES TABLE							
NAME: _____							Date: _____
Support Activities	Core Definition (Structured English)	Elaborate Definition (Structured English)	Part of OR Independent	Head	Other Responsible	Relative Importance (Rank Number from 1 to 99)	Reasons (Structured English)
Human Resources					<u>Name:</u>		
					<u>Position:</u> (official)		
					<u>Type of Responsibility</u> (Structured English)		
Information Technology							
Procurement							
Finance							
Accounting							

Table 6.-2.

In the first table (6.-1.), the major headings used as primary activities, namely the inbound logistics, operations, outbound logistics, etc., are descriptive of an open activity system, in terms of the I-P-O model. But in the second table (6.-2.) the headings used in this thesis as generic types of support activities, namely finance, accounting, etc., will not be used in order not to precondition the stakeholder(s) who will be responsible for the definition of the nature of these activities as primary or support. Finance for example for a bank might be a primary activity (operations), but a support one for a manufacturing one. At this point we have to clarify the difference between the Porterian perception of primary and support activities and the perception embedded in

Beer's VSM. The two definitions are as follows, starting with the VSM's one, as it is defined by Espejo and Harnden, (1992).

"A consequence of this structuring [recursive⁵⁵ structuring] is that each level there are two types of activity. The first, done by what we call the collection of viable subsystems, is that of actually doing the operational work of producing whatever it is which constitutes the identity of the whole. The second can be defined as meta-systemic to the collection. It does not take part directly in the production activities of the lower-level collection. It is to be understood as a controller of both the internal relations between the viable subsystems and the relation of the whole to their environment." (Espejo and Harnden, 1992, my underlining).

Porter's definition of organisational activities is the following:

"The value chain displays total value, and consists of value activities and margin. Value activities are the physically and technologically distinct activities firm performs. These are the building blocks by which a firm creates a product valuable to its buyers..... Value activities can be divided into two broad types, primary activities and support activities. Primary activities,, are the activities involved in the physical creation of the product and its sale and transfer to the buyer as well as after-sale assistance. In any firm, primary activities can be divided into the five generic categories..... Support activities support the primary activities and each other by providing purchased inputs, technology, human resources, and various firmwide functions. The dotted lines reflect the fact that procurement, technology development, and human resource management can be associated with specific primary activities as well as support for the entire chain. Firm infrastructure is not associated with particular primary activities but supports the entire chain." (Porter, 1985).

From the above two definitions the reader can observe that the difference between Porter and Beer lies in the definition of the secondary or support activities. In BSPA we adopt Porter's definition of support activities because if we had adopted Beer's one then it would be incompatible with Porter's value chain concept that by definition does not include the concept of organisational recursion. Metasystemic activities for Beer are managerial activities. One might argue that these activities, in very general terms, support the operations which reproduce the identity of the system (primary activities, the so called system-one in VSM), but their metasystemic nature implies clearly control activities besides the support ones as well. Therefore, if we had adopted Beer's definition then we would had to define support activities, which are defined according to Porter as auxiliary activities, as metasystemic as well. In addition, we avoid to define the support activities as metasystemic because we want to preserve the perceptual nature of control as well as the subjective nature of its exercise.

⁵⁵ "Recursion: a next level that contains all the levels below it." (Beer, 1990).

The stakeholders' definition of activities as primary or support will be left to be defined by the stakeholders themselves and not by the analyst. Differences in the definition of the activities as well as in their classification (on the basis of being primary or support) between a superior (in bureaucratic terms) and his/her subordinate(s), might be a source of information distortion and a likely area of organisational conflict. Under the heading "core", the stakeholders will be asked to give a short to the point definition. The definition has to be short and to the point in order to be comparable with the definitions of the subordinates. For this reason the analyst will use Structured English in order to record the stakeholder'(s)' view(s).

Under the heading "Part of" system five will have to define the activity as part of another activity, or as an independent activity in the sense that it is officially defined as an independent activity or as a part of another activity. For example, 'is the inbound logistics activity an independent activity or it is one of the tasks of the accounting activity?' The definition of an activity as part of another activity implies that serious distortions in communication might have led a stakeholder to view a task belonging to an activity as an activity in its own right. The only case that such a distortion can be regarded as natural is the case where a task is defined as an activity due to a stakeholder's limited systemic view. This implies that in case where system five falls into this trap then either he/she is confused about the activities of the system in focus or he/she is preparing the redefinition (possibly the elevation) of a task into an activity thus preparing for major organisational changes. In this thesis we define tasks as sub-activities which belong to a particular activity. Our use of the term task is made to indicate the level of decomposition of a major organisational activity.

Under the heading "Relative Importance", the stakeholder will be asked to state his/her subjective views regarding the degree of importance he/she places on an activity, relevant to the others, in terms of the organisation's systemic viability. Therefore, we will expect him/her to give a rank number for each one starting with the number (1) for the most important one, in his/her opinion.

Under the heading 'Head' the stakeholder will be asked to identify the person who controls this particular activity. It has to be clear at this point that we ask the stakeholder to identify the person who controls in his opinion that particular activity; in other words we are not asking system five to tell us who controls this particular activity in terms of the organisation's organisational chart. If the person defined by the stakeholder does not coincide with the person in the organisational chart, who is supposed officially to control that activity, or if the activity identified does coincides with the official organisational arrangements, then we can argue that we have identified a likely area of conflict where system five possibly intends to reorganise.

Under the heading "Other responsible", we would expect system five to write down the name and the position of another stakeholder who in his/her opinion has direct or indirect control over this particular activity regarding the first line of management. The above tables will be supported with the necessary documentation where system five will explain his/her definition of 'responsibility' as well as the reasons that he/she provides in support to his/her argument that a particular activity is 'important' in a more elaborate format. In addition, the tables will be supported with further documentation where system five will record his/her views about the

history of an activity in terms of its evolution over the years in the light of its 'successes' and 'failures'. For example, "the procurement activity became an independent activity ten years ago and it had some spectacular failures five years ago, when John Smith, was heading it". As a matter of fact the activity lost one million back in.....when it bought....in the futures market... etc.". In the above table we will include in the definition of the "Core" a statement about the perceived skills required for an activity to run effectively, and the skills that are currently employed, including the technology employed.

6.4. Perceived Organisational Chart and the Value Chain

Therefore, on the basis of the above recordings we will ask system five to map the organisational chart onto the organisational value chain, as it was defined by system five him(her)self. When we argue that we are going to map the organisational chart on the value chain we do not mean the official organisational chart but the perceived organisational chart -based on the actual (meaning real control over a particular activity that includes unofficial control over a particular activity as well) perceived control (meaning as it is perceived by a particular stakeholder) over perceived identified organisational activities. Therefore, from system five's value chain tables (primary and support), we can infer the actual perceived organisational chart from the headings "Head", and "Other Responsible" (see diagram 6.-6., for the Organisational Modelling - BSPA Symbols).

One might ask though what is the purpose of doing that? The ultimate purpose of the above effort will be the identification of the stakeholders' (who are members of the organisations staff - namely its employees) material and informational control grip on the value chain, according to system five's perception. As we will see later on we will ask system five to decompose his/her definition of a value chain segment (namely one of the primary or secondary activities identified) into its distinct tasks and we will ask him/her to draw their communication links linking that particular activity's tasks with the other activities' tasks. We will be asking system five to define the control that every stakeholder, in his/her opinion, has on the organisational value chain. In addition, we will have to compare the actual perceived organisational chart with the official organisational chart. For example, let us suppose that a company which is in the process of developing category management practices, that correspond to cross-functional activities, still employs its traditional sales dominated functional culture (depicted in diagram 6.-4.); where the marketing manager carries limited power in comparison to the sales manager's power.

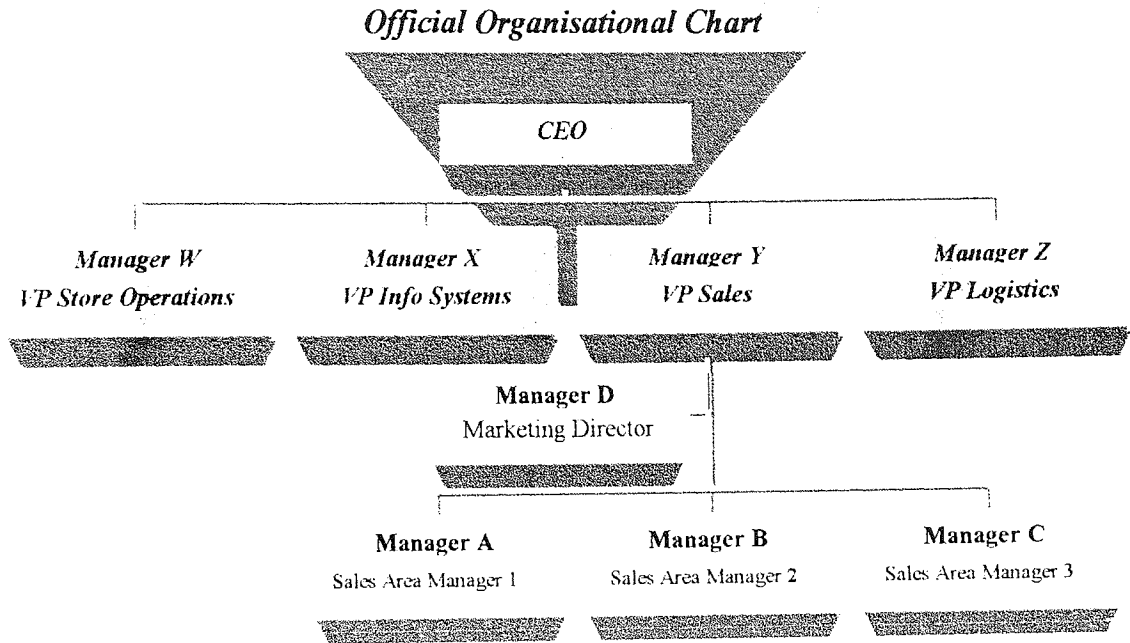
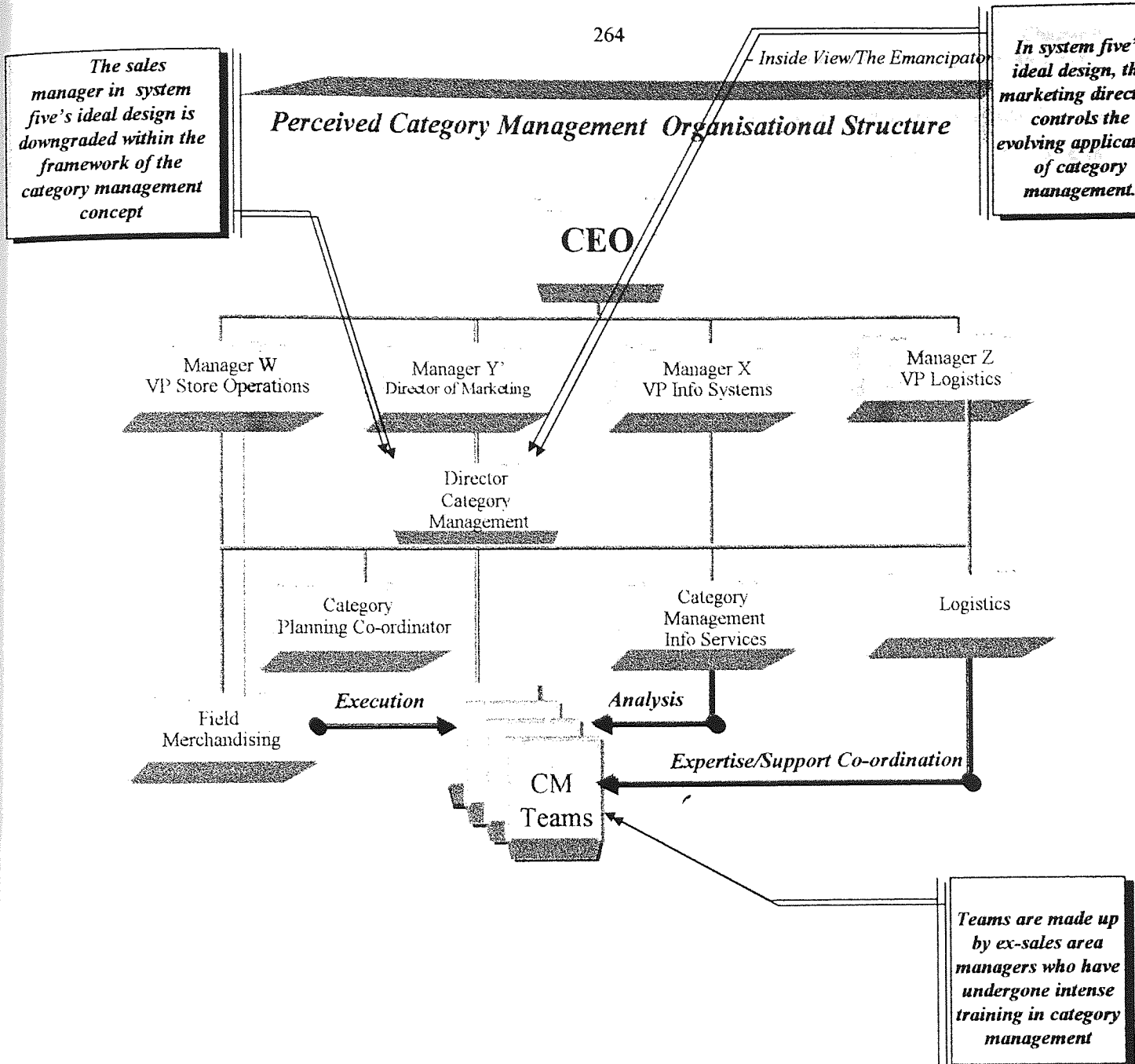


Diagram 6.-4.

Let us suppose further that the marketing manager is the person who initiated the idea for the development of category management in the organisation and he has made very good progress with a number of very important clients that will benefit from the new category management structures. In our example, the marketing manager has acted in a cross-functional manner, informally so far and he has managed to persuade system five for the category management's value as an organisational concept that will provide the organisation with increased co-ordination and synergy of its activities. In order to make our case we will suppose even further that system five from his description of the primary and support activities came up with a perceived organisational chart as the one quoted in diagram 6.-5..



(this diagram was based on the 'Category Management Organisation Structure' exhibit -Food Marketing Institute, 1995)

Diagram 6.-5.

The comparison of the two organisational charts implies that there is a great possibility that there should exist a conflict area between the sales manager and the marketing manager. A conflict where the marketing manager appears to be 'weaker' because he does not employ in his power-portfolio the 'weapon' of bureaucratic power as the sales manager does. In addition, if system five's ideal organisational structure coincides with the one above then we can argue that system five is preparing or that he/she in the process of reorganising the business system in focus.

One might ask then 'Why we are asking system five first?' in the beginning of the system's HAS content enquiry. Because system five is the metasystem (at least in organic and bureaucratic terms), of the first line of management, and his/her perception about the control that each of his/her immediate subordinates has on the value chain, he/ she sets the limits of each subordinate's control over the organisational value chain (ideally at

least). It was argued above that we will try to map the organisational chart, as it is perceived by system five, on the value chain and not the official organisation chart that might depict the organisational stakeholders in different positions.

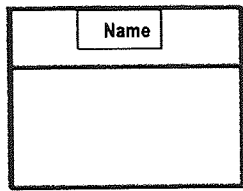
After the mapping of the organisational chart on the value chain we are going to ask system five's immediate subordinates (namely the first line managers) to define their own control space as well as to decompose the activity(ies), they perceive that they control, into tasks and to identify the communication links connecting their activity and tasks (depending on the level of decomposition) with other activities and tasks controlled by other stakeholders. If we get to a point where the perceived control of a first line manager (being at the focus of the inquiry) over a particular activity(ies)/task(s), or a particular communication link(s) is disputed by another first line manager or by system five him(her)self then we will have to check the official organisational chart and the first line manager's (who is the focus of the inquiry) job description. In addition, we will have to check the official positions and job descriptions of those who make the claim(s). The aim is to discover who has authority (legitimate power), over the disputed material and informational asset(s). In case that there is vagueness in the official organisational chart then it is likely that the conflict will be intense. If the organisational chart is clear then the 'defendant' (namely the person who employs legitimate control over an activity) in a conflict situation employs bureaucratic power to defend himself/herself to suppress any illegitimate claim(s) (not backed up legitimate power) made upon his/her authority.

Proceeding with our category management scenario we can argue that there is a great possibility that the 'defendant' in his/her ideal design will most probably seek to bring about structural changes (as it was mentioned above) where the authority of the other manager (namely the manager who is perceived to be making illegitimate claims) will be cancelled-out or minimised. Therefore, at this point we will ask system five, as a first step, to draw his/her organisational chart for his/her first line of command using the following modelling symbols (diagram 6.-6.).

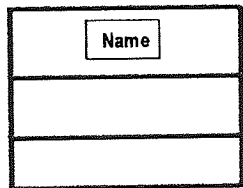
BSPA SYMBOLS

ORGANIZATIONAL MODELLING

The following symbols would be used as :



HEAD OF, e.g. the Marketing activity

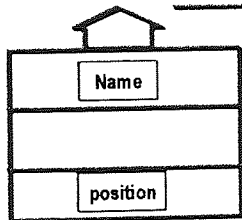


HEAD OF, e.g. Marketing, IS HEAD OF ANOTHER SEGMENT OF THE VALUE CHAIN

AS WELL, e.g. Service



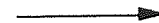
Write where else he appears



Type of responsibility



OTHER RESPONSIBLE



Line, subordinate to the Head
e.g. the Sale mng. N



Line, superior to the Head,
e.g., the electrical engineer X



Staff relationship

Diagram 6.-6.

In the second step system five will have to define the second level of command, namely the second line managers, in the same way as above. In other words he/she will be asked to decompose the activity for which he/she just named a "Head" for (namely a first line manager), into its major tasks (see diagram 6.-7., for the Activities/Tasks Modelling BSPA Symbols). Since the tasks identified are parts of a particular activity, it is most probable that they have been delegated to a second line manager(s). Therefore, in the second step he/she will be asked to decompose a particular activity, he/she has just defined, into its major tasks and name those second line managers that he/she believes are responsible for these tasks. In the third step he/she will be asked to order an activity's major tasks into a time sequence. In other words he/she will be asked to draw from left (present) to right (future) the first task and then the second one or to draw parallel tasks when they are performed concurrently. For example, the production-planning task comes first before the production task itself. It has to be noted again at this point that the definition of a task as well as the very sequencing of the tasks would be left to the stakeholder himself. The stakeholder by performing this act expresses his/her perception about the tasks making up a particular activity as well as his/her perception about the actual hierarchy of control regarding the administration as well as the operation of those tasks. In addition, by answering the question which of the tasks identified he/she thinks are 'important' for the organisation's viability, he/she expresses implicitly his/her focus and his/her value system.

BSPA SYMBOLS

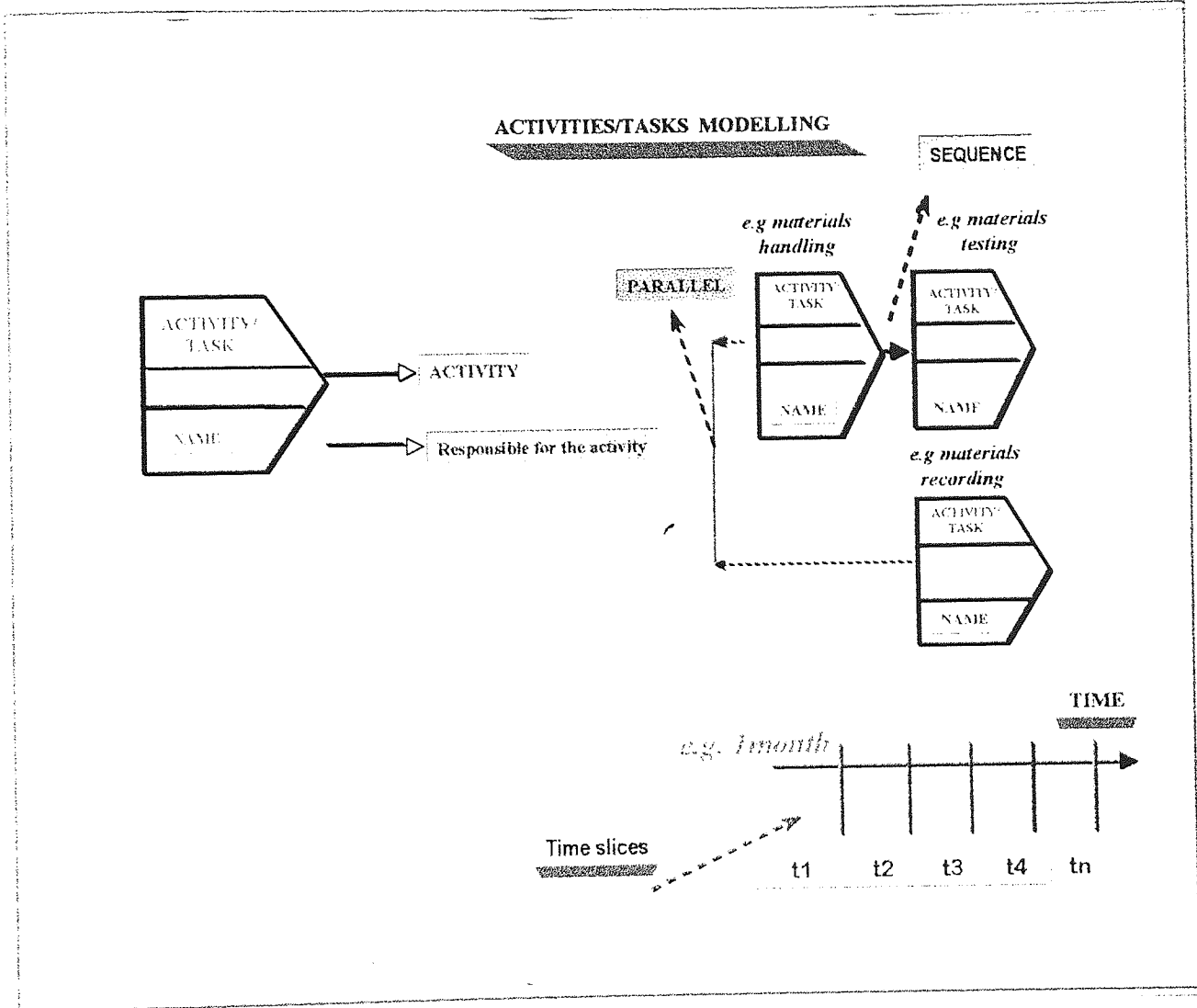


Diagram 6.-7.

6.5. Material and Informational Flow

In the fifth step system five will be asked to define the official activities (namely the objectified ones) major inputs, that are identified above, originating from outside or inside stakeholders. These inputs will be distinguished into material and informational inputs defined in BSPA as links (see diagram 6.-8., for the Types of Communication Modelling - BSPA Symbols). For example, system five will be asked to define the source of a major raw material (material input), coming from company X for example; as well as any informational inputs he/she thinks company X despatches to the business system in focus (e.g. guiding instructions, invoices, etc.) for a particular task; for which manager Z for example is responsible. It has to be highlighted again at this point that the definition of a link as communication lies with the stakeholders and not with the analyst.

Further, system five will be asked to identify those official communication links that he/she believes convey the organisation's official reports. Therefore, the stakeholder will be asked to identify the inputs and outputs of a particular activity into official material and information links and he/she will be further asked to distinguish the information links into information links and into report communication links. At this point he/she can decompose if he/she wishes a major information or a material link into its components. In other words system five can proceed to model the material and informational links of a particular activity's task(s).

BSPA SYMBOLS

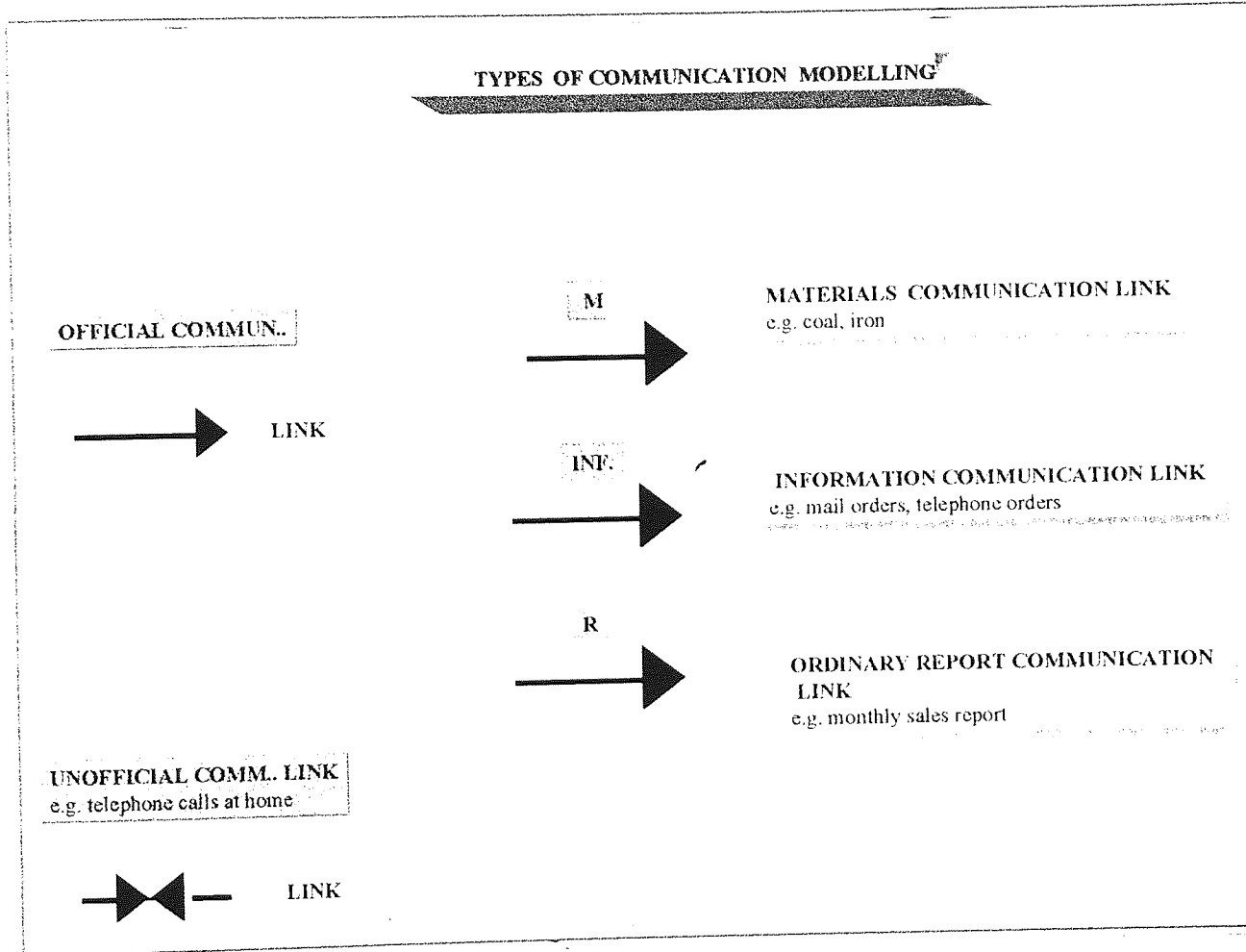


Diagram 6.-8.

The idea of identifying the communication links, being the organisation's official lines of communication, will help us to define an activity's or a task's degree of centralisation or decentralisation of authority by simply modelling their communication links. In addition it will help us to identify the degree of centralisation or decentralisation of authority of the organisational communication network as a whole by modelling the communication links for all the organisational activities. If for example all the communication links end up at manager X, who in his/her turn reports to system five then we are talking about an information-node. A stakeholder is perceived to be an information-node (by another stakeholder) because he/she is connected to 'many' (subjective judgement) information and report communication links and he/she can pass on 'consolidated' information (processed and summarised) to another stakeholder, e.g., a divisional manager could be regarded as a information-node by the General manager, or the head of the secret-service by the Prime-minister. An information-node is most likely to be perceived as having resource power in the sense of 'controlling' the flow of information as well as its timing. If the same information, that one stakeholder passes on, or pieces of the same information, arrive at system five from many stakeholders then we are talking about information-filters. A stakeholder is perceived to be an information-filter (by another stakeholder) because he/she is not connected to many communication links (subjective judgement) and he/she can not pass on 'consolidated' information to another stakeholder. The only process he/she applies on the information he/she is passing on is his/her own conscious or unconscious bias. A communication-filter can be regarded by another stakeholder as an information-node only in the case he/she controls few but very important information and report links or because the application of his/her bias could be regarded as of great importance. A stakeholder can be either an information-node or an information-filter depending to whom he/she is reporting to (see diagram 6.-9., for the Information Modelling - BSPA Symbols).

One might argue though that official reporting "is a joke" in many organisations, because communication is decentralised. 'So why bother to examine official reporting first?'. The analyst should examine official reporting practices for three reasons the following:

1. Official reporting will be used as a starting point to discover the unofficial one (if any unofficial exists). For example, after we have modelled the official communication links connecting a particular activity/tasks with other organisational activities/tasks we will ask the stakeholders to tell us if things are reported only this way. There is quite a good possibility that the questioning of this sort will lead us with the help of the stakeholders into the insights of unofficial reporting by telling us "how things are done in practice?". But "what if the stakeholder lies?" one might ask. Yes, he/she might be lying all right, for his/her own reasons, but one has to be reminded at this point of the fact that we are examining four hierarchical levels at the same time, meaning that we have increased our chances to discover it from the analysis of the lower levels. In addition, the fact that the methodology examines a multiplicity of correlated factors increases our chances to discover the stakeholders' strategic actions.
2. The second reason lies, as it was mentioned before, in our search for the authority over an information-link that does not imply bureaucratic power only but implies as well personal responsibility when it comes to

signing an official report. In other words, in official reporting conscious distortion of communication is limited, because if it is uncovered it can be used as evidence for the application of sanctions by the higher hierarchical levels upon the lower ones.

3. Finally, official reporting in many organisations and especially at the lower levels of the organisational hierarchy is used as a basis for the subordinates appraisal and reward, namely an integral part of the organisation's algedonic loop. For example, in an MBO environment, for a second line manager Y to get his/her bonus at the end of the year, there has to be an official report sent by Y's boss to the personnel manager regarding the agreed business objectives at the beginning of the financial year, as well as an evaluation report stating the successful attainment of those objectives or the reason(s) for that Y failed to achieve his objectives.

BSPA SYMBOLS

INFORMATION MODELING

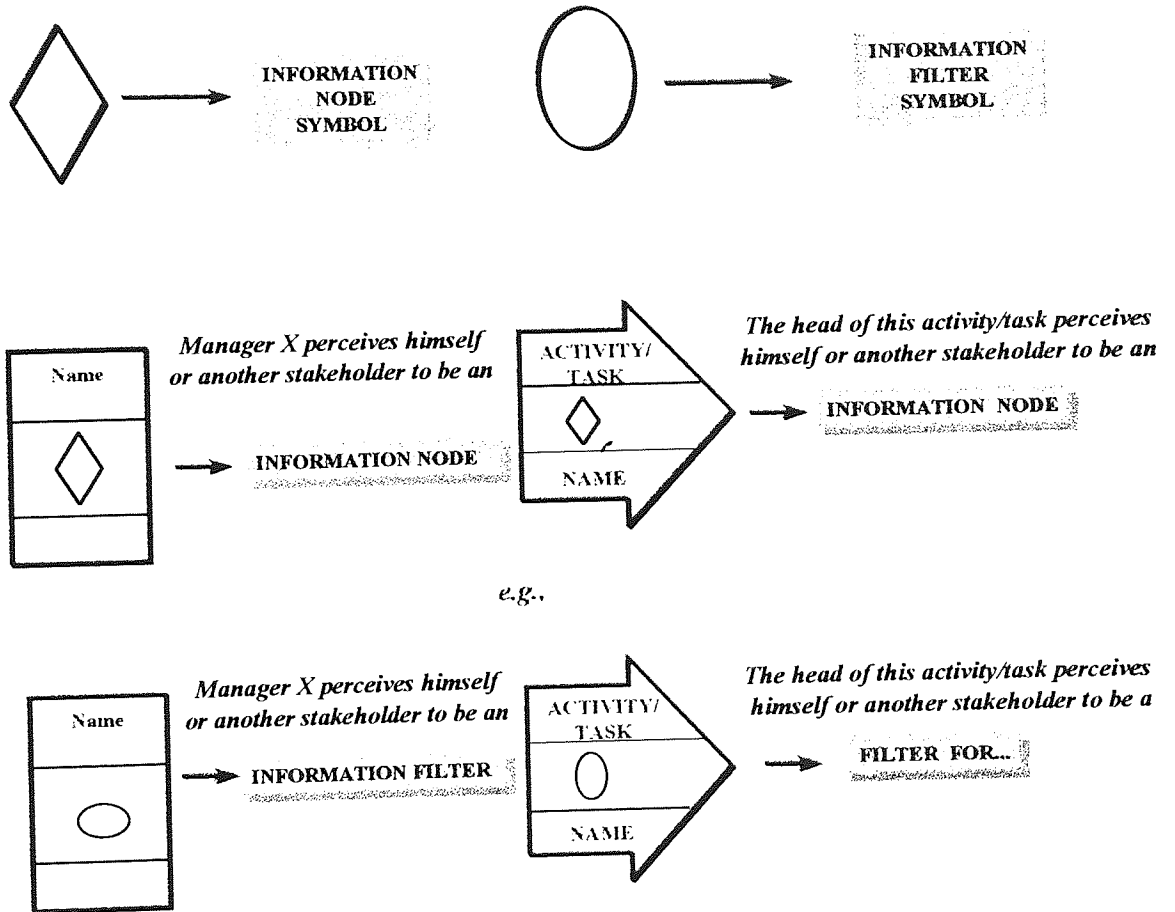


Diagram 6.-9.

The last point brought us to a very important issue, namely the issue of rewarding, or in other words the issue of the organisational algedonic loop. In BSPA, the organisational algedonic loop is used for motivation, conformity and control of an organisation's HAS content, or in other cases is used for suppressing the lower hierarchical levels, and/or creating false-consciousness. Manager X who, for example, is regarded by another stakeholder as a node of official reporting to the immediate level above, might be a reward node, in case he/she decides himself for somebody to get his/her rewards at a certain time period (e.g. to get his/her bonus or pay raises, etc.). Manager X could be a reward filter when he/she is passing on information regarding the appraisal of manager Y to somebody else to decide. The definition of a manager, or a superintendent, as being a reward node, or a reward-filter will be left to be defined by the stakeholder him(her)self. Therefore, we will ask the stakeholder to distinguish further the report communication links into ordinary reporting and reward reporting (see diagram 6.-9., for the Information Modelling - BSPA Symbols). The aim is to identify the reward feedback-loop and examine its semantic and pragmatic content not only in terms of the type of reporting (reward reporting vs. ordinary), but in terms of the nature of 'reward' and 'punishment' as well (see diagram 6.-10., for the Reward Loop Modelling - BSPA Symbols).

BSPA SYMBOLS

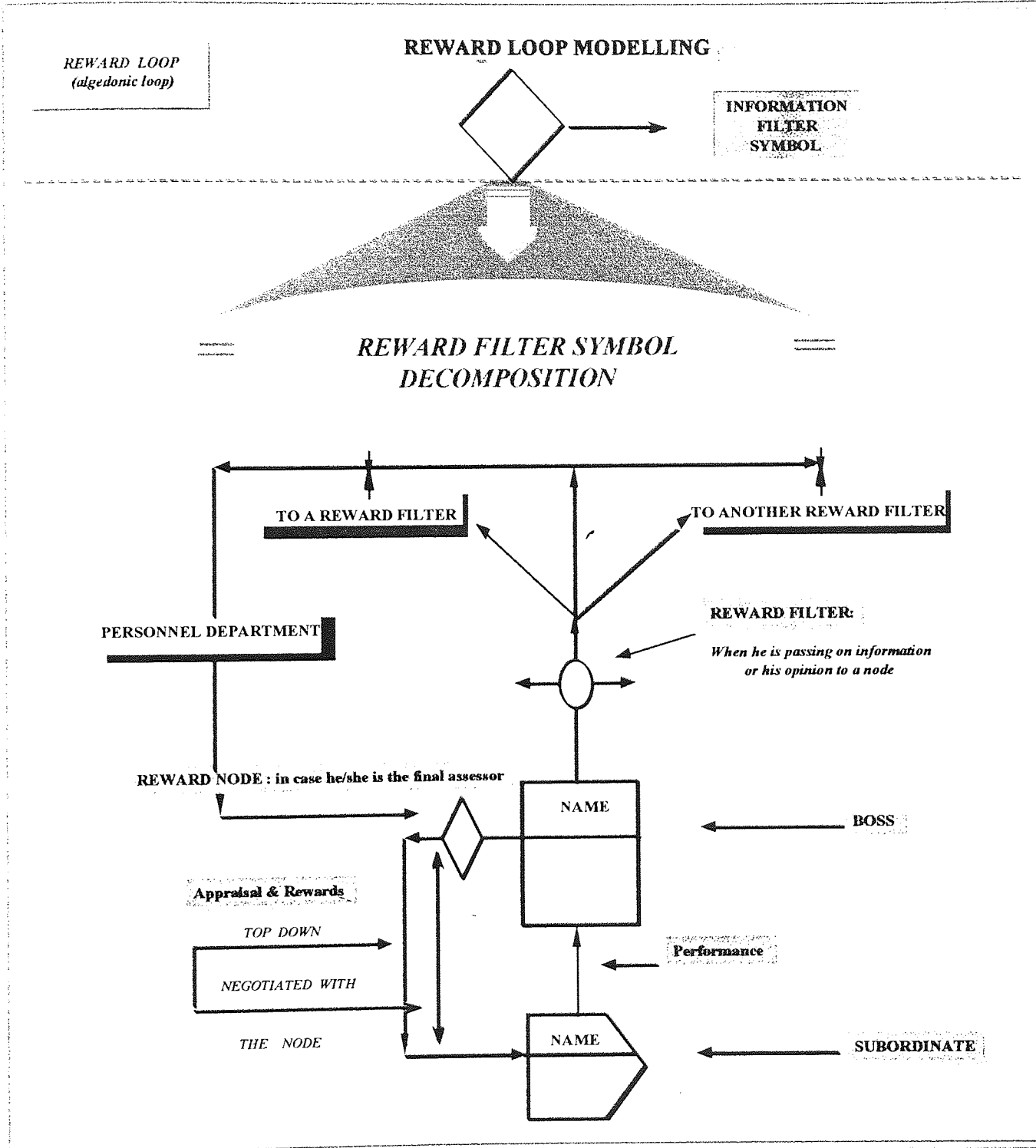


Diagram 6.-10.

6.6. Organisational Time Assets and the Value Chain

Finally, one might wonder why system five is asked to sequence the activities (and the tasks at a higher level of resolution) he/she identified, or better, why we asked him/her to place them within a time frame? The timing of a piece of information or the timing of an activity (or a task) might be power to those who can control it or influence it. In other words the stakeholders who can influence or control the timing of an activity or a task they employ a time-asset in their power-portfolio. Timing is defined as the ability of a stakeholder to act at a specific time slice (see diagrams 6.-7., and 6.-11.), as we are moving towards the future, thus influencing the organisational material and/or information flow, towards a pre-defined end. In other words "if I had tomorrow's paper today, I might be rich". This of course is the funny side of timing but within the organisational setting the possession or the control over of a time asset is regarded, in this thesis, as very advantageous in comparison to the possession or control over of an organisational material or informational resource because the very timing of the organisation's employment of its material and informational resources can destroy or enhance those very assets. A time asset in the best case can be used to act as an 'early warning system' for those further in the time space, or it can be used to 'sabotage' those situated further in the time space (in value chain terms) thus destroying their organisational material and informational assets they might employ in their power-portfolio. In other words it can be used to co-ordinate a number of very complex organisational activities as we have witnessed in the companies using Just-In-Time (JIT) production systems. One of the key success factors of the ECR concept is that of the synchronisation of the supply-production activities with consumer demand:

"The key to synchronised production is setting run strategies for the production lines that are balanced against actual demand patterns, and planned variations to support promotions and product introductions.

- The goal of synchronised production is to integrate supply with demand by adopting run strategies that are synchronised with actual demand patterns.

- For many manufacturers, this would mean much shorter production runs, moving in the direction of making important products every day, in the quantities needed to replenish first the distributors warehouses and, eventually, the retail store shelves.

In general, these run strategies would define the sequence in which all of the SKUs would be produced that flow through each line. Quantities are set based on daily replenishment requirements, adjusted by extremely short range forecasts to handle planned variances (i.e., promotion plans). To implement synchronised production, a manufacturer would likely need to re-engineer its production planning and scheduling process." (Food Marketing Institute, 1994).

In order to identify then an activity's important input or output in terms of its timing, we have to ask the stakeholder to sequence the activities/tasks he/she identified and then we will ask him/her which is the most important input or output for the viability of the whole system. In other words we are trying to discover and comprehend the stakeholder's focus and his/her value system.

6.7. The BSPA Value Chain

In order to perform the above analysis, besides the tables and the supporting documentation, we will need a diagrammatic tool as well. The BSPA diagrammatic tool will consist of the following:

1) Porter's value chain (Porter, 1985). According to Porter, economists have characterised a firm (namely an objectified business system) in terms of its production function upon which the value chain concept was based, as follows:

"Economists have characterised the firm as having a production function that defines how inputs are converted into outputs. The value chain is a theory of the firm that views the firm as being a collection of discrete but related production functions, if production functions are defined as activities. The value chain formulation focuses on how these activities create value and what determines their cost, giving the firm considerable latitude in determining how activities are configured and combined." (Porter, 1985).

Implicit in the concept of the value chain is the general systems theory concept of Input-Process-Output, characteristic of the open systems operations. Porter's value chain though will be slightly modified, in the sense that the support activities appear in the third dimension of a 3-dimensional value chain (see diagram 6.-11. and 6.-12.). The reason behind placing the support activities in the third dimension is that the communication links connecting system five with the first line managers or with their subordinates should not cross the support activities, if they do not have to, because their decomposition will become rather difficult if not impossible in diagrammatic terms. The decomposition of the support activities will be performed in the third dimension. System five will appear outside the BSPA Value Chain because his/her responsibility is systemic, meaning that it encapsulates the whole of the value chain. In addition, the BSPA Value Chain will be sectioned into organisational hierarchical levels, namely the first line of management, the second, the third, etc.. Finally, an outside organisation that is defined as an outside stakeholder will be depicted with the BSPA Value Chain as well, while an outside stakeholder which is not a organisation but an entity (namely an individual, a group, a government agency or the government itself, etc.) will be depicted with a polygon diagram (see diagram 6.-12.). The definition of an outside stakeholder as an entity or an organisation will be left to be defined by the stakeholders themselves.

BSPA VALUE CHAIN

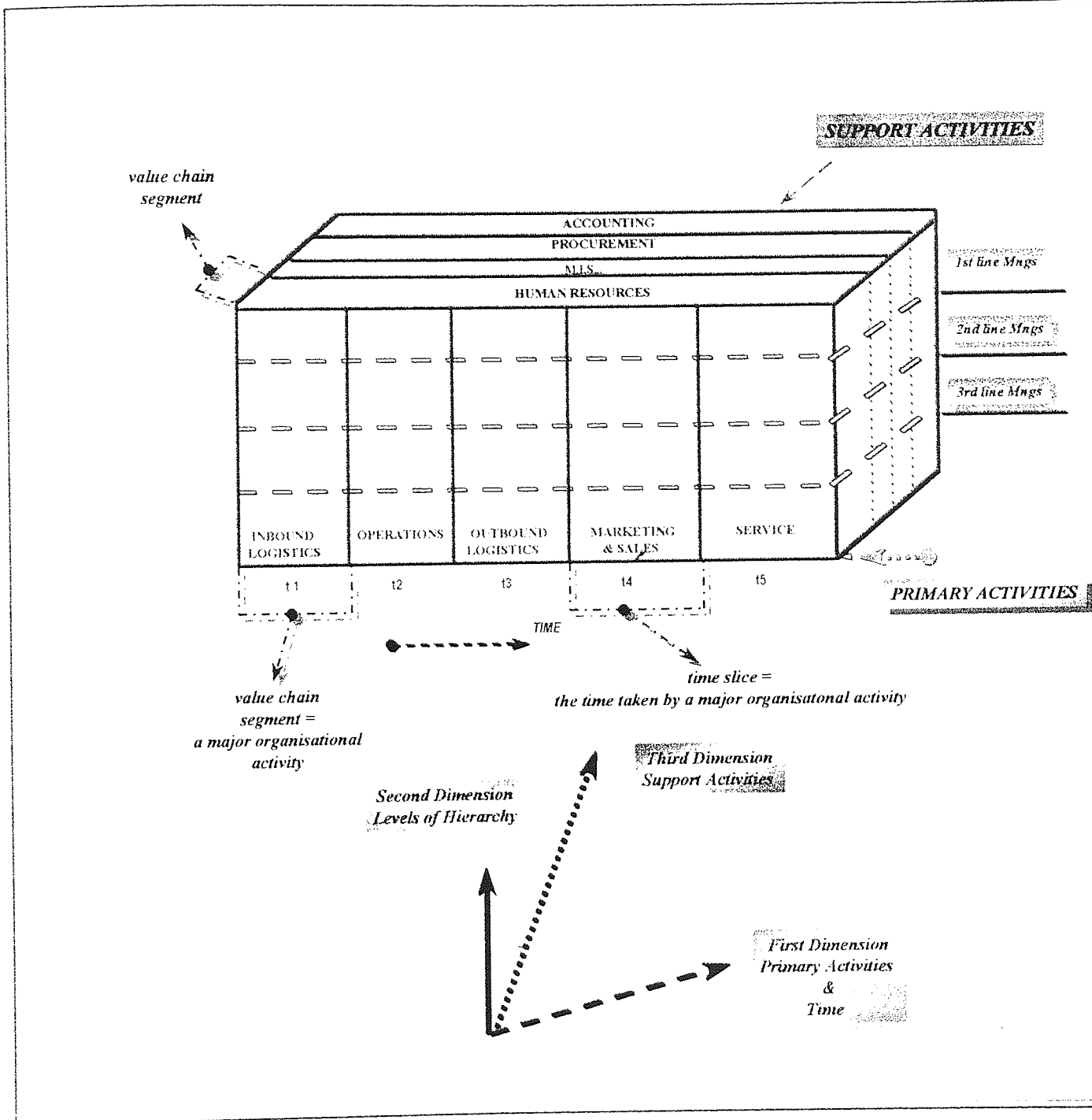
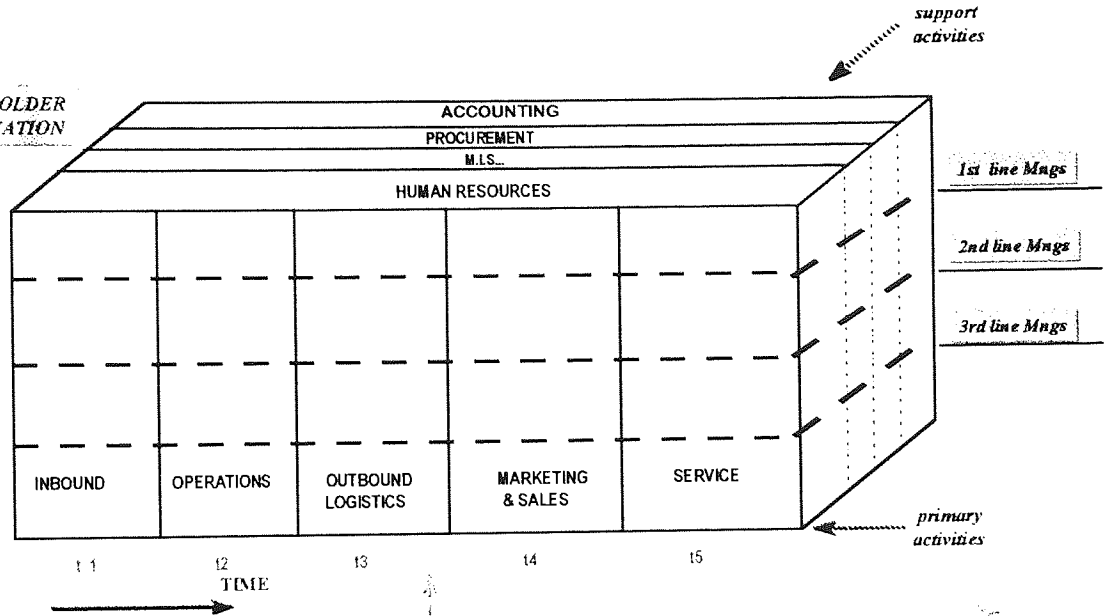


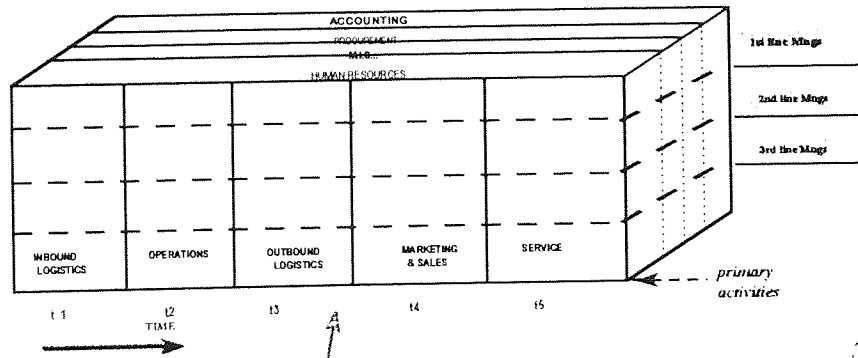
Diagram 6.-11.

BSPA SYMBOLS

OUTSIDE STAKE-HOLDER
BUSINESS ORGANIZATION



ORGANIZATION IN FOCUS



*This is a generic value chain model.
That implies that the order of
appearance of the activities as well as
their definition as support or primary
depends on the system in focus and
it will be left to be defined by the
stake-holders themselves.*

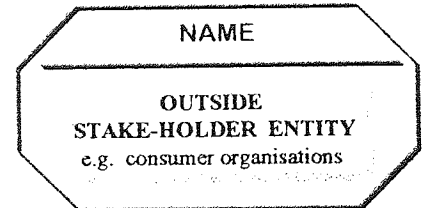


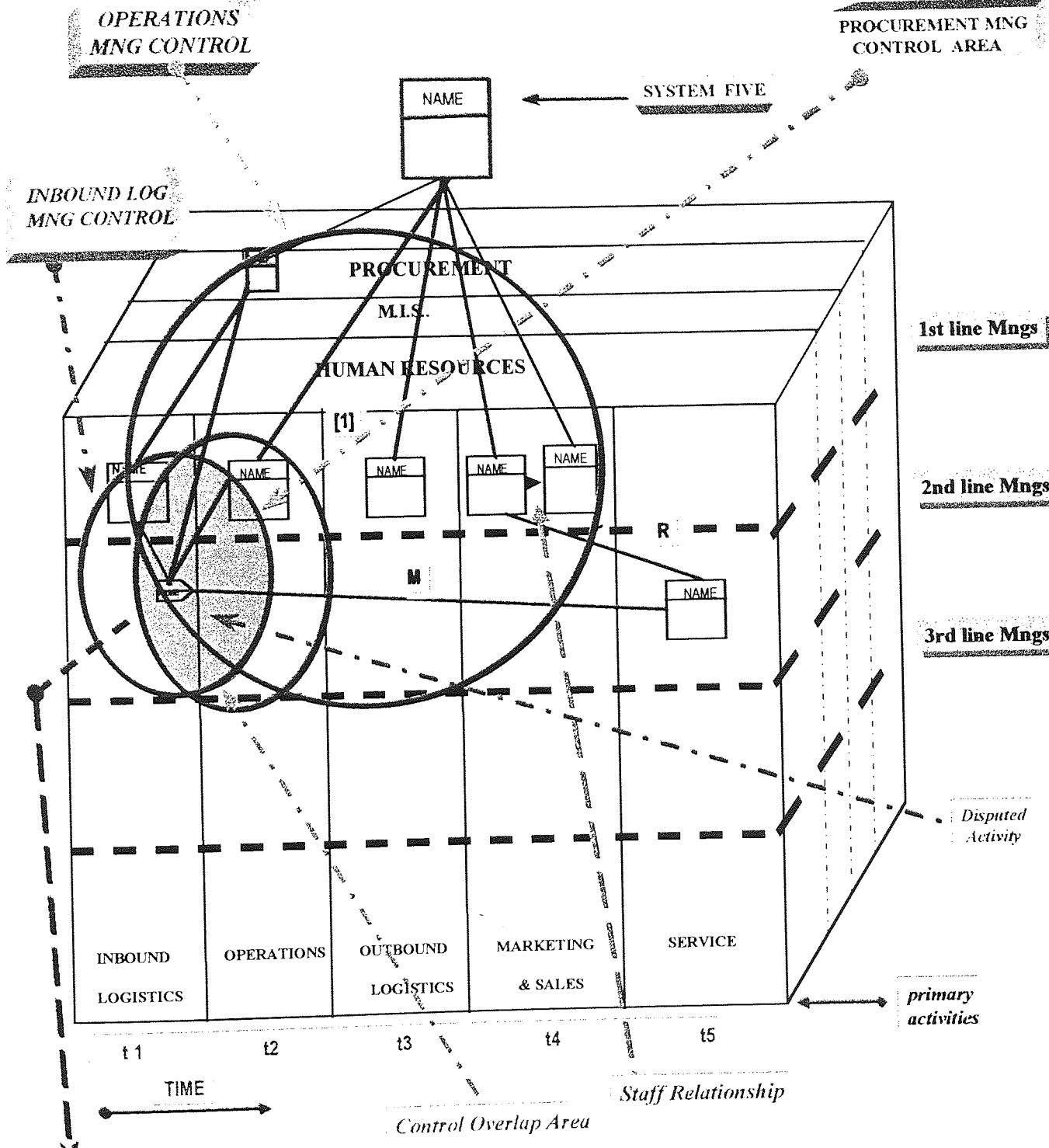
Diagram 6.-12.

6.8. BSPA Value Chain and Control Overall

The control overlap between two or more stakeholders expressing a claim for the same activity/task or for a material and/or an informational link can be represented as the intersection of two or more (depending on the stakeholders making a claim), red circles, drawn upon the BSPA value chain. Control overlap is depicted in diagram 6.-13., as the intersection of three red circles (representing the claims made by three stakeholders for the control of an inbound logistics task -namely the inbound logistics manager, the operations manager, and the procurement manager) filled with a grey background. It has to be noted again that in the control overlap area(s) organisational conflict is located, according to the BSPA philosophy.

On the BSPA value chain we will depict the “Relevant Importance Numbers” as well. The relevant importance numbers are ranking number that the stakeholder(s) assign to an activity or to a communication material or reward link. As we explained before the importance placed by a stakeholder on an activity/task, or on a material, or on an informational resource, can be used to uncover his/her value system and his/her focus. In addition, it can be used as an indication in regard to the sources of a stakeholder’s resistance to change as well. The number would be recorded and represented within a set of brackets, e.g. [1], and it would be depicted on a value chain’s activity/task and on the communication links.

CONTROL OVERLAP DEPICTED ON THE BSPA VALUE CHAIN



Likely Origins of the organisation's entropic trends

Diagram 6.-13.

The intensity of the organisational conflict, embedded in the control overlap area(s), regarding the control over or the possession of a particular activity(ies)/task(s) will be quantified using a fuzzy scale where the stakeholders claiming the control of an activity/task will be asked to define their claim as follows:

- a) 100% - representing a claim for absolute control.
- b) 75% - representing a claim for the undisputed administration of the activity/task where another stakeholder, who makes a claim for the control or the possession of the disputed activity/task as well, will be provided with limited administrative control.
- c) 50% - representing a claim for participative control (possibly functional -meaning separation of functional responsibilities); and
- d) 25% - representing a claim for minority administrative control.

The control overlap areas in BSPA are regarded as the areas where organisational entropic trends are developing. For this reason the fuzzy measurement of organisational conflict, located in the control overlap areas, will be used for the development of an organisational entropic monitoring system. The monitoring system will be based on the product of the quantified claims made upon the organisation's material and organisational assets with the number of the stakeholders who make a claim on a particular asset. For example, if we suppose that three stakeholders make a claim upon a particular activity/task (as it is depicted in diagram 6.-13.) and they have quantified their claims as 50%, 100%, and 25% respectively, then the measurement of the entropic trends will be $0.375 [3*(1*0.5*0.25)]$.

This number (0.375) will be further weighted by multiplying it with an arbitrary number representing the official hierarchical level of those making the claim and thus reflecting implicitly the bureaucratic power of those involved in a conflict situation. The official hierarchical level weights will be the following:

- a) The number 10 will be used to represent a claim made by a first line manager.
- b) 7.50 for a second line manager.
- c) 5.0 for a third line manager.
- d) 2.50 for a fourth line manager; and
- e) 1.0 for every other stakeholder making a claim on a particular organisational material or informational conflict.

The above hierarchical levels weighting will almost always give a larger number to a conflict situation between three than a conflict situation between two. This is intended in order to reflect the increase in the complexity of the conflict situation due to the increase of the conflicting stakeholders. Therefore, in our example the final entropic organisational number (regarding the control overlap area depicted in diagram 6.-13.) will be 375 $[(10*10*10)*0.375]$ because the claim on a particular activity is made by three first line managers (the inbound logistics manager, the operations manager, and the procurement manager). The fact

that in our entropic monitoring system we emphasise more on organisational conflict at the higher organisational levels is due to our belief that serious conflict at the 'top', namely among the management team, is a sign of serious overall organisational conflict that threatens the system with disorganisation (entropy) in regard to its present organisational closure.

The control overlap areas, in BSPA, are regarded as the product of conflicting motivational forces (*f*) representing the stakeholders intentions to control, possess, and/or defend the existing control or possessions, over organisational material and informational assets (see diagram 6.-14.). Therefore, as it was argued in chapter five, the time length of those conflicting motivational forces defines, to a high degree, the intensity, or in physics terms momentum, of the conflict itself. Motivational forces with short time-lengths demand for immediate diffusion thus increasing the organisational entropic trends. This implies that the overall organisation entropic number will have to be weighted further with the motivational forces time lengths. Three types of time weights will be used the following:

- a) **10 time points** for those motivational forces with time length between ≥ 0 and ≤ 1 year. These forces in BSPA are assumed to demand for immediate gratification within the time limits of an organisation's *financial year*. This implies that they can disturb (change) an organisation's short term planning. It has to be noted at this point that a motivation force that represents one stakeholder's intention to defend the existing control over or the possessions of particular organisational material and/or informational assets will be rated with 0 time-length. The 0 rating is given because any relaxation of the time factor might amount to loss of control over or possession to another stakeholder who makes a claim over the defendants control or possessions.
- b) **5 time points** for those motivational forces with time length between >1 year and ≤ 2 years. These forces in BSPA are assumed to demand for medium-term gratification. This implies that they can disturb an organisation's *medium-term planning*; and
- c) **1 time point** for those motivational forces with *time length* > 2 years. These forces in BSPA are assumed to demand for long-term gratification. This implies that they can disturb an organisation's long-term planning. In addition, they are regarded as very weak forces mainly originating from the stakeholders' regression effect without excluding the fact that there are . That is why they are rated with a very low score.

The overall organisation entropic number will be further multiplied then with the above time weights in order to formulate the final entropic score. It has to noted at this point that so far we have assumed that only one control overlap area exists in the organisation to calculate the overall organisational entropic number. But in case where more than one control overlaps area exists then the overall organisational entropic number will be the sum of the entropic organisational numbers representing different organisational control overlap areas.

Conflicting Motivational Forces

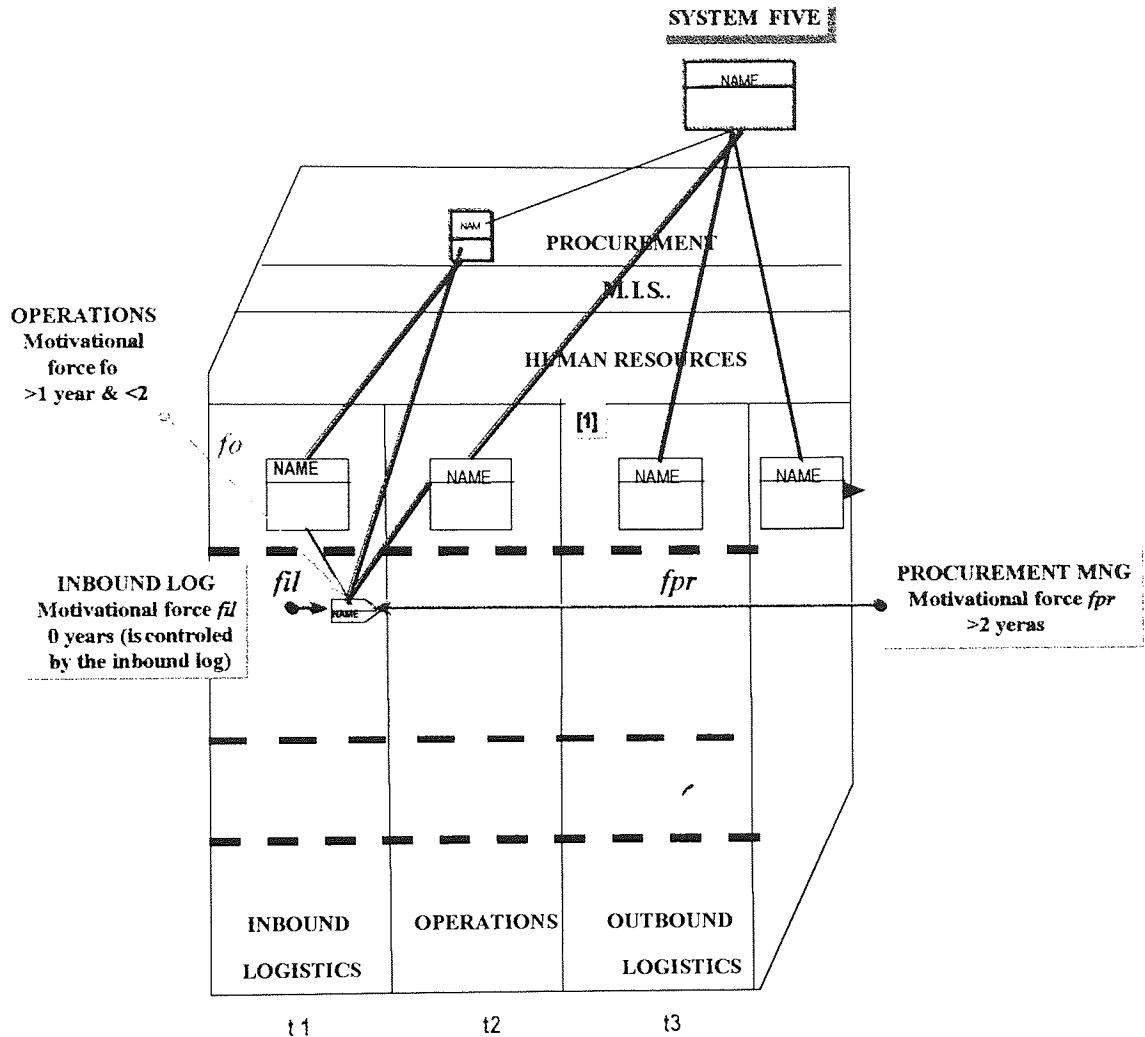


Diagram 6.-14.

The overall organisational entropic numbers of a particular business system, which will be recorded in different time periods, will be compared with the management ideological cohesion scores. If these two numbers, when compared, are found to be correlated then the BSPA General Fuzzy Rule will be elaborated into more fuzzy rules in an effort to develop a full scale intrinsic motivated organisational information fuzzy system (single loop learning). In addition the comparison numbers will be used as feedback, in terms of taking action for the re-examination or further development of the BSPA principles and philosophy (double loop learning - see diagram 6.-15.).

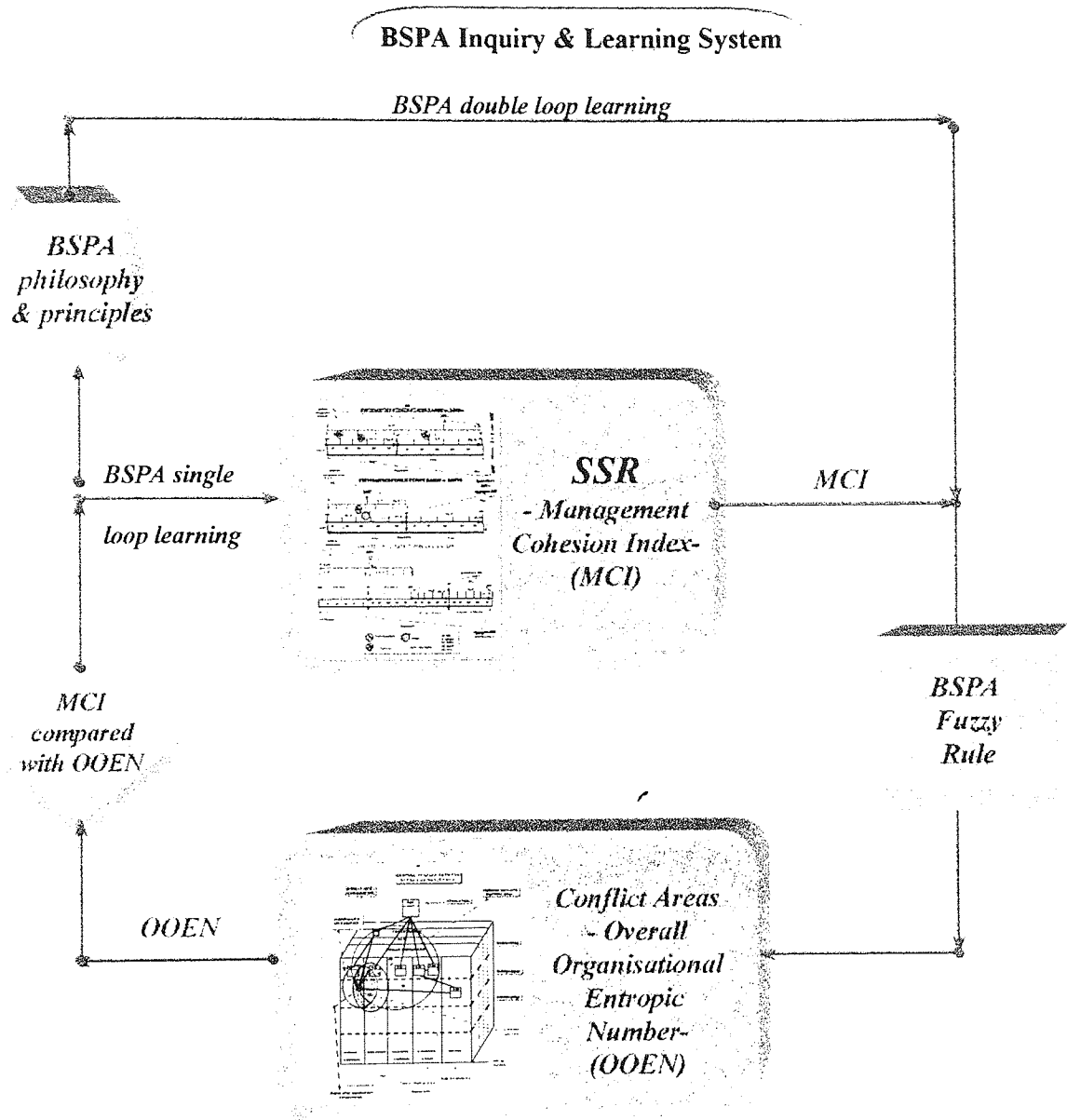


Diagram 6.-15.

6.9. Inside View Steps and Supporting Documentation

The application of the inside view will be grouped into analytical steps that will be numbered starting from step 0 through to step 5. The above methodological steps will include a number of supporting documentation aiming to capture information generated from the inquiry in table formats. The methodological steps are defined as follows:

6.9.1. Step 0

At step 0 the inquiry will start with system five. At this step system five will be introduced to the concepts of value chain on the basis of Porter's writings. The difference between Porter's value chain and the BSPA value chain one will be explained in detail. As we explained before in case that system five is not familiar with

Porter's theories then the value chain concept will be explained as a simple workflow system with inputs and outputs.

When system five becomes familiar (either way) with the BSPA value chain concept he/she will be asked to define the main input, in his/her opinion, that the whole system processes. In addition, he/she will be asked to define the system's main output as well as the time it takes for that input to be transformed into output. For example, the main input for a car manufacturing company would be steel and the output would be cars, while for example the time taken for steel to be transformed and come out from the production line as a car it is about 3 days. In the case of a marketing research company the main input could be defined as retail data (e.g., sales figures for consumer products) for which it takes a month to be processed and to be transformed into retail index information [a predefined frame of reference (universe) in which the retail phenomena are measured, e.g. retail sales quantity/share, retail purchases/share, retail stocks/share, etc.].

Therefore, in this case the time length of the value chain would be 30 days, according to a particular stakeholder who makes the statement regarding the perceived relationship between the organisation's main input-process and main output. In case where the length of the value chain is difficult to define then a general estimate should be given by the stakeholders regarding the organisation's production cycle. The findings of this inquiry would be captured in the following table, called I-P-O-T (Input-Process-Output-Table), (6.-3.).

I-P-O-T		
Name: _____	Position: _____	Date: _____
Question	Description (Structured English)	Time Taken (dd-mm-yy)
Which is the Major Input?		
What is the Main Process?		
What is the Main Output?		
Total Value Chain Time		

Table 6.-3.

System Five will have to define the I-P-O-T for the whole value chain. The same questions will be asked at the lower levels as well, supplemented by another questionnaire designed for these smaller areas of responsibility. The idea to ask even the lower levels of the organisational hierarchy about the value chain's overall time aims to discover first of all if there is a general agreement about the overall timing of the value-chain within the organisation. It can be used implicitly to assess the degree of the overall perception of time in the organisation. This is a very important element in regard to the co-ordination of organisational activities as

we mentioned before. If the standard deviation between the stakeholders' overall value chain time set is large then that will be an indication of distortions in communication or indications of strategic actions of the stakeholders that control organisational time assets. Step 0 will be supplemented by the "System Five's Value Chain Table - Primary and Support Activities" (tables 6.-1. and 6.-2.).

6.9.2. Step 1

At this step system five will be asked to define the subordinates of the first line of command, namely the second line of management and define their perceived areas of control over the organisational value chain as well. The above information will be captured on the "System Five - Second Line of Command Table" (6.-4.).

SYSTEM FIVE - SECOND LINE OF COMMAND TABLE				
Name:	Position		Date _____	
Head	Subordinate	Core Area of Control (Structured English)	Relevant Importance (Ranking Number from 1..99)	Reasons (Structured English)
1.	Name: Position: Years in this Position:			
2.				

Table 6.-4.

The subordinate's core area of responsibility should be short and to the point. It should be described in terms of the input-process-output paradigm. Under the "Relevant Importance" heading system five has to give a rank number for his immediate subordinates' area of responsibility starting with the number [1] for the most important area of control he/she perceives it to be important for the viability organisation overall. This is an intended vague question aiming to uncover system five's unconscious preferences, thus his/her focus. The uncovering of system five's focus from the importance he/she places on parts of the organisational value chain are hints about his/her value system. These hints and the hints from his/her preferences and focus on the communication links, connected to the perceived important activities (elaborated later), will help us to build the overall picture of his/her value system. The ability to do that is based on two assumptions that people place a lot of importance on the things they value most which in this case is translated into the control or the intended control of the organisation's material and informational assets. But one might argue though that there is a great probability of failing in this effort because the stakeholder might be lying purposeful in regard to his/her preferences. This is a real danger indeed especially if we are dealing with a strategic-oriented stakeholder, but

we will have to repeat at this point that our methodological approach limits the chances of the analyst becoming a vehicle for the execution of the plans of a strategic oriented stakeholder(s) because it is based on the examination of a multiplicity of interdependent factors. These factors are not used only to build the stakeholders' value-system picture but they are used as well as 'checks and balances' against each other thus enabling us to identify inconsistencies stemming from the stakeholders' possible strategic actions.

6.9.3. Step 2

At step 2, system five will be asked to decompose the value chain into distinct activities. In addition, he/she will be asked to define the first line manager's control over the organisation's activities, identified, by naming the individuals responsible for each major activity. Then he/she will be asked to decompose these activities into their major tasks within a time frame (namely within the original value chain time frame he/she defined above and defined in the I-P-O-T Table). He/she will be asked to identify the people responsible for these tasks thus defining the second line of command. System five will be asked to order the major tasks making up a major organisational activity' within a first line manager's/managers' area of control, as being parallel or sequential (see diagram 6.-7.), and he/she will be asked to give an estimate for the time taken, in his/her opinion, for each one to complete. In addition, he/she will be asked to give a short 'to the point' definition of each one of them, a relevant order of importance number, and the name of the person(s) he/she thinks he/she is responsible for these tasks. In case where system five is unable to decompose a first line manager's area of responsibility (namely the activity that a particular first line manager is responsible for) into its major tasks; or he/she is unable to order these tasks within a time frame; or assign a person responsible (meaning that he/she cannot identify a second line manager responsible for a particular task(s); or he/she is not in a position to describe (using Structured English) one or more tasks, then his/her inability to do so will be recorded. The inability to define one of the above factors might be an indication that either system five administers an activity as a black box, or that distortion in communication exists, or even that system five's focus is on another part of the value chain. For example, the CEO being an ex-sales person can not define the marketing department's tasks but he can do that in great detail for the sales department which he/she regards to be essential (high Relevant Importance Number) for the organisation's overall viability. The correlation of the "Relevant Importance" numbers with the "don't know" answers will, in case there is a high correlation number, be an indication that the black box approach is a characteristic of the organisation's management style.

One might argue though that system five does not have the ability to decompose an activity into its major tasks for the second line of command. The answer to this argument is that we are not asking system five to be specific in describing in detail an activity's major tasks, and we are not asking him/her to be precise about the timing of these activities/tasks. We are asking system five to express his/her general perception of 'what is going on' two levels below, in terms of at least knowing who is doing what. In this thesis we regard the

treatment of the next two levels below in the organisational hierarchy not as *black-boxes*, but as *muddy*⁵⁶ ones, as an indication of good management. In this thesis, as we argued in previous chapters, we do not regard as good management practice the adherence to the principles of the functional reason solely.

If system five does not know anything about the operations of the second line of management that implies that he/she relies fully on the first line of management in regard to gathering information about the operations of the second line of management. That would provide the first line of management with enhanced power in dealing with the second level, as well as with system five itself. The information from the above inquiry would be captured in the "First and Second Line of Command Activity Table" (6.- 5.), as follows:

⁵⁶ "We note that a box within which all possible states are observable, and therefore accountable, is transparent. If this is not the case, the box is opaque. Most of the boxes with which managers deal are not completely transparent and not completely opaque either. Let us call them *MUDDY BOXES*. This distinguishes them from the truly opaque boxes that are known to cybernetic theory as black boxes." (Beer, 1979).

SYSTEM FIVE - FIRST & SECOND LINE OF COMMAND ACTIVITIES/TASKS TABLE									
Name:		Position:				Date:			
Activity Number	Activity /Task Named	Description (Structured English)	Responsible	Position	Time Taken mm/dd/yy	Starting mm/dd/yy & dd/mm/yy	Finishing	Relevant Importance Number (Ranking Number from 1..99)	Reasons (Structured English)
Parallel/ Sequence	Official Name:		Name:	Official Name:		Official Time:	Official Time:		
	Own Name			Years in this position:		Unofficial Time:	Unofficial Time:		
1.									
2.									
2a.									
2b.									
3.									
3a.									
Total Time						0	0		
Statistics (differences will be accounted based on the fuzzy classifications, quoted in the chapter 7)						% difference official vs. unofficial mean, std. deviation.	% difference official vs. unofficial avg., std. deviation	Correllation between don't know and the relevant imp. no	

Table 6.-5.

Numbers like 2a or 2b, mean that the activities/tasks 2a and 2b, are 'parallel' to the activity/task 2. Under the heading "Activity/Task named", we expect the stakeholder to give the official name of the activity/task, if one exists, else to give one of its own. In case where there is an official and an "own" name, we should record both in order to avoid communication distortions when we interview the other managers.

6.9.4. Step 3

At this step system five will be asked to define the communication links of each activity/task identified to exist connecting the inside with other inside stakeholders and the inside stakeholders with the outside stakeholders. He would be asked to distinguish these communication links according to their semantic

content. This way he/she will be asked to distinguish between these communications links which their semantic content is materials of information. The information links will be decomposed into those conveying information and into those conveying ordinary official reports. Therefore, the "System five - First & Second Line of Command Activities/Tasks Table" (Table 6.-5.) will be supplemented with the communications links. The new table will be called "First and Second Line Communication Links Table" (Table 6.-6.).

FIRST AND SECOND LINE - COMMUNICATIONS LINKS TABLE												
Name :			Position:							Date: _____		
Com. Link No	Activity /Task	Input Structured English	Time Length mm/dd mm/mm	Relevant Importance No.	Originator	Type M/I	Process Structured English	Time Length mm/dd hh/mm	Rel. Import. No.	Output	Receiver	Rel. Imp. No.
1.												
2.												
2a.												
2b.												
3.												
3a												
Total Input Time Length			0		Total Output Time			0		Statistics: avg., std. deviation		

Table 6.-6.

In the above table, under the heading "Com. Link No" we will record the "Com. Link No" given for a particular activity/task in the "System Five -First and Second line of Command Activities/Tasks Table" (6.-5.).

Under the heading "Input", we will record the name of the input, the official one if there is one (e.g., we can obtain from the engineering or the MIS department the official code name for the material input iron is IR40S), and the one given by system five (if it is different from the official one). In case there are two names, an official as well as an unofficial one, then we will record both.

Under the heading "Time length", we will record the official time taken for a particular activity/task (if one exists, e.g., 1 minute max. of getting through the service desk by telephone, plus another 4 minutes max. to place a request. The time length can be obtained in this case from the service department, if it is part of the department's official policy statement, as well as the unofficial predetermined time for this particular input. The recording of the time lengths is very important especially in case where we deal with companies using Just-in-Time (JIT) or ECR, as it was mentioned above, where deviations from the schedule might disrupt not only the workflow of the business system in focus but of the whole network of the companies that the business system in focus is connected to.

Under the heading "Originator" we record the name of the sender, who could be the originator of more than one inputs to the system in focus. Under the heading "Type", we classify the input as a material (M), or as an informational (I) one. In the case where a material input is escorted by an information one, which is most likely to be the case in real life, we record these inputs under the same name but we classify them differently. This is done because the processing of these inputs as well as their time length could be different. If an input is the result of more than one originator then we record the names of all the originators as well as their inputs as part of a larger input.

Under the heading "Process", we describe briefly the name of the process, the official name, if one exists, as well as any unofficial one(s). For example a material input X, is processed by "boiling process one".

Under the heading "Output", we record the type of material or information output. If the output is both material and informational we record the two outputs with the same name.

The above table is based on the Model of a "Communication System"⁵⁷, with the exception of *feedback*. The above table would be supported by documentation where we would have recorded the feedback as well as any details about the processing of the information recorded in the table. By identifying each activity's/task's inputs and outputs, we identify implicitly the person(s) who are responsible for those links, or they handle them in their operations. It has to be noted at this point that each activity identified carries the name of the person(s), who according to system five or later on according to the other stakeholders, is(are) responsible for a particular activity. The 'Relevant Importance Number' placed by system five on an activity and on a communication link will determine if a first or a second line manager X is a communication link node, or a filter. The definition of a node, or a filter, is supplemented by the degree of importance placed by system five

⁵⁷ "The purpose of a *communication system* is to reproduce at the destination a message selected at the source. A transmitter provides coded symbols to be sent through a channel to a receiver. The message which comes from a source to the transmitter is generally encoded there before it can be sent through the communication channel and must be decoded by a receiver before it can be understood by the destination. The channel is not usually a perfect conduit for the coded message because of noise and distortion. Distortion is caused by a known (even intentional) operation and can be corrected by an inverse operation. Noise is random or unpredictable interference. There is a finite set of possible messages to be transmitted..." (Davis and Olson, 1984).

itself. It is our belief that a high relative importance number (the highest being "1") for an activity, should imply high relevant importance numbers for its communication links as well. If this is not the case then either there is distortion of communication in regard to system five's mapping of the activities, facilitated by the first or second line managers, or it is an indication of system five's strategic actions. In addition the relevance important numbers attributed to the information communication links by system five will provides us with an inside as to the system five's information pragmatics, besides its semantic content.

Once again, it has to be noted at this point that the resolution of detail should not be high. But system five should be in a position to identify the major communication links for the two immediate levels of command below. In case the originator is an outside business organisation stakeholder, then an effort should be made to be depicted on the outside stakeholder's BSPA value chain. The more we move down towards the operations level then the task of identifying the source of the input will become much more easier because the type of the communication exchanges will be more tangible. The communications links supporting documentation should be captured in tables 6.-7., through to 6.-9., as follows:

MATERIAL COMMUNICATION LINKS
- FIRST AND SECOND LINE OF COMMAND -

Name:						Position:	Date: _____
	Activity/ Task	Input	Process Description (Structured English)	Output Description (Structured English)	Receiver	Use (Structured English)	Feedback (Structured English)
1.							
2.							

Table 6.-7.

Under the heading "Use" we will record the perceived use of a particular output. In the case where the receiver is the end user (consumer), then we can record his/her perceived *use* and *signalling*⁵⁸ *criteria* (Porter,

⁵⁸ *Use criteria.* Purchase criteria that stem from the way in which a supplier affects actual buyer value through lowering buyer cost or raising buyer performance. Use criteria might include such factors as product quality, product features, delivery time, and applications engineering support.... Use criteria grow out of links between a firm's value chain and its buyer's value chain... Use criteria can encompass the actual product (e.g., Dr Pepper's taste difference from Coca-Cola and Pepsi), or the system by which a firm delivers and supports its product, even if the physical product is undifferentiated.... Use criteria can also include intangibles such as style, prestige, perceived status, and brand connotation (e.g., designer jeans), particularly for consumers... Finally, use criteria also may encompass the characteristics of distribution channels, or downstream value. Since channels, or downstream value.....

Signalling criteria. Purchase criteria that stem from signals of value, or means used by the buyer to infer or judge what a supplier's actual value is. Signalling criteria might include factors such as advertising, the attractiveness of facilities, and reputation.... Signalling criteria reflect the signals of value that influence the buyer's perception of the firms ability to meet

1985). One might wonder though why these product/service purchase criteria should be used here? The answer lies in the fact that the use and value criteria do not correspond only to purchase criteria but there are connected to the *buyer's*⁵⁹ (or the recipient's of an organisation's output) *value chain*. Therefore, the 'correct' perception of the recipient's value chain is rather important, in terms of preserving the consumer's sovereignty (being the sixth BSPA principle). The perception of the buyer's or the of recipient's value chain, expressed through its use and value criteria, is an indication of the organisation's understanding of its own social responsibility. One should not forget that use and especially signalling criteria can be engineered by marketing practices.

Under the heading "Feedback" we will record the returning of materials, or parts of them, in case of a material output. For example, in the case where a product is returned for repair to the mechanics department then that information will be recorded under the feedback heading. A feedback information like the one just quoted in our example, nearly always is escorted by an information feedback (e.g., a complaint note or a repairs note, etc.), which we should record in the information or the report support documentation. At the recording of the material feedback there should be an indication of the existence of an informational or a report feedback.

In the "Information and Communication Links - First and Second Line of Command Table" (6.-8.), under the heading "Medium" we will record the way the information input is communicated. We should record the media used for its import (fax, e-mail, Electronic Data Interchange, mail), where it is stored (physical, computer, both).

Under the heading "Process Description", we should record the type of processing (computer, manual, both, etc.).

Under the heading "output description" we should record its physical format (computer file, paper file, both, ..etc.). In addition, we should record its physical storage, the access procedures, if there are any, and its physical security. The early recording of physical considerations will save us time later on when the physical design of the information system will take place. Of course we should not expect system five to have detailed

its use criteria.... Typical signalling criteria include: reputation or image; cumulative advertising; weight or outward appearance of the product; packaging of labels; appearance and size of facilities; time in business; installed base; customer list; market share; price (where price connotes quality); parent company identity (size, financial stability, etc.); visibility to top management of the buying firm" (Porter, 1985).

⁵⁹ "Buyers also have value chains, and a firm's product represents a purchased input to the buyer's chain. Understanding the value chains of industrial, commercial, and institutional buyers is intuitively easy because of their similarities to that of a firm. Understanding households' value chains is less intuitive, but nevertheless important.... A firm's differentiation stems from how its value chain relates to its buyer's chain. This is a function of the way a firm's physical product is used in the particular buyer activity in which it is consumed (e.g., a machine used in an assembly process) as well as all the other points of contact between a firm's value chain and the buyer's value chain. Many of a firm's activities interact with some buyer activities.... Differentiation, then, derives fundamentally from creating value for the buyer through a firm's impact on the buyer's value chain. Value is created when a firm creates competitive advantage for its buyer -lowers its buyer's cost or raises its buyer's performance." (Porter, 1985).

knowledge about all the above, but it should have a general knowledge at least. All the above descriptions should include the element of time as well.

**INFORMATION COMMUNICATION LINKS
- FIRST AND SECOND LINE OF COMMAND -**

Name:	Position:					Date: _____	
	Activity/ Task	Medium	Process Description (Structured English)	Output Description (Structured English)	Receiver	Use (Structured English)	Feedback (Structured English)
1.							
2.							

Table 6.-8.

In the "Report Communication Links - First and Second Line of Command Table" table (6.-9.), we will record the official written reports sent. The written reports basically amount to the official organisational reporting. Though a lot of reporting will be performed in a oral manner, through the informal organisation's communication links, in BSPA official reporting is regarded as essential because it can be used as evidence for the employees appraisal as well as for responsibility accountability. Therefore, under the appropriate headings we should record the format the storage and the processing of the official reports.

**REPORT COMMUNICATION LINKS
- FIRST AND SECOND LINE OF COMMAND -**

Name:	Position:					Date: _____	
	Activity/ Task	Medium	Process Description (Structured English)	Output Description (Structured English)	Receiver	Use (Structured English)	Feedback (Structured English)
1.							
2.							

Table 6.-9.

6.9.4.1. Drawing the BSPA Value Chain

At this point we will ask the stakeholders to draw all the above on the BSPA value chain (Diagram 6.-12.). The drawing process will be conducted as follows:

1) First system five will be asked to define the time slices at the bottom of the value chain. Then he/she will be asked to draw the heads of each value chain segment (using the “Head” symbol”). If a head appears in more than one value chain segment, then the “Head of another segment” symbol will be used. For example, the head of marketing activity could be head of the service activity as well. Or the head of procurement could be head of the inbound logistics as well. The “Head” symbol will be used in the core activity, as it is perceived by system five, of a particular subordinate. For example, the marketing manager⁶⁰ who is also head of the service activity will be depicted by the “Head” symbol in the marketing segment, and by the “Head of another segment”, in the service segment. In addition, the placement of the “Head” should be done within the area of the first line of management. This is done for the reader to have a diagrammatic view of manager X’s control area as well as his/her perceived organisational hierarchical position in terms of the control over a particular activity(ies) and not in terms of his/her official bureaucratic position. Then system five will be asked to place the “Other responsible” symbol besides the “Head” symbols. With this action we try to depict any perceived line and staff relationships on the value chain in terms of the activities identified. If the procurement manager is perceived to have functional authority over the manager of the inbound logistics, then it should be depicted as such. The type of responsibility arrow shows the type of control in terms of line and staff relationships.

2) The next step will be the drawing of the first line of command subordinates’. These would be depicted with the “Head” or “Head of another segment” symbols, but within the area of the second line of command. The “Other Responsible Symbols” will be placed along the “Head” ones.

3) The next step will be the decomposing of the BSPA value chain segments into distinct activities/tasks (use of the “activity/task” symbol), placed within the time slices that system five him(her)self has defined.

4) The next step will be the drawing of the communication links (depicted as connecting lines), connecting the above activities/tasks with other activities within the organisation and with the outside stakeholders as well. We are asking system five, at this point, to define the outside stakeholders because we want him/her to define them within an exchange framework, made up of material (including money), and informational exchanges. Outside stakeholders which are business organisations are depicted using the “Outside Stakeholders - Business Organisation” symbol, while the Outside stakeholders defined as entities, such as individual stock-holders, pressure groups, the media, etc., will be drawn using the “Outside Entity” symbol.

⁶⁰ The title *manager* is used for the person who has been identified by *system five* as having the *systemic* responsibility of a particular *activity* that has been identified by *system five* him(her)self.

5) Finally, the stakeholders are asked to decompose the communication links into the types defined above, namely material, informational, report, etc.. At this step the decomposition of the communication links might lead to the identification of other activities/tasks or to the decomposition of the existing ones as well. At every step we will record the “Relevant importance number” for each value chain segment, activity, and communication link.

The above drawing steps, which correspond to the steps 0 through to step 3 of the inside view, in analysis terms, can be defined as decomposition steps. The BSPA value chain should be depicted on an A4 size paper, but in case it becomes overloaded and it suffers from the *sunburst* [like] *effect*⁶¹ the value-chain segments will be depicted on different A4 size papers. When the diagrammatic tool is developed into a computer system then it would be easy to access the information at a higher level of resolution by focusing on a value chain segment and using a number of pop-up menus to access the definitions or the support documentation tables. The idea of capturing the information in a number of unnormalised tables, though very early in the research steps, aims to set the path for the capturing of the above information in a relational database system in the future. Relational databases are chosen because they allow the separation between the logical and the physical aspects of data management and they allow for the easy creation of prototypes and Decision Support Systems based on their ability to support queries both in an interactive mode as well queries embedded in the applications. In addition, relational databases are chosen because they are advocated by Martin’s Information Engineering Methodology and because they are made available through very popular software packages such as Microsoft’s Access or SQL servers.

6.9.5. Step 4

At this level we will model the stakeholders’ control over the communication links in terms of information filters and nodes. First we will start with the ‘most important’ value chain segment, as defined by system five. In that segment we will identify the activity that defines it, and then the most “important” person or persons responsible for this particular activity. It is rather probable that the most “important” person will be the one controlling the most important inputs as well for the viability of the organisation as a whole. There is a great probability as well that this person might be perceived by system five to be an information node because there should be many communication links connected to this very important input. An information node, as it is perceived by system five, is a person who carries resource power in the sense that he/she is handling material or informational resources, essential for the viability of the whole system. If the node, when asked to draw his/her ideal value chain, defines the same activity as of the utmost importance, or at least he/she provide us with a high score, then we can claim that he/she is conscious of his/her power. According to the empirical concept that advocates that one “should not put all one’s eggs in one basket”, we will ask system five to tell us if he/she believes that there is somebody else in the organisation who can match the skills of the node in

⁶¹ “...When these processes are used in the construction of the *DFD*, it sometimes happens that a very large number of data flows relate to one process, to such an extent that the diagram is overcrowded and confusing. This phenomenon is referred to in several of the Yourdon-based methodologies as the ‘sunburst’ effect, and it can have a number of possible solutions.” (Crinnion, 1991).

handling that very essential activity. If the answer is no then the node employs expert power (as it is perceived by system five) as well, besides his/her resource power.

If the node's duties allow him/her to be the final assessor of his/her subordinates reward claims, then he/she employs reward control power as well. But because things are not clear-cut in real life we will ask system five to define the above types of power in terms of a high-medium-low scale.

Finally, based on the belief that people when they value something highly try (or at least they are motivated) to control it, we will ask system five to define the character of the information node. If he/she defines him/her as high (namely as very 'good' character), then in terms of the *interpersonal relationships*⁶² he/she will have the support of system five. The node will employ patron power as well which can be used by a stakeholder as a power base used as an advantage in his/her interpersonal roles⁶³. In other words it might provide him/her with the ability to enhance his/her control over the outside stakeholders through his/her figurehead activities and become an information node through his liaison activities. The question about one's character is basically an indirect question, regarding any hidden feelings of professional jealousy, expressed possibly in feelings of dislike about the *node's* character. Handy (1986) defines *professional jealousy* as "territorial jealousy" and he distinguishes into types of jealousy originating from "overt status signs", "information jealousy" and the so-called "the in-group phenomenon" as follows:

"Territorial jealousy. Just as one herd looks covetously at the grazing grounds of another so do groups in organisations look at the territory of other groups of individuals. In particular:

a) The overt status signs of office size, dinning-rooms, cars, secretaries, etc. It is impossible to find a universally acceptable way of allocating these territorial desiderata. Though everyone agrees they are unimportant, they may often be the visible signs of cherished influence or status, and become of their symbolic value.

b) Information jealousy, or the feeling that one would love to know what goes on behind that fence, is another common feature of organisations. All the groups believe that they are excluded from information available to the group above them. Often this is true, but seldom to the extent that they believe. A manager coming out of a meeting with his peers, that lasted three hours, may

⁶² *"Interpersonal Relations.* These are a number of devices which focus on the interpersonal aspects of the job or the relations between and within units or groups. Some descriptive (and more structural) devices simply attempt to assess communication or friendship patterns. For example, the sociometric devices, 'Communication,' describe who talks to whom about what or who likes whom. *This information can uncover serious problems in the distribution and flow of information and in personal relationships.*" (Mitchell, 1982, my emphasis).

⁶³ *"Interpersonal Roles.* All managers are required to perform duties that are ceremonial and symbolic in nature. When the president of a college hands out diplomas at commencement or a factory supervisor gives a group a high school students a tour of the plant, he or she is acting in a figurehead role. All managers have a leadership role. This role includes hiring, training, motivating, and disciplining employees. The third role within the interpersonal grouping is the *liaison* role. Mintzberg describes this activity as contacting outsiders who provide the manager with information. These may be individuals or groups inside or outside the organisation. The sales manager who obtains information from the personnel manager in his or her own company has an internal liaison relationship. When that sales manager has contacts with other sales executives through a marketing trade association, he or she has an outside liaison relationship." (Robins, 1993).

say to his subordinates that nothing of any interest took place. He may well be right, but he will probably not be believed. We long for the fruit in other's gardens until we have tasted it and found it sour.

c) The in-group phenomenon. Groups are well-practised in the ways of improving the desirability of their territory. As Festinger, in his work on cognitive dissonance, pointed out, the harder it is to get something, the more we value it when we get it. The highest and most inaccessible mountain peaks are the ones most prized. The smaller and more exclusive the group, the more difficult the admission tests, the tougher the apprenticeship, the more we value membership. Those who get in become more cohesive, identify more with the group, protect its interests and its inviolability more determinedly." (Handy, 1986, my emphasis).

In BSPA that territorial jealousy is more likely to occur when the control of an activity is disputed, and it would be located in the control overlap area, while informational jealousy is more likely to occur when the control over a communication link is disputed. We can not be sure that feelings of dislike would have its roots in jealousy or at least only in jealousy but we will have to ask this question which besides the closed character of the scale placing (high-medium-low), should be an open ended-one mainly. Statements like "he is very good in his/her job but he is tough with people", might be true statements but they could be the surface expressions of other feelings seeking ethical justification. In any case they are very important because they might impede organisational synergy and co-ordination. Finally, if the organisational chart and the node's description, by system five, attest to the node's authority in regard to his/her responsibility for a specific activity, or a set of activities, then the node employs bureaucratic power in the form of legitimate power, namely authority. The more clear the organisational chart is and the node's job description regarding his/her duties, the more his/her bureaucratic power. Mintzberg (1983) argues that in political games between line and staff, the line managers (who employ bureaucratic power) are better equipped to fight political battles.

"As noted earlier, the line manager has behind him not only the weight of the organisation's System of Authority - which gives him the right to make certain choices - but also some potent political means of influence. Being the nerve centre of his own unit and being directly linked to the operating functions through the formal hierarchy, he develops a certain centrality in the flow of information. Moreover, of the two, the manager probably has the greater will to fight the political battles- not to mention the greater skill at doing so -for power is part and parcel of his job. Staff analysts are often lost in the world of organisational politics." (Mintzberg, 1983).

Therefore, we will have to ask system five, to interpret the job description and the organisational chart in the light of the node's current job duties. If the match is termed as high, then there is no dispute over the node's bureaucratic power. It is very important to find out how a manager who is disputed interprets the organisational chart. A person who according to system five is responsible for a lot of 'very important' activities will lead us to the identification of perceived centralisation. The definition of centralisation of

authority will be left to be defined by system five itself, on the basis of the activities assigned to a person. The above information will be captured in the "Node's Power Base Table" (6.-10.), as follows:

NODE'S POWER BASE TABLE					
Name: _____		VC Segment: _____			
Position: _____		Relevant Importance: _____			
Yr. In this Position: _____		Activity: _____			
Date: _____		Time Slice: _____			
Power Base	High (H)	Medium (M)	Low (L)	Not Clear (NC)	Comment (focusing on centralisation/decentralisation issues) (Structured English)
1. Resource					
2. Expert					
3. Reward					
Control					
4. Patron					
5. Bureaucratic					
Definition of Centralisation -					
Decentralisation					

Table 6.-10.

At this point we can define system five's value system on the basis of his/her stated preferences. We will include all the preference points he/she expressed and we will ask him/her, when he/she is presented with them to define briefly his/her focus, and to give a short overall justification for his/her views. The above information will be captured on the "System Five's Value System Table" (6.-11.). On the basis of the psychoanalytic paradigm, at this point where system five with our probing has defined his/her value system in more detail, we will ask him to compare it with his/her current and future strategic domains, expressed in his/her specific SSR as well as extended SSR.

SYSTEM FIVE S VALUE SYSTEM				
Name: _____		Yr. In this position _____		Date: _____
Preference	“the specific SSR”	Mission	Focus (Structured English)	Justification (Structured English)
VC Segment				
Activity				
Communications Link				
Overall				

Table 6.-11.

6.9.6. BSPA Power Value Chain

At this point we are going to draw the BSPA Power Value chain (diagram 6.-16.). Basically, it will be the BSPA value chain, but the “Head” symbols, or the “Other Responsible” symbols will be supplemented with *the node symbols where appropriate*. The “Relevant importance” numbers are written on the activities as well. The decomposition of the activities is supplemented with the drawing of the most important communication link(s), according to system five. In case where the activity is termed as ‘very important’ but its communication links are not, or vice-versa, then we will have to go back to system five to ask him/her to explain us the discrepancy, which can be due to distortions of communication or to intentional hiding of the truth. This statement implies that when the head of an activity is defined with a high “Relevant Importance Number” then he/she is more likely to be a communication node as well. In the BSPA value chain the “Heads” and “Other Responsible” symbols will be supplemented with the “Reward node” or “Reward filter” symbols where appropriate. In case where a manager is a reward node then we should record the names of the employees as well as the types of the rewards that the node, in the opinion of system five, decides for. In the “Reward Node Table” (6.-12.), we capture the semantic information about the formulation and the type of the rewards as well as the names of those employees for which the rewards are intended.

REWARD NODE TABLE						
Reward Node Name:		Position:			Date: _____	
			Yr. in this position			
Employees	Position	Type of	Relevant	Formation of	Timing	History
Name		Reward	Importance	Objectives		
			Number			

Table 6.-12.

Under the heading “Position”, we will record those activities which the employee is responsible for according to system five as well as his/her official position (as stated in the organisational chart). In addition, we should include the “Relevant Importance Number”, assigned to each activity by system five.

Under the heading “Type of Reward” we will record a short description of the reward (e.g., money, ethical recognition, fringe benefit, etc.).

Under the heading “Relevant Importance Number”, we will record the importance assigned by the employee to a particular reward, according to system five, thus capturing the perception of the pragmatic meaning that the reward carries for a particular stakeholder. This is very important indeed because an important reward can be used in a “carrot & stick” policy (namely a policy based on the algedonic loop principle) by system five to coerce a particular employee. If the employee, when interviewed assigns the same importance to this type of reward then system five’s power is enhanced in regard to the employee.

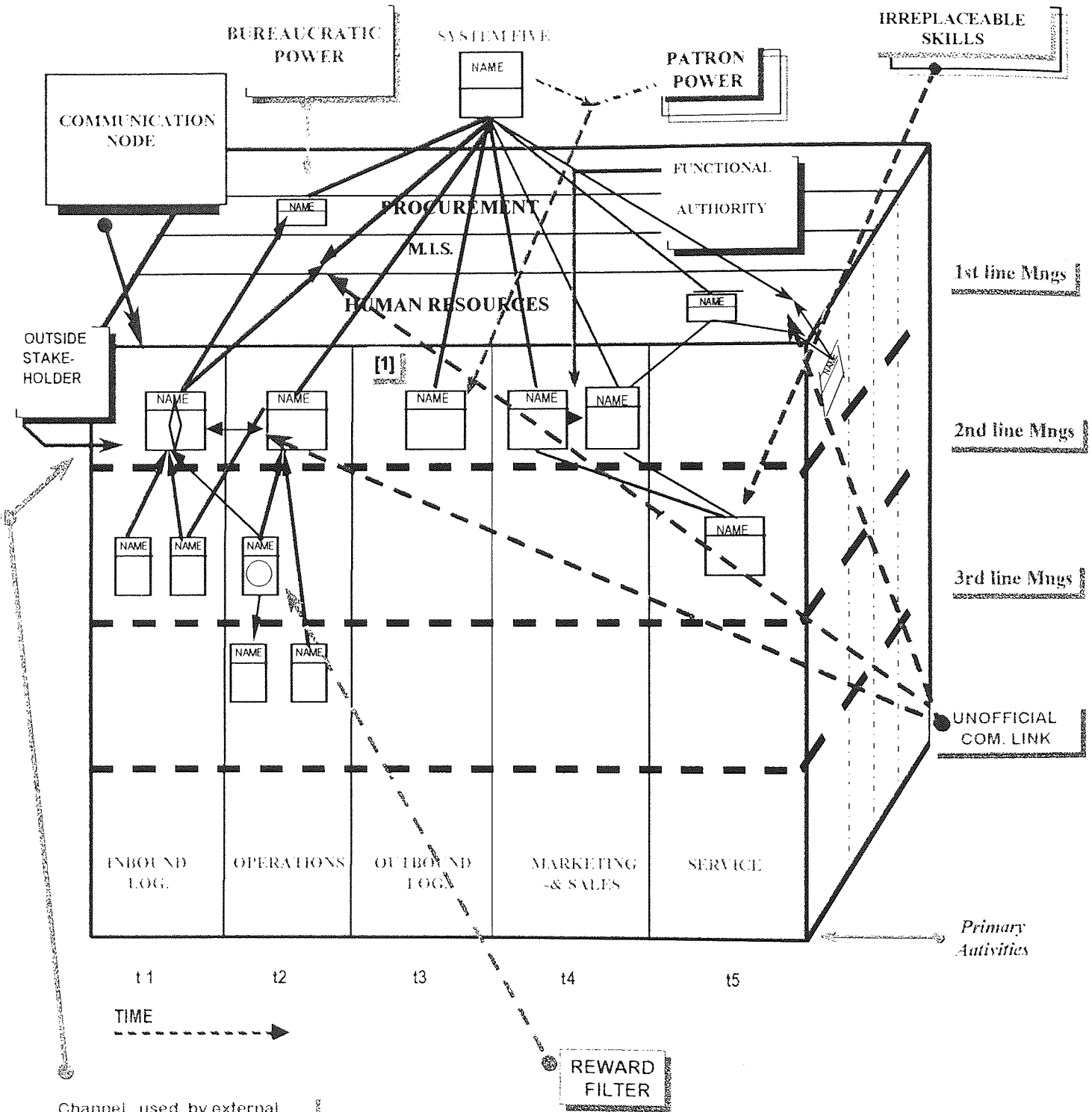
Under the heading “Formation of Objectives”, we should record the mechanism of objectives formation in regard to the reward; is it MBO?; top down?; bottom-up?; etc.. Under the heading “Timing”, we will record the time of the reward’s success criteria setting and the way that the effort of a particular stakeholder is assessed. Finally, under the heading “History”, we will record the successful attainment or failures of the employee to achieve the reward’s objectives.

The reward filter table is similar to the Node’s table (6.-12.). The only difference lies in the “Passing on Information” field where the filter identifies the reward node, that he/she passes information to. In the supporting documentation he/she should be asked to define the type and the format of the information he/she is passing to the node. In addition, under the “Timing Heading”, he/she will have to record the time that he/she passes on the information to the node.

REWARD FILTER TABLE						
Reward Filter Name:		Position:			Date: _____	
			Yr. in this position			
Employees	Position	Type of	Relevant	Passing on	Timing	History
Name		Reward	Importance	Information		
			Number			

Table 6.-13.

BSPA POWER VALUE CHAIN



Channel used by external stake-holders to influence the org.

Diagram 6-16.

6.9.7. Connecting Summary

What we have done so far can be summarised as follows:

- 1) We have asked system five to define the organisation's value chain, on the basis of a modified Porterian value chain, namely the BSPA value chain.
- 2) We have asked him/her to define the value chain's duration, and we have asked him/her to decompose this duration into distinct time slices.
- 3) We asked him/her to map the perceived organisational chart on the organisational value chain and to decompose further the value chain segments into distinct tasks and assign the names of those responsible for those particular tasks. In other words, we asked him/her to articulate his/her perception in regard to the first and the second lines of command in terms of their activities/tasks and within the value chain framework.
- 4) We asked him/her to define the communication links connecting the above activities/tasks and thus we asked him/her to define the connections of the people responsible for those activities/tasks with other stakeholders' inside and outside the organisation. In addition, we asked him/her to decompose those communication links into material and informational links.
- 5) We asked him/her to draw his/her findings on the value chain using the BSPA's symbols.
- 6) We asked him/her to articulate his/her perception regarding the stakeholders, he/she identified as the first and the second line's of command, power bases and to draw the BSPA Power Value chain; and
- 7) Finally, we asked him/her to define, in the light of his/her stated preferences, his/her value system and compare it with his/her original statements and with his/her early interpretation of the mission statement in order to gain self-knowledge regarding the material and informational origins of his/her views.

6.9.8. Step 5

Therefore at this point then we should go back with system five to confirm our findings. In other words we are going to perform BSPA's *Structured Walkthroughs*⁶⁴. The main aim of course is to confirm with the stakeholder his/her statements, but in addition we would like to uncover the mechanisms of the unofficial organisation. To uncover though the mechanisms of the unofficial organisation is a rather difficult task indeed. But through the BSPA's structured walkthroughs we will ask the stakeholder to concentrate first on the communication report links and confirm, if things are done only formally, or they are done informally as well.

⁶⁴ *Walkthrough*. A technical quality review of a newly designed system. The review is conducted by system analysts, users and auditors in order to ensure that both the logical data flow diagrams and the physical data flow diagrams are correct." (FitzGerald and FitzGerald, 1987). In BSPA there are no auditors. There are only analysts and users (stakeholders).

In other words we will try to find-out how unofficial reporting is performed. The above information will be captured in table 6.-14., as follows:

UNOFFICIAL ORGANISATION LINKS

Name:						Date: _____
Official Report Communication Link	Type	Informal Links	Connecting Levels	Organisational Policies - supporting the unofficial organisation - (Structured English)	Conflict Resolution	General Activities (Structured English)

Comment about the important links:

Table 6.-14.

Under the heading "Type" we will record the content of the reporting itself.

Under the heading "Connecting Levels", we will record the names as well as the positions of those engaging in informal reporting.

Under the heading "Organisational Policies", we will include those policies which in the opinion of system five support the unofficial reporting.

Under the heading "Conflict Resolution", we will include those policies which allow the lower levels to bypass the immediate superior level.

And under the heading "General Activities", we will record those organisational habits which aim to increase and facilitate communication of all sorts within the organisation. e.g. parties, rituals, etc.. From the above findings we are going to draw the unofficial communication links on the BSPA Power value chain. In order to achieve that goal we will concentrate on those communication links which system five regards to be important. We will like to see if system five, in the areas which he/she regards as important, is using other communication links besides the official ones and in what way. In case he/she hasn't done so, it means that he/she relies totally on the official channels thus enhancing the power of the first line of command, dealing with those "important links" or processes. At this step a talk about the problem, for which the analyst was

called in, would be appropriate. In other words the analyst will ask system five to make the problem, stated in the start of the inquiry, specific in the sense that he/she should pinpoint the causes of the problem-stated (at the start of the inquiry) on specific tasks, value chain segments and communication links. This process will aim to enlighten system five about the real causes of the problem stated. The above information would be captured in the "System Five Problem Type Table" (6.-15.).

SYSTEM FIVE PROBLEM-TYPE TABLE

Original Problem Stated:

Original Problem Classification: (Self Knowledge - Open Conflict - Money Losing)

New Problem Specification:

Value Chain Segment:

Activities

Communication links:

New Problem Classification: (Self Knowledge - Open Conflict - Money Losing)

Table 6.-15.

System five so far has defined the role as well as the power base of the stakeholders he/she perceives to employ currently. System five's views as well as the rest of the stakeholders are gathered into folders. In these folders the stakeholders AP(s) are included in the first section of the folder where they can be used as quick reference. In the second section of the folder we will include the details of the previous analysis (the inside view's analysis details regarding the views of a particular stakeholder) in an appendix format. The AP(s) format will be as follows and it should be the same for every stakeholder and every interviewee (table 6.-16.).

ACTORS PROFILE			
AP For Actor (stakeholder).....		By	Actor (stakeholder).....
		Date__	
Position:	Yr(s). in this position:	Position:	Yr(s). in this position
Name			
Position on the VC			
Other Responsible			
Major Activities			
Major Communication Links			
Information Node			
Reward Node			
Power Bases			
Unofficial Links			
Value System			

Table 6.-16.

6.9.9. Idealised Design

The drafting of the AP(s) draws to a close all the activities regarding the current situation. The next step would be to ask system five to engage in idealised planning. On the basis of his/her stated, in the beginning, strategic domain choice, he/she will be asked to define the ideal value chain; map the ideal first and second lines of command onto the ideal value chain and define the ideal activities and their communication links. The capturing of the information and its supporting documentation will be the same as for the current situation, in order to be used as a basis of comparison. After the ideal BSPA value chain has been drafted then we should concentrate on identifying differences between the BSPA value chain and the ideal one. Special attention should be paid to the differences in regard to the important points identified in the current design, and especially in the definition of the other stakeholders' power bases. The ideal AP(s) are drafted and they are compared with the existing current ones. All the differences are recorded and they are reported back to system five. Special attention is paid to the areas that system five defined as important (namely activities/tasks, communication links, and rewards). If in the ideal design system five limits the power bases of some of the stakeholders, then it has to be reported to him/her as a source of bias originating from his material and informational interests. In other words organisational changes sought are reported in the light of system five's material and informational interests. In addition, system five's strategic vision, expressed in detail in the ideal design, is examined on the basis of the differences between the current and the future designs and in the light of the organisational material and informational interests that they both are based upon. The original problem stated by the initiator of the study is examined at this point in order to define its material and informational sources. The purpose is to enlighten system five in regard to the possible causes of his/her worldview and

especially his/her strategic vision. System five should be left to reflect on the findings of the research for a reasonable amount of time (a week or a month).

6.9.10. Idealised Planning

The next step then would be to ask the first line of command to perform the same steps and go through the five steps, identified above, in order to draft the AP(s) for system five and the two immediate levels below (the organisational level inquiry is performed always in sets of four official hierarchical levels). As we move down the official hierarchy the scope of the analysis and design will be minimised in the sense that the stakeholders, due to their limited systemic view, will engage in idealised planning for their limited operational areas. When we have recorded the current as well as the ideal designs for each set of four hierarchical levels then we can draw the “BSPA Control Overlap Value Chain”, diagram 6.-13.. The aim of this design is to make the stakeholders aware of the areas of control overlap, namely the areas of organisational conflict, depicted diagrammatically upon the organisational value-chain. When this step is completed the conflicting stakeholders will be called to the ‘negotiation table’ and each other’s current AP(s) will be exchanged. The stakeholders will be asked if they want to exchange their AP(s) as they are or to exchange them after they have hidden some of the information they carry. In case they want we to do that, their reasons are recorded and they are examined in the light of the material and informational sources they are originating. The process proceeds with the so-called Limited Actors Profiles [LAP(s)]-namely censored (by the stakeholders themselves) Actors Profiles. The blank areas of the LAP(s) are asked to be filled by the conflicting stakeholders who are asked to express their opinions in regard to the reason why they are hidden. These LAP(s) are passed back to the stakeholders who asked for them to be censored, and they are asked again if they want to proceed with the LAP(s) or they want to lift their censorship. Insistence on hiding information from the other stakeholder(s), is a serious indication of irreconcilable conflict between the stakeholders. If the insistence originates from the ‘more’ powerful stakeholder then we can argue that the ‘more’ powerful stakeholder believes that the exercise of his/her power is connected directly with the information asked to be hidden. If the insistence originates from the ‘less’ powerful stakeholder(s) then we can argue that these are the points upon which the less powerful stakeholder bases his/her strategy for undermining the more powerful one(s); or they are the points that he/she believes coercion, who is afraid to challenge, originates. We will call these points of conflict critical system breaking-up points (CSBP) and they will be compared with the overall organisational entropic numbers in terms of finding any correspondence between the control overlap areas and the censored information on the LAP(s). CSBP(s) should be subject to further research due to the very complexity and the importance for the organisational viability of the subject matter. Continuous insistence on hiding information especially from the most powerful stakeholder amounts to the causes of coercion that appears in the form of closure of debate (Midgley). A coercion situation characterised by closure of debate should lead the analyst into taking political action and campaigning according to Midgley (1996).

“The broadest definition of ‘systems practice’ currently used embraces both ‘soft’ and ‘hard’ methods of intervention as well as the more traditional ‘observational’ scientific methods.

However, I argue that the only way to create change in coercive situations when there is closure of debate is through direct political action and campaigning. The purpose of political action and campaigning is to create the conditions under which debate and therefore change becomes possible... For human co-operation to be possible, we need forums in which people can discuss ideas, harmonise understanding, and take decisions..... Without forums of debate and decision making in which common conceptual frameworks can evolve, both flexibility and empowerment and put to risk. Empowerment is threatened because those with the resources to put their ideas into action will never have their ideas exposed to the possibility of change, and those who are currently without the ability to convert their ideas into actions will simply never be heard. Flexibility also suffers because only a limited number of generated options will ever be considered seriously. Of course, to be effective, the process of debate and decision-making must be linked to means of taking practical action. It must also embrace more than just the performed views of participant: it needs to be open to information generated from outside the debate.” (Midgley, 1996).

Political action and campaigning ranges, depending on the situation, from the provision of a rigorous critical systems methodological platform for coercion-free debate to the challenging of the authority of the ‘experts’ and the ‘facts’ of the powerful and to the siding with the less powerful when the dissolution of the system takes places due to unresolved conflict and coercion. The basic idea about the exchange of the AP(s) is to make the stakeholders to focus and concentrate on the control overlap areas and then talk about each other’s power bases, as they are perceived by the other. The aim of the discussions, being a political action in itself, is to eliminate the sources of distortion of communication due to the stakeholders’ power bases and due to the misinterpretation of the data exchange. The next step then will be the exchange of each other’s idealised designs. The aim is to reach a consensus idealised planning on the basis of the stakeholders’ self-knowledge. When the consensus idealised design has been completed, we should ask the stakeholders to switch to the outside view. In other words they will be asked to evaluate their idealised design’s impact on the industry network that the business system in focus is part of. The above actions should be performed for every four levels of the official organisational hierarchy (see diagram 6.-2.). When all the hierarchical levels participated in this manner, then they should be called (or their elected representatives), should meet in an open discussion to formulate the company’s mission by engaging in idealised planning. When this is done then they will be asked to assess the impact that their design will have on the industry network. Finally, they should assess the organisational changes in the organisational structure and functions overall, in order to define training programs or reward schemes aiming to supporting the idealised design.

Areas of conflict with the rest of the management team will be indirectly identified. A manager’s BSPA value chain, Power value chain, and his/her corresponding ideal value chains will be compared with the value chains of the rest of the management teams. This will enables us to identify conflict not only vertically (sets of four official hierarchical levels) only, but horizontally as well (with the rest of the management team). If the comparisons lead us to the identification of control overlap areas then that will have to be reported back to the

conflicting managers. The conflicting managers will be asked to draft AP(s) for each other and the entropic numbers will be calculated. In addition the horizontal control overlap areas identified will be examined against the managers' specific SSRs. If the conflict was identified in the specific SSRs then the value chains should provides us with the material and informational causes of the conflict. In addition, the intensity of the conflicting motivational forces, identified in the SSRs, will be compared with the particular material and informational interests in order to draw inferences. If the conflict was not identified then we can argue that its concealment was due to either distortions in communication, including false consciousness, or to strategic actions. The multiplicity of factors examined and recorded in the BSPA's encyclopaedia, and the comparisons performed will provide us with the ability to draw conclusions about the real causes of the act of concealing conflict and thus feeding-back this information to the stakeholders with the intention of aiding their effort of gaining self-knowledge.

6.10. Summary of the Methodology

At this point we can summarise the methodology in table 6.-17., as follows:

BSPA METHODOLOGY STEPS

SUMMARY

VIEW/STEP	SHORT DESCRIPTION	DOCUMENTATION Tables/Diagrams Supporting documentation	SUMMARY of the Information recorded in the BSPA Encyclopaedia
1. SYSTEM FIVE S MISSION STATEMENT EXPLANATION	<p><i>System Five's</i> Explanation of the Mission Statement</p> <p><i>System five</i> defines the components of mission. (purpose-strategy-values-standards) & skills.</p> <p><i>Emphasis is given on the compatibility of the components defined.</i></p>	<p>Current Strategic Domain Table 5.-1. & 5.-2.</p> <p>Current Strategic Domain Table 5.-1. & 5.-2.</p>	<p>What Business are we in?</p> <ul style="list-style-type: none"> - Define values - Define Purpose - Define Skills - Define Strategic Positioning
3. SYSTEM FIVE S CURRENT STRUCTURE	<p>Definition of structure according to pre-defined management structure models (e.g. matrix).</p> <p>Definition of its compatibility with the mission statement components</p>	<p>Current Structure Table 5.-3.</p> <p>Diagrams A1.-1., A1.-2., A1.-3., A1.-4., A1.-5., A1.-6., A1.-7., A1.-8., and A1.-9.</p>	<p>Definition of the perceived organisational structure on the basis of a pre-defined management structure model(s).</p>
4. SYSTEM FIVE CURRENT PROCESS	<p>Definition of major organisational activities (value-chain segments) e.g. (finance, accounting).</p> <p>Definition of the processes compatibility with the mission statement</p>	<p>Current Process Table 5.-4.</p>	<p>Definition of the perceived major organisational activities, using Structured English</p>

VIEW/STEP	SHORT	DOCUMENTATION	SUMMARY
OUTSIDE VIEW -	DESCRIPTION	Tables/Diagrams	
(continued)		Supporting	
		documentation	
5. SYSTEM FIVE S CURRENT MISSION	Summary of System Five's views about the current mission and its components including organisational structure and process (activities)	System Five Current Mission Matrix Table 5.-5.	Integration of the perceived mission statements components under one table
6. SYSTEM FIVE S IDEAL MISSION	Ideal Mission Components including ideal organisational structure and processes (activities)	System Five's Ideal Mission Matrix Table 5.-6.	Definition of the components of the ideal mission statement and the ideal structure and processes (activities)
7. SYSTEM FIVE S INDUSTRY OUTLOOK	Define the Industry Structure (on the basis of Porter's <i>Industry structure</i> , & Gilbert's and Strebel's <i>Industry Life Cycle</i>)	System Five's Industry Outlook Table 5.-7.	Define <i>suppliers, buyers, competitors, potential entrants</i> , market's state of growth, and <i>basis of competition</i>
8. SYSTEM FIVE S SPECIFIC SSR	Depict diagrammatically System Five's Steady-States-Range	System Five's specific SSR Diagrams 5.-1. & 5.-2.	Diagrammatic representations of the Current and Ideal Strategic Domains, & current and Ideal Strategic Positioning.
9. SYSTEM FIVE S HISTORY	Define the business system's perceived past successes and failures	Organisational History Table 5.-8.	Perceived business successes and failures -profitability, growth, etc.
10. MANAGEMENT TEAM S SPECIFIC SSR & EXTENDED SSR	Depict diagrammatically the Management team's specific SSR against the System Five's specific SSR	Management Team's specific & extended SSR's Diagrams 5.-1., 5.-2., 5.-3., 5.-4., and 5.-5.,	Same as step 9 for the rest of the management team
11. MANAGEMENT TEAM COHESION SCORE	Define the cohesiveness of the management team in regard to their strategic vision	Group Ideological Cohesion Score Table 5.-9.	<i>Fuzzy</i> scores of +_10 assigned for fuzzy agreement or fuzzy disagreement against system five's views regarding the current and future strategic domain and positioning

VIEW/STEP OUTSIDE VIEW - (continued)	SHORT DESCRIPTION	DOCUMENTATION	SUMMARY
		Tables/Diagrams Supporting documentation	of the Information recorded in the BSPA Encyclopaedia
12. LINE OF DUTY	The management team expresses its feelings about freedom in work as well as about the fairness of the organisational reward system	Line of Duty Table 5.-10.	Freedom is defined in terms of the scale of "High-Medium-Low." Fairness is defined in terms of the scale "Fair, Not-Fair, Don't know"
13. PROVISIONAL PROBLEM CLASSIFICATION	Problem is defined provisionally on the basis of the BSPA's problem classification system	Provisional Problem Type Classification Diagrams 5.-7., and 5.-8.	The perception of problematic areas are attributed to three sources: " <i>Stakeholders retrospection, Money Losing and Open Conflict</i> "

VIEW/STEP	SHORT DESCRIPTION	DOCUMENTATION	SUMMARY
INSIDE VIEW			of the Information recorded in the BSPA Encyclopaedia
1. STEP 0	<i>System five</i> defines the system's major Inputs-Process-Outputs. Defines the Value chain's overall Time as well as the Primary and Support Activities. System Five defines the first line of management and identifies the people responsible for these activities	a. Inside View Organisational Level Inquiry Diagram 6.-2. b. System Five's Value chain primary activities Table 6.-1. c. System Five's Value Chain Secondary Activities Table 6.-2. d. I-P-O-T Table 6-3.	a. Definition of the process of inquiry in sets of four official levels of hierarchy. b. Definition of the overall value-chain time and c. Definition of the value chain's primary and secondary activities, using structured English.
2. STEP 1	System Five articulates his perception about the Second Line of Command activities	System Five Second Line of Command Table 6.-4.	- Second line of command heads - Subordinates - Core areas of perceived control - areas of focus
3. STEP 2	<i>System Five</i> identifies the first's and second's line of command communication links with inside and outside stakeholders	System Five's First & Second Line of Command - Communication Links Table 6.-5.	Perceived communication network
4. STEP 3	<i>System Five</i> decomposes the communication links, into material, information and report communication links	System Five First & Second Line of Command - Communications Links Table 6.-6.	Syntactics, Semantics, and Pragmatics of the Material, Information & Report Communication Links
5. DRAW THE BSPA VALUE CHAIN	Draw the above levels on the BSPA's Value Chain. In order to avoid overloading the BSPA Value Chain draw each segment separately	a. BSPA Symbols Diagrams 6.-6., 6.-7., 6.-8., 6.-9., and 6.-10., b. BSPA Value Chain Diagram 6.-11.	Diagrams stored in the BSPA encyclopaedia
6. STEP 4	<i>System Five</i> defines Communication Nodes, Reward Nodes and Reward Filters.	a. Nodes Power Base Table 6.-10., b. System Five Value-System Table 6.-11., c. Reward Node Table 6.-12., and d. Reward Filter Table 6.-13.	a. Perceived Bureaucratic, Resource, Reward and Patron power bases defined b. System Five's value system defined

VIEW/STEP INSIDE VIEW - (continued)	SHORT DESCRIPTION	DOCUMENTATION Tables/Diagrams Supporting documentation	SUMMARY
7. DRAW THE BSPA POWER VALUE CHAIN	The BSPA Value Chain is supplemented with the communication, and reward nodes and filters	BSPA Power Value Chain Diagram 6.-16.	BSPA Power Value Chain Diagram stored
8. STEP 5	Confirm with <i>System Five</i> all the above findings by performing structured walkthroughs. Identify the unofficial organisation and depict it on the BSPA Power Value Chain	a. BSPA Power Value Chain 6.-16. b. Unofficial Organisation Links Table 6.-14.	Unofficial Links, Type, conflict resolution procedures, general policies, unwritten laws.
9. DRAFT AP(s)	<i>System Five</i> drafts the AP(s) for the First and the Second Lines of Command	AP(s) Summary Table 6.-16.	Position, responsibility, power base, unofficial links, etc. The AP(s) are part of the stakeholders' folders containing all the information defined by <i>system five</i>
10. PROBLEM TYPE DEFINED	<i>System Five</i> defines the problem stated, specifically. Comparison with the original problem-type classification	<i>System Five</i> Problem-Type Table 6.-15.	Original Problem Classification Vs. New Problem Classification
11. IDEAL DESIGN	<i>System Five</i> defines and draws the ideal BSPA Value Chain	Ideal Value Chain (same as the BSPA Value Chain)	Definition of ideal Activities/Tasks, Ideal Communications Links, and Ideal Organisation structure and processes
12. REPEAT	Repeat steps 1-9 for the first and the second line of Command	The same documentation used as in steps 1 to 5	
13. CONTROL OVERLAP	Check the differences between the three levels of command regarding definitions of activities/tasks, communication links,	a. BSPA Value Chain b. Ideal Value Chain c. BSPA Power Chain d. Control Overlap Depicted on the BSPA Value Chain Diagram	Control Overall areas are depicted as red circles. Areas of control overlap are represented as the intersection of the control area circles.

	value chain time lengths, etc.	6.-13, 6.-14.	Diagrams are stored in the BSPA encyclopaedia
14. EXCHANGE APs	The conflicting stakeholders are asked to come to the negotiation table	a. Consensus BSPA Value Chain (same as the BSPA Value Chain)	Consensus or disagreement is recorded
15. REPEAT	Repeat the above levels for the lower official hierarchical levels		
16. UNIVERSAL VALUE CHAIN	If conflict is resolved and consensus is reached then the Universal Value Chain is drawn	Universal BSPA Value Chain (same as the BSPA Value Chain)	Definition of the consensus mission, strategic domain, strategic positioning, standards and structure.
17. OUTSIDE VIEW	Assess the impact of the new mission on the industry network	Industry Impact Table (same as the System Five's Industry Outlook)	Impact on suppliers, consumers, potential entrants and competitors

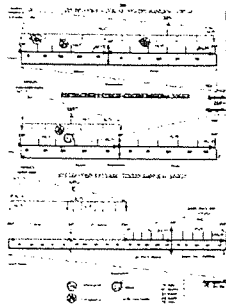
Table 6.-17.

In diagrams 6.-17., 6.-18., and 6.-19., the BSPA methodological steps are depicted as follows:

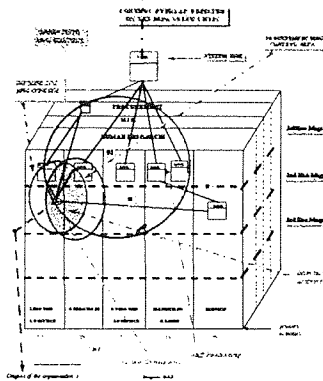
THE BSPA METHODOLOGY IN SUMMARY 1

SSR & THE MANAGEMENT COHESION SCORE

OUTSIDE VIEW

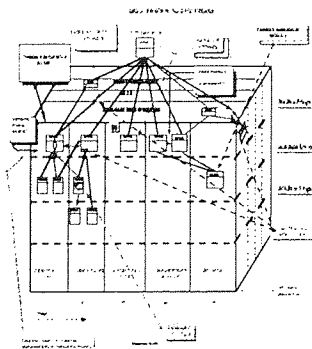


INSIDE VIEW



BSPA VALUE CHAIN & CONTROL OVERLAP

BSPA POWER VALUE CHAIN



ITERATIONS AND FEEDBACK

Diagram 6-17.

**BSPA METHODOLOGY
&
THE IE PYRAMID IN SUMMARY_2**

THE BSPA METHODOLOGY IN SUMMARY_1

SSR & THE MANAGEMENT COHESION SCORE

OUTSIDE VIEW

INSIDE VIEW

**BSPA VALUE CHAIN
& CONTROL OVERLAP**

**BSPA POWER
VALUE CHAIN**

**BSPA IE PYRAMID
&
INFORMATION SYSTEMS
DEVELOPMENT**

ITERATIONS AND FEEDBACK

BSPA INFORMATION ENGINEERING PYRAMID

BSPA DATA TYPES AND ENTITIES

**BSPA DATA TYPES
& ENTITIES TYPE STEP
11 - INSIDE VIEW**

BSPA MISSION

**BSPA FUNCTIONS ARE DEFINED
TELEOLOGICALLY IN STAGE FIVE
STEP 11 - INSIDE VIEW**

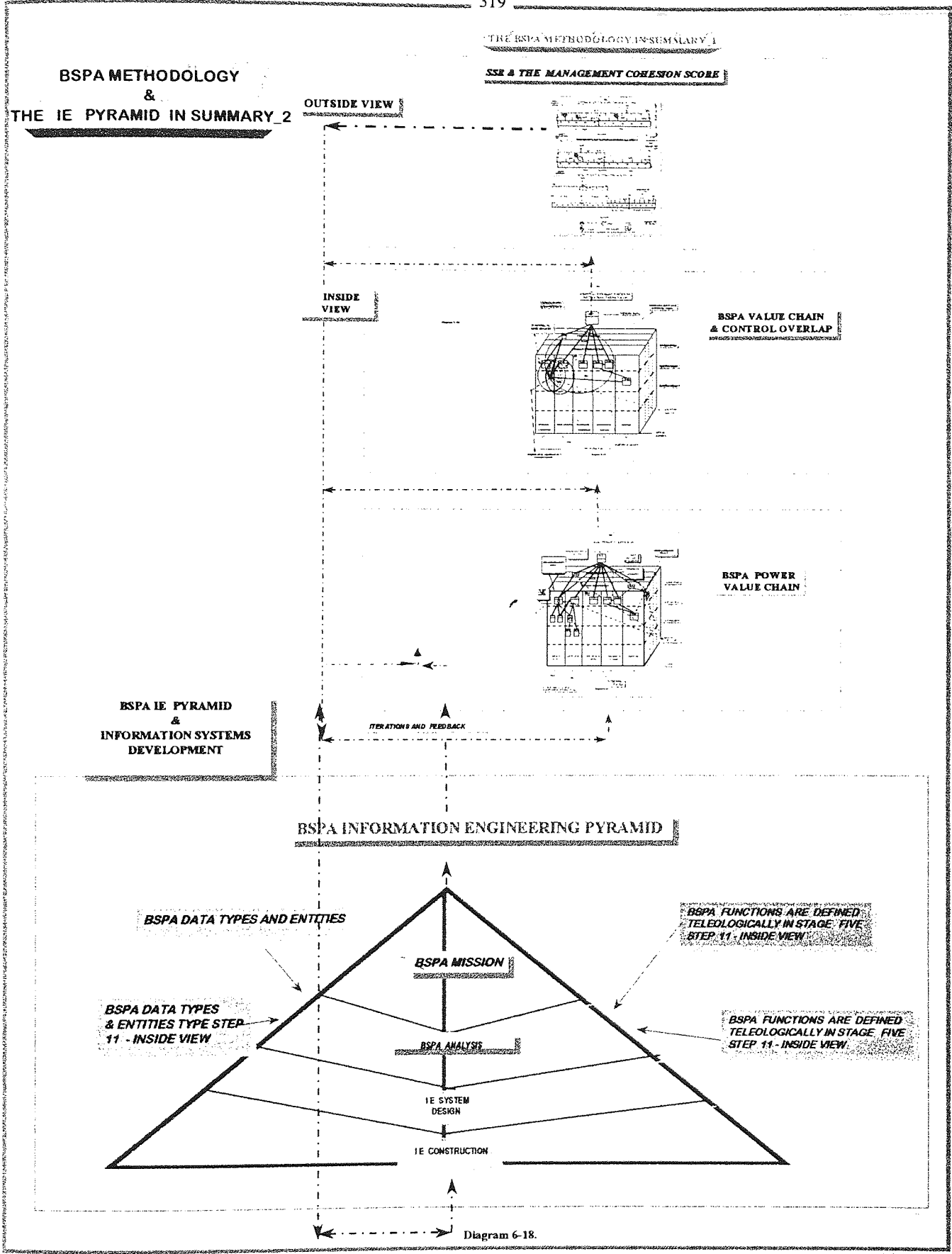
BSPA ANALYSIS

**BSPA FUNCTIONS ARE DEFINED
TELEOLOGICALLY IN STAGE FIVE
STEP 11 - INSIDE VIEW**

**IE SYSTEM
DESIGN**

IE CONSTRUCTION

Diagram 6-18.



PROVISIONAL PROBLEM TYPE CLASSIFICATION

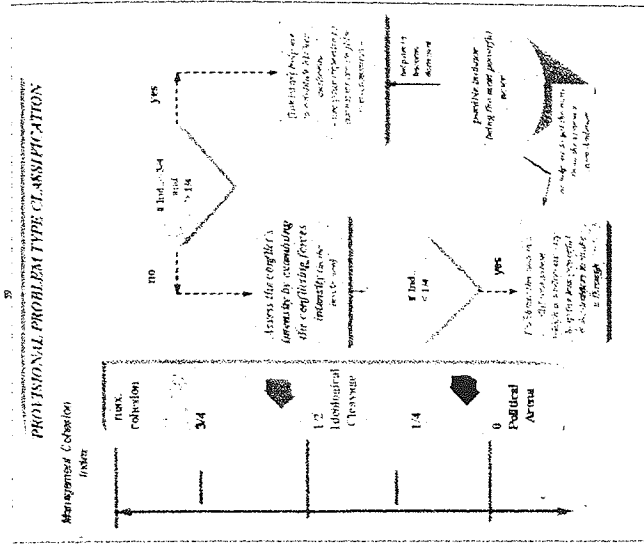
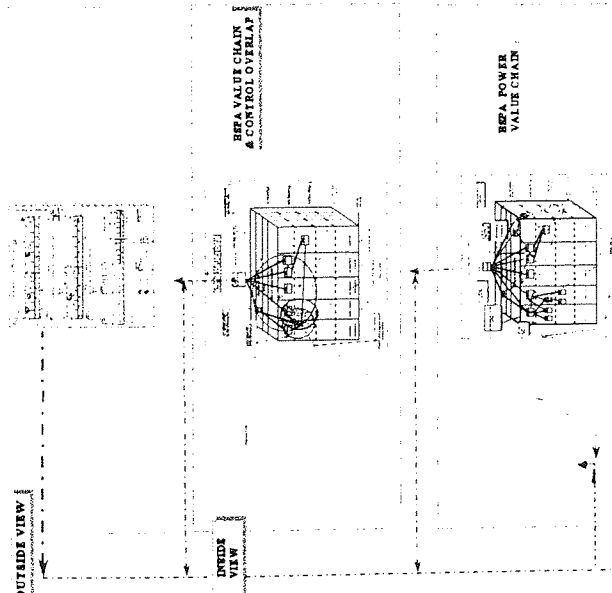


Diagram 7-4

Diagram 6-19.

BSPA METHODOLOGY & Provisional Problem Type Classification & IE PYRAMID IN SUMMARY 3

BSA & THE MANAGEMENT COHESION SCORE



BSPA IE PYRAMID & INFORMATION SYSTEMS DEVELOPMENT

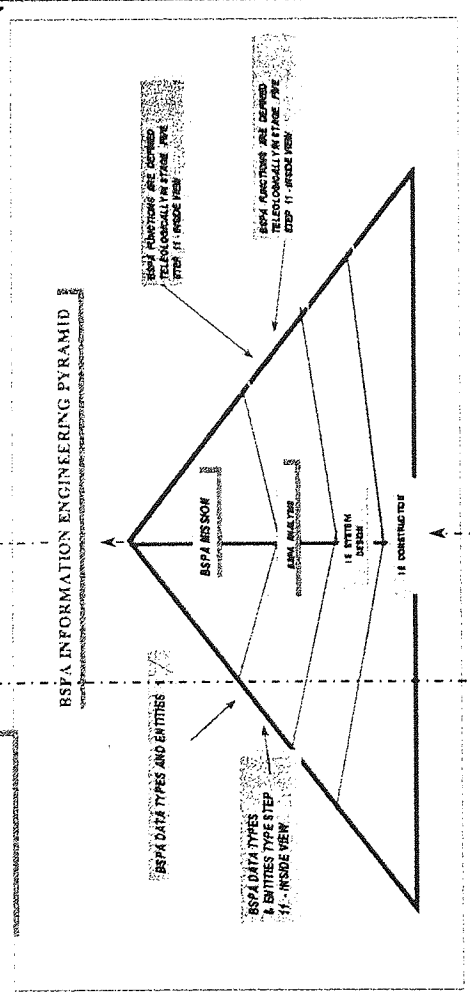


Diagram 8-18.

- Chapter Seven -
BSPA EVALUATION

7.1. Chapter Seven Introduction

In chapter one we stated our intention to develop a methodology, which will provide business organisations with information systems that demonstrably improve coordination of organisational activities by enabling the development and maintenance of a single/multifaceted view of purpose throughout the organisation itself. In other words we stated our intention to develop a methodology that will produce intrinsically motivated information systems. Namely Information Systems that will produce meaningful knowledge to the extent that it makes its users (business system's stakeholders) to reflect and thus inquire about their purpose(s), in relation to the business system and the other (perceived) stakeholders, by reflecting both on the sources of motivation and/or deception that are contained in their purpose(s) and also on the sources of collective motivation and/or deception that are contained in the business purpose(s) itself.

In chapter three we identified and prescribed a conceptual solution to the above problematic and we formulated a strategy that describes the appropriate actions that must be taken to bring about the conceptual solution itself. The conceptual solution prescribed was that of critical hermeneutics that must include the analysis of business purpose as an a priori condition to determining the appropriate systems to be developed always in the light of the critical systems concepts of complementarism and human emancipation. In addition the conceptual solution prescribed the analysis of the organisational material and informational interests, and in general man's knowledge constitutive interests, and the analysis of the complex-coercive relations that arise due to the stakeholders' overlapping and conflicting claims made upon the organisation's material and informational assets.

The strategy formulated concentrated on the identification of the stakeholders' ideological constraints by linking the inputs of the ideological process, namely their organisational material and informational interests, with the ideological outputs namely the stakeholders' worldviews, shared beliefs, value systems, information system semiotics, and the business systemic purpose itself at the stakeholders' interaction level. The strategy's goal was to identify the causes of the stakeholders' ideological constraints at the stakeholders' interaction level, namely at the level where the organisational systemic purpose is formulated in the light of the stakeholders' complex-coercive relationships that characterise the contemporary business organisations.

For the identification of the stakeholders' ideological constraints the strategy demanded for the use of the SSR and OOEN concepts and their linking together in double loop learning that incorporates fuzzy thinking as well. In addition, the strategy demanded for the use of a formal complementarist system, in regard to hard and soft thinking, that must be used in the form of validity criteria to test the basic adequacy of the methodological solution itself.

In this chapter we examine if and how the strategy of the conceptual solution was translated into a critical systems methodology that subsequently will produce, in the contemporary business organisations, intrinsically motivated information systems. In other words we examine if and how BSPA meets the strategy's requirements

in terms of the SSR the OOEN and the validity criteria set out in chapter three. In addition, we examine, in a self-critical manner, the advantages and the disadvantages of the BSPA methodology in anticipation of its application on the business organisations.

7.2. The Conceptual Solution's Strategy Applied on the Business System

The SSR original concept, quoted in section 3.2, was modified in order to become applicable for the business systems purpose analysis. For that modification the SSR concept borrowed from Lewin's (1952) social fields and phase spaces where individual intentions or motivations can be represented as vectors of forces; their opposing direction of which represents conflict as part of a dynamic process that produces a quasi-stationary equilibrium between opposing forces. Lewin's defines social fields as follows:

In BSPA's Specific SSR we treated a group's social field, namely the management team, as the aggregate life space of the individuals that make up a particular group. In the Specific SSR, Lewin's field concept was modified to represent the life space of the individual managers and the life space of the management group as a whole. This led us to the problem of defining the boundaries of the management group's field in terms of the syntactic, semantic, and pragmatic dimensions of the management team's decision making process, as well as in terms of the interdependency between the dimensions identified always in the light of the organisation's instrumentality expressed in its commercial rational. In the Specific SSR the boundary of the management group's life space (defined as the steady-states-range) was identified as the group's ideological limits, while life space's concepts of existence, interdependency, and contemporaneity were defined as the management team's group decision process dimensions; their semantic and pragmatic content of which exist within the ideological limits themselves..

In the Specific SSR the question "what business are we in?" was defined to represent the current organisational strategic domain labelled as the Current-State Position (CSP). The question "what business we want to be in?" was made to represent the desirable organisational strategic domain labelled as the Desirable-State Position (DSP), while the middle point, labelled as the Intermediate-State Position (ISP) was defined as the change in strategic positioning (type of competitive advantage) only implying no change in the current strategic domain (what business we are currently in). The above range was divided into a skills part, a structure part, a systems part, a purpose part, and a values part. These divisions correspond to four (out of seven) of Peters' and Waterman's 7Ss model.

The range of the Specific SSR in terms of the SSR concept spreads from the ideological plus point, in this case being a stakeholder's ideal strategic domain defined in the specific SSR as the DSP, and the ideological minus, in this case being the current strategic domain and defined in the specific SSR as CSP. The correspondence of DSP and the CSP with the SSR's plus and minus signs is not made arbitrarily. The correspondence is used to express graphically the business system's in focus organisational closure (Maturana, 1991a) that allows for structural change which is conditioned and limited by organisational ideology

(organisational spontaneous activity). The plus sign, or rather the DSP, represents the limit of structural change that does not threaten the business systems organisation or in other words the dominant ideology. We have to make it clear that when we talk about the business organisation that is defined by organisational ideology we mean the relationships between the organisational material and informational interests that define and specify a system as a composite unity and determine its properties as such a unity. This means that different strategic domains can be chosen as long as they do not seek to destroy the dominant stakeholder(s) existing relationship(s) between their organisational material and informational interests. The minus sign (CSP) for the current strategic domain represents the present consolidated structure being always at a disadvantage because it is always embedded in a dynamic process or better in a state of quasi-stationary equilibrium as Lewin (1952) argues. The minus sign is chosen to represent that very disadvantage, namely the fact that every consolidated structure runs the risk (by being in a dynamic environment) of becoming pathologically autopoietic thus turning the system into a closed one meaning that it becomes not only organisationally closed but structurally closed as well. The arguments we are making in support to the choices of the plus and minus signs parallels Mary Parker Follett's (1995) concept of circular response as well that regards the functional and ever changing relating between two social entities has a plus value.

The management team's SSR mapping starts with system five's (as it is defined cybernetically) views inquiry in accordance with the subethood principle. In cybernetic terms system five embodies, or at least should embody, the system's identity by providing the system with closure. Therefore, the mapping of the rest of the management team, meaning the first line managers, is performed against system five's SSR, on a one-to-one basis. Based on the management team's views, expressed in their SSRs, we can proceed in devising a scoring method (elaborated in chapter five). The scoring method was based on the stakeholders points of agreement (marked with a positive number e.g. +10), and points of disagreement (marked with a negative number e.g. -10) regarding the current-intermediate and desired position points. The purpose of the scoring system, being an arbitrary system, is to help us in formulating an ideological cohesion score for the management team as a whole.

In the Extended SSR "what business we are in?" and "where we want to be?" is complemented with the question "with whom should we collaborate?" thus dealing with the analysis of the outside stakeholders as well. That analysis is performed based on Porter's (1980) five forces model in a relatively objective and functional way and Galbraith's (1983) concept of the organisational centre of gravity or Mintzberg's core business concept in conjunction with the concepts of organisational "integration" and "diversification".

In regard to the OOEN in the BSPA we depict the control overlap between two or more stakeholders expressing a claim for the same activity/task or for a material and/or an informational link as the intersection of two or more (depending on the stakeholders making a claim), red circles, drawn upon the BSPA value chain (a three-dimensional Porterian value chain). In BSPA organisational conflict is located on the control overlap area(s). The intensity of the organisational conflict, embedded in the control overlap area(s), regarding the control over or the possession of a particular activity(ies)/task(s), were depicted as motivational forces their

motivation of which can be explained by Habermas' knowledge constitutive interests while there measurement can be done with the use of a fuzzy scale.

In addition, the control overlap areas in BSPA are regarded as the areas where organisational entropic trends are developing. For this reason the fuzzy measurement of organisational conflict, located on the control overlap areas, was used for the development of an organisational entropic monitoring system.

Finally, the BSPA's OOEN and the Specific and Extended SSRs were linked together with the BSPA Fuzzy rule into the BSPA double loop learning that is used to check the validity of the BSPA fuzzy rule itself as well as the BSPA philosophy and principles.

From the above we can infer that the strategy's demands for the use, in a complementarist manner, of the SSR and OOEN concepts and their linking together in a double loop learning, that incorporates fuzzy thinking as well, were applied fully on the business system.

In the light of the solution's conceptual requirements the following methodological solutions were developed. These methodological solutions are summarised in the BSPA Methodological Solution Table 7.-1., as follows:

BSPA Methodological Solution Table

<i>Issue</i>	<i>Conceptual Solution</i>	<i>Methodological Solution</i>
1. Track, measure, and report on the organisational systemic/functional integration in terms of the organisational ideological cohesion - Outside View	Based on the SSR concept/subsethood measurement	1. Specific SSR/Management Cohesion Index (MCI) 2. Extended SSR/Management Cohesion Index (MCI)
2. Track, locate on the organisational value chain, measure and report on the organisational entropic trends in terms of the stakeholders' conflict for the control and/or possession of the organisations' material and informational interests – Inside View	Based on the OOEN concept /fuzzy entropy measurement	BSPA Overall Organisational Entropic Number
3. Track and compare the organisational ideological cohesion with the organisational entropic trends	Based on the General Fuzzy Rule -single loop learning- (the subsethood measurement compared with fuzzy entropy one)	BSPA Fuzzy Rule -single loop learning- (the MCI is compared with the OOEN)
4. Track and report on the methodological bias itself	Based on the General Fuzzy Rule - double loop learning – The general Fuzzy Rule under review on the basis of the comparison results from the above measurements	BSPA Fuzzy Rule -double loop learning- The BSPA philosophy and principles under review on the basis of the comparison results from the above measurements

5. To provide the stakeholders with meaningful knowledge to exercise critical systems thinking	Create the stakeholders profiles	Development of the Actors Profiles
6. Use complementary thinking to address different aspects of organisational life	Production of new methodology based on the inter/intra methodological complementarity	<p align="center">Inter/Intra Theoretical & Methodological Complementarity</p>
		<p>1. The Specific and the Extended SSR</p> <ul style="list-style-type: none"> - The 7Ss Model - Porter 5 forces model - Porter Generic strategies model - The Ashridge Mission Model - Galbraith's Centre of Gravity Model - Mintzberg's Core Business Model (Upstream/Downstream classification model) - The closure concept and the system five concepts (managerial cybernetics) - Lewin's Life Space Model - Maturana's Autopoiesis concept <p>2. Inside & Outside view</p> <ul style="list-style-type: none"> - The Value chain concept - The Alliance capitalism concept - General Systems Theory - Fuzzy Logic - Organisational Theory - The Theory of Communicative Action - Lewin's Life Space model - Psychoanalytic Paradigm - Discursive Psychology <p>3. OEN</p> <ul style="list-style-type: none"> - General Systems theory - Fuzzy Logic - Lewin's Life Space concept <p>4. BSPA Information System</p> <ul style="list-style-type: none"> - Information Engineering - Structured Systems Analysis - Soft systems thinking - Critical Systems Thinking - Semiotics & Information Theory - The Theory of Communication Action - The Theory of knowledge constitutive interests

7. Use the conceptual solution's validity criteria as a formal system model		The validity criteria was used as a formal system model. The results of their use are explicated in Table 7.-2., in section 7.3.
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Table 7.-1.

7.3. BSPA Evaluation in terms of the Validity Criteria

In theoretical terms, at this stage of the methodology's development, we can claim that BSPA is a critical systems methodology aimed to be used for the analysis of complex-coercive methodologies and for the analysis of the organisational power phenomenon in general. BSPA is unique because it amounts, in our opinion, to a breakthrough in regard to this particular systems field (the critical systems field), as well as in regard to its methodological approach. In theoretical terms the BSPA methodology (chapters five and six) can be used for the identification and analysis of organisational power and politics in accordance with its principles and philosophy (chapter four), thus with its ontological and epistemological frameworks.

Therefore in this section we will examine BSPA against the validity criteria that were set out in chapter three for the development of an intrinsically motivated information system to see if the BSPA methodology qualifies as a critical systems methodology. This examination is summarised in the BSPA vs. The Validity Criteria Table 7.-2., as follows:

Conceptual Solution's Validity Criteria Table

Position:	Validity Criteria	BSPA
Represented by:		
Subjectivity	The materialistic and the informational roots of subjectivity must be used to explain relative objectivity in terms of ideological identification and subsequent systemic cohesion	<i>The stakeholders are asked to express their subjective views in regard to theirs as well as in regard to the other stakeholders' (as they perceive them) control and/or possession of the organisation's material and informational assets. These views are compared with their ideological constraints in order to explain their subjectivity and the relative objectivity they identified with in the light of systemic cohesion and in the light of the organisational complex-coercive relationships</i>
Complexity	Business systems are made up of official objectified hierarchies that are interwoven with its HAS content	<i>The perceived (by the stakeholders) organisation chart and organisational HAS content is mapped on the perceived organisational value chain</i>
Wholeness of systems (holism) is	Parts (namely the stakeholders motivated by their knowledge constitutive interests) must be defined in terms of common material and informational interests. The highly complex material and informational interaction of parts corresponds to the autopoietic ideological process. The concept of organisational ideology as the ideology of the whole must serve the critical purpose of reminding us of the limits of organisational strategic orientation and action	<i>The use of the SSR concept serves the critical purpose of reminding us of the limits of organisational strategic orientation and action, as well as systemic cohesion</i>
Reducing complexity of systems to 'simple' subsystems (reductionism) is	<u>Only</u> when we consider that the individuals making up a business system (the HAS content) are part (a subsystem) of an <i>expendable tool</i> (the business system) with distinct instrumental orientation	<i>The design or the redesign of the business system in terms of functional subsystems is allowed only after its HAS content (subsystems) has defined in a priori and in a coercion free manner the systems' instrumentality</i>

<i>The purposeful character of systems (teleology) is</i>	The organisational ideology autopoietic nature: official organisational purposes must be interpreted by the management and the employees. Organisational perceived purposefulness must be examined in the light of organisational power and politics	<i>The use of Maturana's and Varela's autopoiesis concept along with the general systems theory and the cybernetic principles of systemic viability, and along with the BSPA participative method (four official organisational levels every time), and always in the light of the organisation's political metaphor (complex-coercive relationships) is critically considered as the result of the stakeholders' power game</i>
<i>The decomposability principle is</i>	Only after the HAS content of the business system has defined, in a coercion-free manner, the purpose as well as the structure and the functions of the business system (being a designed system)	<i>Is accepted because the HAS content is allowed to define a priori in a free manner the organisation's purposefulness in the first place</i>
<i>The description of systems must</i>	Focus on redundancy for the business systems instrumental (based on theoretical reason) design in the light of its HAS uniqueness	<i>The uniqueness of the HAS content materialises in the inside view while the redundancy of the expendable tool, namely the business system, materialises in the outside view</i>
<i>The crucial design task to solve is</i>	The problem identification in terms of the organisational ideological constraints and in terms of the phenomena of organisational power, coercion and false consciousness of the whole system before the design of the business instrumental design takes place	<i>Problematic and solution is identified within the organisational SSR and it is explained in terms of the control overlap areas identified on the organisational value chain</i>
<i>The designer's main task is</i>	The subjectivity and relative objectivity is facilitated through the exchange of validity claims which aim to a coercion free consensus and thus becomes the necessary relative objectivity needed for the design of the business system instrumental design itself	<i>The designer acknowledges first his/her own subjectivity and bias, in other words he/she becomes self-enlightened in the light of the relative objectivity (ideology) he/she identifies with</i>

Table 7.-2.

From the above we can infer that BSPA meets fully the Validity Criteria that were set out in chapter three. The advantages and the disadvantages of the BSPA methodology, produced in a self-reflecting manner, at this stage of its development are summarised in the following sections.

7.4. BSPA Specific Advantages

In this section we summarise the specific advantages of the methodology, as we perceive them in our biased way, while in the next section we will record the methodology's disadvantages in an effort to transcend our bias.

- a) The BSPA methodology is a focused and not a generic problem solving methodology. It is focused on the analysis of business systems (the dominant institution in our society) and this is reflected in the homomorphic model it employs in its epistemology.
- b) The organisational metaphor that is employed for the analysis of business organisations is that of complex-coercive relationships, which admits to the existence of power, politics and false consciousness within organisations. In other words it does not turn a blind eye to the most serious aspects of organisational life as soft and hard systems methodologies do.
- c) BSPA approaches the problem of power relationships in a structured manner. First it treats business systems as special nature systems. It recognises the business system's instrumentality, as well as its HAS content. This way it overcomes the criticism of the functional as well as the instrumental reasoning of system design, and it reconciles the instrumental aspects of the organisation with the sociological ones.
- d) BSPA accepts the fact that an analysis methodology can not be value-free in regard to its epistemological framework as well as in regard to the observer-analyst problem. Instead the epistemological bias in BSPA is accepted as unavoidable and is made explicit. The methodology's ethical biases amount to the conscious belief that every analysis effort of a business system should aim towards the restoration and the promotion of the consumer's sovereignty and towards promoting the concept of the psychological healthy society. In addition it provides the analyst with an ethical framework, epitomised in the Kantian ethic which advocates treating people as ends and not as means.
- e) BSPA searches for the identification of the power relationships in a structured manner as well. By admitting to the strong bond connecting humans' material and informational interests with human knowledge, perception, and ultimately with the process of ideology, BSPA goes down to the roots of the power-relationships problematic. Therefore, in its effort to become a critical systems methodology it does not confine itself to the identification of the stakeholder's Weltanschauungen only that in this thesis are regarded as behavioural expressions of hidden material and informational interests. In addition, it tries to pinpoint the power-relationships in their root by identifying the informal organisation and its grip on the organisational value-chain. This way it tries to identify politics and coercion in terms of the conflicting stakeholders' grip over organisational material and information resources. The fact that a critical systems methodology encapsulates in its epistemological approach the time factor as well (as it is expressed in the organisation's value chain), sheds light on the very important relationship between time and power. Finally, by admitting to a complex-coercive

model of the stakeholders' relationships, it incorporates the semantics as well as the pragmatics of information exchange and communication distortion in the light of the organisational power and politics. BSPA makes a serious effort to overcome the problem of being managerialistic and naturalistic in its examination of the business system and its environment. The methodology tries to link systems analysis with strategic thinking, organisational theory, and information theory. In addition, BSPA admits, in regard to the organisational mission formation, its bias towards the alliance capitalism concept of industrial organisation.

f) BSPA can be characterised, in regard to its philosophy, as basically modernist, but being sensitive to the post-modernist criticism of the language medium. The methodology adheres to the principles of the psychoanalytic paradigm but it does not rely totally on the transparency of language, as it is claimed by the modernists, to bring about a coercion free consensus. Actually, the methodology tries to overcome the problems that prevent language from being transparent in an effort to overcome the obstacles in achieving a coercion-free consensus. With the aim of creating and approximating the "ideal speech" situations, as they are defined by Habermas, in BSPA though we categorise organisational problems in the light of organisational politics and coercion we try to pinpoint the sources of power relationships independent of the problem stated. Finally, by using a two-way analysis concept, namely the inside/outside views of the organisation, we try to overcome any problems arising in the enquiry of the business system from its dual nature.

g) In BSPA we set the foundations for creating structured feedback mechanisms [based on the MCI and the Overall Organisation Entropic number – that can be captured by a computer program in the future]. These feedback mechanisms will become the basis for evaluation and learning in regard to any course of action taken by the individual stakeholders and the system as a whole.

h) Finally, we can claim that BSPA overcomes, in a critical systems manner, the barriers erected by traditional management systems, according to Kaplan and Norton (1996), regarding the translation of organisational strategy into action, namely purposeful behaviour. Kaplan and Norton argue that they have identified four specific barriers, namely the organisations' inability to "*translate its vision [purpose] and strategy into terms that can be understood and acted upon*"; the organisations' inability to translate their "*long-term requirements of the business unit's strategy are not translated into goals for departments, teams, and individuals*"; the organisations' failure to "*to link action program and resource allocation to long-term strategic priorities*"; and the organisations' "*lack of feedback on how the strategy is being implemented and whether it is working*".

BSPA overcomes all those barriers with the employment of its two way epistemological approach (namely the outside and the inside views) that provide organisational stakeholders with an integrated critical systems framework for organisational action at the sociological as well at the psychological levels. The first the second barriers and the third barriers are dealt with by the use of the SSR and subsequently with the use of the OOEN (that corresponds to the outside-inside views accordingly) and with the structured participation of the inside stakeholders that is based on the mapping of the official organisational chart on the organisational value chain. This way BSPA deals in systemic terms with the organisational conflict and its material and informational causes, namely with the effects of the organisation's material and informational resources allocation, in terms

of its strategic as well as its tactical and operational dimensions. The fourth barrier is dealt with the use of the BSPA fuzzy rule that is used as a double-loop learning organisational mechanism that provides structured feedback in regard to the different aspects of organisational purposefulness, namely the sociological the psychological, the systems aspects and the commercial rationale aspect as well in strategic as well as in tactical terms.

From the above we can claim that with the use of BSPA the stakeholders acquire the ability to design purposeful systems in terms of performing "inquiries"⁶⁵, "actions", and "valuations" (Ulrich, 1983) tasks. A system designed with BSPA should produce meaningful knowledge in respect to the organisation's mission definition; and it should aid the process of reaching a coercion free consensus between the stakeholders for the design of a compatible with mission organisational structure and functions. Finally, feedback mechanisms being the integral part of an intrinsically motivated information system will keep the stakeholders alert in regard to the sources of deception that might prevent the system from examining critically its purposefulness.

7.5. BSPA Disadvantages and Possible Criticism

The development of BSPA so far has been entirely theoretical. The methodology has been developed to a high degree of detail but in theoretical terms. This is a major handicap that can only be overcome by applying the methodology itself on real business organisations. This implies that it will take some time and it might lead to changes in the methodology itself. Therefore in the light of this handicap we will try to overcome our bias and even our bounded rationality due to the lack of the methodology's practical application in order to identify the methodology's disadvantages.

a) The basic disadvantage of the methodology lies in the fact that it gives no guarantee in regard to dissolving the power relationships between conflicting stakeholders. Basically, there is no guarantee that the exchange of APs will lead to a coercion-free consensus; instead it might spark-off a process of differentiation thus leading to an unbridgeable gap between the stakeholders due to the revelations made in the APs. The methodology assumes that the very process of drafting an AP will lead the stakeholders to acquiring self-knowledge thus acting in an enlightened self-interest manner, when they come to the negotiation table. Therefore, we can assume that if the AP process fails, then the system will most probably be led down the differentiation road. In this case the organisation will fall into deep crisis or the most powerful stakeholder will make use of the in-depth knowledge recorded in the APs to bring down the other stakeholders. The most powerful stakeholder in

⁶⁵ "...the fundamental design task of the social planner is 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. This task applies to each of the three basic kinds of complementary problem-solving processes that a purposeful system S, and each of its purposeful subsystems, must inevitably perform:

1. **Inquiry:** A purposeful system S must produce meaningful knowledge in respect to its purpose (S ought to become a purposeful inquiring system).
2. **Action:** S must secure the purposeful use of this knowledge (S ought to become a purposeful action system).
3. **Valuation:** S must responsibly evaluate its production and use of knowledge from the standpoint of both the client and those who do not benefit but might be negatively affected (S ought to become a purposeful, morally responsible, valuation system). (Ulrich, 1983).

a situation like this would either exalt the analyst as the ultimate suppresser or he would be ask him/her to leave especially in the case where he/she tries in a conspicuous manner to protect the less powerful stakeholders from the most powerful one. It is our belief though, as we argued before, that the trend towards the so called alliance capitalism model of industrial organisation, would have conditioned the stakeholders into acting more in an enlightened self-interest manner. Contemporary business practices demand for the creation of alliances based on co-operation and co-ordination in order to complete very complex instrumental tasks thus taking advantage of the new forms of a labour force, namely the knowledge-based worker.

b) One might argue that the concept of AP(s) is difficult to implement due to the nature of the subject of the inquiry, and due to the multiplicity and complexity of the factors involved. The answer to this argument is that the analysis of organisational ideology is a very high variety subject indeed. Therefore, the multiplicity of factors is deemed as necessary for its analysis. But if one pays closer attention to the factors selected, one will distinguish the close relationships bounding those factors. For example, the analysis of the organisational ideology of the stakeholders identified will shed light on their inherited value-system, based on historical material and informational interests. The analysis of the organisational HAS's rituals, myths, style, skills, etc., will basically confirm that dominance of that historical consensus, or it will prove its inadequacy to unify the business system's HAS content. Further, the examination of the group's strategy, systems, as well as its spread of control over the value-chain, will reflect the dominant ideology's rationality. In the case where the above factors are not compatible between themselves, that would imply that a differentiation process is well underway. By examining the communication links connecting one stakeholder with other stakeholders (many-to-many relationships), we will identify the sources, as well as the content of influences, which have led the ideological process to an equilibrium expressed as a dynamic cohesion or vice-versa. The identification of the informal organisation will make it possible to identify the origins of organisational pluralism and its causes.

But we have to highlight though at this point the very difficulty of constructing the APs themselves due to the nature of the task and due to the vast amount of work that appears to be involved.

The BSPA analyst in this case is examining the system from the inside making value judgements as any other stakeholder does. He/she is a stakeholder as well, and his/her bias is epitomised in his/her belief that strong ideologies conceal material interests, which are reflected in the stakeholder's perception or the organisation's strategy, style, systems, and motivation towards collective action. This implies that the BSPA analyst must adhere to the BSPA philosophy and principles like a Capitalist or a Marxist believes in Capitalism or Marxism accordingly. Critical systems methodologies in contrast to soft systems methodology, according to Mingers (quoted in Checkland, 1989 -discussed in chapter four), have a theory on how the structure of society - especially its stratification- might limit fundamentally the range of debate about change. Though BSPA does not claim that it employs a theory about the society's structure in terms of the limits that it imposes on the range of debate (though it adheres to the critical systems' thinking one) it employs a theory about the structure of business organisations in terms of the constraints that that very structure imposes on the debate by organisational power and politics. This implies that the BSPA analyst has at least in the beginning to identify

with this particular theory in order to engage in the BSPA analysis. We say at least in the beginning because the BSPA theory itself is subject to the double-loop learning of the BSPA Fuzzy Rule.

But we have to highlight though at this point the very difficulty of finding an analyst with a wide range of skills in order to be able to comprehend and implement the BSPA itself.

c) One might argue that by confining the organisation's social responsibilities into the preservation and promotion of consumer sovereignty concept, we set the business system on the road towards self-destruction. After all, 'pure' consumer sovereignty implies pure competition, no profits, and the abolition of the marketing concept. One might wonder then 'How on earth then', the business system will undertake any complex and long-term investments? This criticism might hold some truth. It is true that pure competition might lead to the destruction of the business system, but the concept of preserving consumer sovereignty, as it is presented in BSPA, amounts to a realistic approach instead of a utopian one. The concept of absolute consumer sovereignty will remain an ideal (especially if we take into account the fact that we live in a fuzzy world), as the concepts of absolute capitalism and absolute communism. The meaning of consumer sovereignty in BSPA, can be confined into avoiding consciously to creating new "manmade market imperfections", in the light of the concepts of the enlightened self-interest and that of alliance capitalism of industrial organisation.

d) One might argue, that the Kantian ethic provided to guide the analyst's actions, is very general and lacks in content. In our opinion an ethical rule or an ethical standard does not have to be specific because that will ultimately inhibit action by being very regulative. Organisational Cybernetics could attest to that.

In addition, one might argue though that this ethic is 'worthless' because it does not guide the analyst into setting priorities between conflicting ethical commands. This is true! But the BSPA analyst is in the business of facilitating the stakeholders' search for self-knowledge in the light of organisational conflict, politics, coercion and false consciousness. The job of setting priorities falls within the stakeholders' domain of action, according to the psychoanalytic paradigm. In this case the Kantian ethic is compatible with the BSPA principles and philosophy.

7.6. Measures of Success

Based on the above discussion we can draw a number of inferences in regard to the best use of BSPA. Actually, the best use of BSPA could be made in the re-orientation of the organisations. A project like Checkland's (1991) re-orientation of Shell-Dutch would be the best case. In addition, BSPA can be used to co-ordinate the value chains of different organisations across an industry and deal with the problems of intra- and inter-organisational politics and conflict that organisations face when they try to upgrade their organisation with structures that facilitate the concept of the alliance capitalism model of industrial organisation. In other words BSPA can be used for the effective and efficient development of Efficient Consumer Response and Category Management structures and processes in the retail sector (retailers co-operating with their suppliers)

of the economy as well as in other industries, including the information systems development industry. In general BSPA, as its name stands for, can be used for the development of mission-critical systems. The measure of success of those projects can not, and should not be defined by the analyst or be prescribed by the BSPA methodology itself in advance for two very important reasons:

a) First, by prescribing a business system's measure(s) of success violates the cybernetic principle that we, as analysts, will always generate less variety than the system in focus; and b) we will violate BSPA's philosophy in regard to the psychoanalytic paradigm, being a central concept to the BSPA's epistemology. We are not the experts, and we can not be, we can only bias the stakeholders towards using the BSPA epistemological framework in their search for disemprisoning, debating, and developing effective as well as efficient organisational structures and functions. The stakeholders themselves should design and develop the measures of success for their designs thus developing those structures that will provide the system with intrinsic motivation and intrinsic control. We can only offer the general framework for the success of a project undertaken with BSPA. Ulrich (1983) in his critique of the *Project Cybersyn* (Beer, 1991) argues that a major handicap of this project was its inability to provide the whole system with "intrinsic motivation" and not only "intrinsic control":

"...the organic systems concept of cybernetics appears to be oriented toward the idea of intrinsic control rather than intrinsic motivation. Intrinsic control means the capability of the system, independently of an external controller, i.e. by means of internal complexity control, to maintain its stability (e.g. its structure, its boundaries, and particularly a given goal state) across a range of environmental or internal variations...."

By analogy, we can introduce the term 'intrinsic motivation' to refer to a system's source of purposefulness (source of motivation) when this source can not be localised within an external decision maker but is distributed throughout the system itself. Intrinsic control does not imply intrinsic motivation: just because a system is capable of maintaining a given goal state by means of intrinsic homeostatic control, it is not necessarily self-responsible with regard to the purposes it serves. If the question of the source of motivation is not raised in addition to the question of control, homeostatic system maintenance or 'survival' tends to be substituted for an openly normative definition of the system's purposes (which are always somebody's purposes)" (Ulrich, 1983, my underlining).

From the above we can claim that any measures of performance of a purposeful system such as a business system should be the result of its intrinsic motivation and not the result of extrinsic or intrinsic control. Therefore, we can only make explicit our bias expressed as an overall general framework for the methodology's measurement of success. This framework should include the following:

1. In regard to the mission-critical systems:

- If the organisational mission, which was selected by the stakeholders with the use of BSPA, when applied led to the teleological design of new structures and new processes compatible with the mission selected.
- If the SSR analysis, in conjunction with the management cohesion index and the overall organisational entropic number, is proven (that they are all consistent and they give the same indications) that can be used as an early warning system for the detection of incipient instability and incipient organisational conflict into the management team; thus proving its usefulness as the outer-feedback organisational loop.

2. In regard to the business system's instrumental purposes:

- If the objective (measured in money terms) profitability of the organisation has increased basically due to the fact of reducing the organisation's and the industries transaction costs (being the result of lessening organisational conflict).
- If industry wide 'cut-throat' competition relationships were replaced by alliance relationships.
- If the new organisational and industrial organisation led to increases in the level of consumer satisfaction (measured by consumer research).

3. In regard to the Cybernetic principles:

- If the organisation, which was designed teleologically, adheres to the cybernetic principles (use of *cybernetic diagnostics*⁶⁶).
- If the number (percentage) of the time assets, owned/controlled by certain stakeholders, has been reduced and replaced by automatic information systems (being subject to stringent business policies that in their turn are subject to continuous review by the stakeholders) thus minimising the resource power of the stakeholders who controlled/owned those assets.
- If the perceived number (percentage) of reward filters and nodes, as well as the information filters and nodes has diminished.

⁶⁶ "Since the very word 'viability' has a basically biological significance, there need be no inhibition about viewing this as a diagnostic enquiry. As we put together the anatomy of the viable system, then -be ready for it- we shall be able to notice that bits of it may be missing. As we discuss the physiology of the viable system, also, we shall be able to recognise those functions that are not operating effectively.

- Some subsystems do not work too well.
- Some inter-connections are too formal or too informal.
- Some communication channels cannot carry their due informational loads.
- And so on - IN PARTICULAR: the balance of central direction and local autonomy may be 'trying to disobey' the cybernetic 'Law of Cohesiveness', thereby inducing stress.

Do not these diagnostic indications make sense already? The 'in particular' surely represents a syndrome wholly recognisable by any manager - or, for that matter, any citizen." (Beer, 1990).

- Correlation between the numbers 1 and 2 measurements of success [regarding the system's instrumental purpose(s)] and number 3 (regarding the cybernetic principles) should be carried out to prove the success of the design.

- The cybernetic ratios of productivity, latency, and performance should be introduced to compare the stakeholders' current design with the ideal one, and with the overall design adopted.

4. In regard to Strategic Thinking:

- If strategic thinking has become interactive (subject to creation and generation of new ideas in contrast to proactive that anticipates but does not create new ideas) under the concept of the enlightened self-interest that implies the acceptance of the organisation's social responsibilities.

- If education and training of the employees is undertaken to promote systemic thinking and co-operation.

5. In regard to Information Systems design and development:

- If the design of the databases supports the systemic mission as well as the organisational structure and processes. Structured English, even in the early stages of the BSPA enquiry, for the description of the organisational processes regarding the policy(ies) governing the transformation of the organisational inputs into outputs at a high level of abstraction, was used for the design of business system's physical databases.

- If the organisational information system supports the informational exchanges of the organisation's informal organisation as well (redundancy should be built in order to support the unofficial communication). In other words does the organisation's information system encapsulate in its design the HAS's internal sources of control and motivation?; and does it convey information to the stakeholders that it is not only syntactically correct but it is regarded as semantic and pragmatic as well by the stakeholders themselves?

The above measures in our opinion should be included in every BSPA enquiry (without excluding the possibility of the users developing more measures of success as well), but the very thresholds of success and failure must be left to be defined by the stakeholders themselves.

From the above one might infer that the BSPA can only be judged by the success of the projects that use it. This is true to a large extent. But one has to remember that the use of the outer loop of the BSPA Fuzzy Rule double loop uses the information gathered in the form of the MCI and the OOEN to infer the validity of the bias hidden in the Fuzzy Rule itself and subsequently in the BSPA philosophy and principles. This implies that though a project might fail due to the fact that the AP process failed and the analyst had to go away, or the system itself fell into an irreversible differentiation process due to unbridgeable conflict, etc., the MCI and the OOEN scores, that were gathered before the AP process, can be used to validate the fuzzy rule itself.

Therefore, we can claim that the very success of a project would provide us with the ability not only to validate the fuzzy rule but with the ability to fine-tune the rule and start generating new ones in order to

develop a fuzzy system. A project failure would provide us with the ability not only to validate the fuzzy rule but with the ability as well to fine tune the fuzzy rule or terminate parts or all of BSPA itself. It all depends of course on the practical application of the BSPA on real business organisations and on the survival of the failing projects until the stage of the APs at least where is the high risk part of the project.

BSPA is a novel approach in the critical systems field and despite its future success or failure as a methodology we would like to believe (bias of the developer) that it amounts to a breakthrough in the critical systems field aiming towards creating a momentum for further research into the critical systems field in general and specifically into the very application of the concept of critical system thinking in the management and the design of the contemporary business systems.

7.7. BSPA Positioning

BSPA is intended for use in situations where two existing methodologies appear to have something to contribute: those for information systems development, and those for organisational intervention. As will be explained, its focus is different from that of information system development methodologies and while it covers similar territory to some of the methodologies for organisational intervention, particularly the "soft" ones, its philosophy is different. Looking first at information systems development methodologies one might argue that BSPA looks similar to Martin's Information Engineering (IE) at the strategic planning stage. However, BSPA is conceived as a critical systems methodology because its epistemology is based on the concept of critical hermeneutics; IE seems to fall within the naturalist hermeneutics domain. As it was argued in chapter two IE's approach is managerialistic, expert and technology driven, and very permissive to the sponsor of the study. Turning to soft systems and to TSI, BSPA bears obvious philosophical similarities to methodologies like Checkland's SSM and Flood's and Jackson's TSI. However it differs from SSM because it regards business systems' problematic areas not as complex-pluralistic but as complex-coercive. The differences between the BSPA's critical systems philosophy from the soft systems ones are elaborated in section 7.7.1.. No existing soft systems or critical systems methodology goes as deeply to the roots of complex-coercive problematic areas hidden under the mantle of organisational ideology. In BSPA the perceived organisational chart is mapped onto Porter's value chain, to answer the questions "who possesses, or controls what?" and "who intends to possess or control what?" The stakeholders' capacity to possess or to control organisational material and informational assets amounts to the exercise of power in BSPA. The addition of the value chain to a soft systems epistemology has not been done arbitrarily and does not amount to a simple improvement. It is a powerful solution regarding the identification of complex-coercive problematic areas in their origins.

However, to get to this point it is necessary to reject the analyst's value free stance advocated even by soft-system methodologies, and instead allow for the analyst's values in the methodology, as long as they are made explicit and applied consciously. BSPA employs a two-way intervention, namely the inside-outside view, thus adhering to the business system's special nature. The BSPA's business systems definition itself implies a complementarist approach in terms of hard and soft systems thinking best represented by Simon and

Churchman respectively. With the use of BSPA we aim to aid the process of attributing a business system not only with a teleological designed structure and functions for intrinsic control only but also with the structure and functions for intrinsic motivation as well.

In many of the previous chapters the issue of whether a critical systems methodology, such as BSPA, would be allowed to run its course by the most powerful stakeholder was raised. The main arguments used so far were the following:

- 1) The conditioning of the stakeholders towards more alliance forms of industrial organisation (alliance capitalism)
- 2) The movement towards a knowledge-based society, and the
- 3) BSPA's problem-free enquiry based on the psychoanalytic paradigm.

The last point is very important for BSPA's success. The BSPA systemic enquiry approach parallels Lewin's (1952) restructurization-psychological directions-meanings concept. Lewin argues that a psychological direction (meaning purposeful behaviour) depends on the cognitive structure of the perceived problematic area and the stakeholder's life space in general. This implies that if we want to keep the most powerful stakeholder from blocking the analysis effort, we have to change the structure of the problem and his/her life space in general; and thus allowing him/her to restructure his/her life space towards resolving his/her problematic area and not towards finding a solution. Lewin calls the restructuring process learning and he explains the learning process of a one-year-old child as follows:

“What is the difference between the psychological situation of the one-year-old child who cannot find the way to his goal when he stands within a U-shaped barrier (Figure 6) and the four-year-old child who has no difficulty whatever? To state this question in a different form: What psychological change occurs at the moment when the child has ‘insight’ into the solution for the first time? The difference can partly be described as follows: Before the solution, the direction ($d_{A,G}$) from the region A where the child (P) is located toward the goal G is the same as the direction ($d_{A,B}$) to the barrier B ($d_{A,B} = d_{A,G}$). Moving in the direction C would at that time mean for the child going in the direction ($d_{A,-G}$) ‘away from the goal’ ($d_{A,C} = d_{A,-G}$). The force $f_{A,G}$ acting on the child in the direction toward this goal leads, in this constellation, to a tendency to locomote in the direction $d_{A,B}$. As the restraining forces of the barrier B are too great, the child is unable to reach its goal. After the insight (or when the child is old enough), the cognitive structure of a situation is changed. The areas A and G, which previously had the character of separated areas, are now connected as part of the area A, C, D, G. A locomotion from A to C may be seen as the first part of the path $W_{A,C,D,G}$. Correspondingly, the direction toward C ($d_{A,C}$) rather than away from G ($d_{A,C} = d_{A,G}$; $d_{A,C} = d_{A,-G}$).

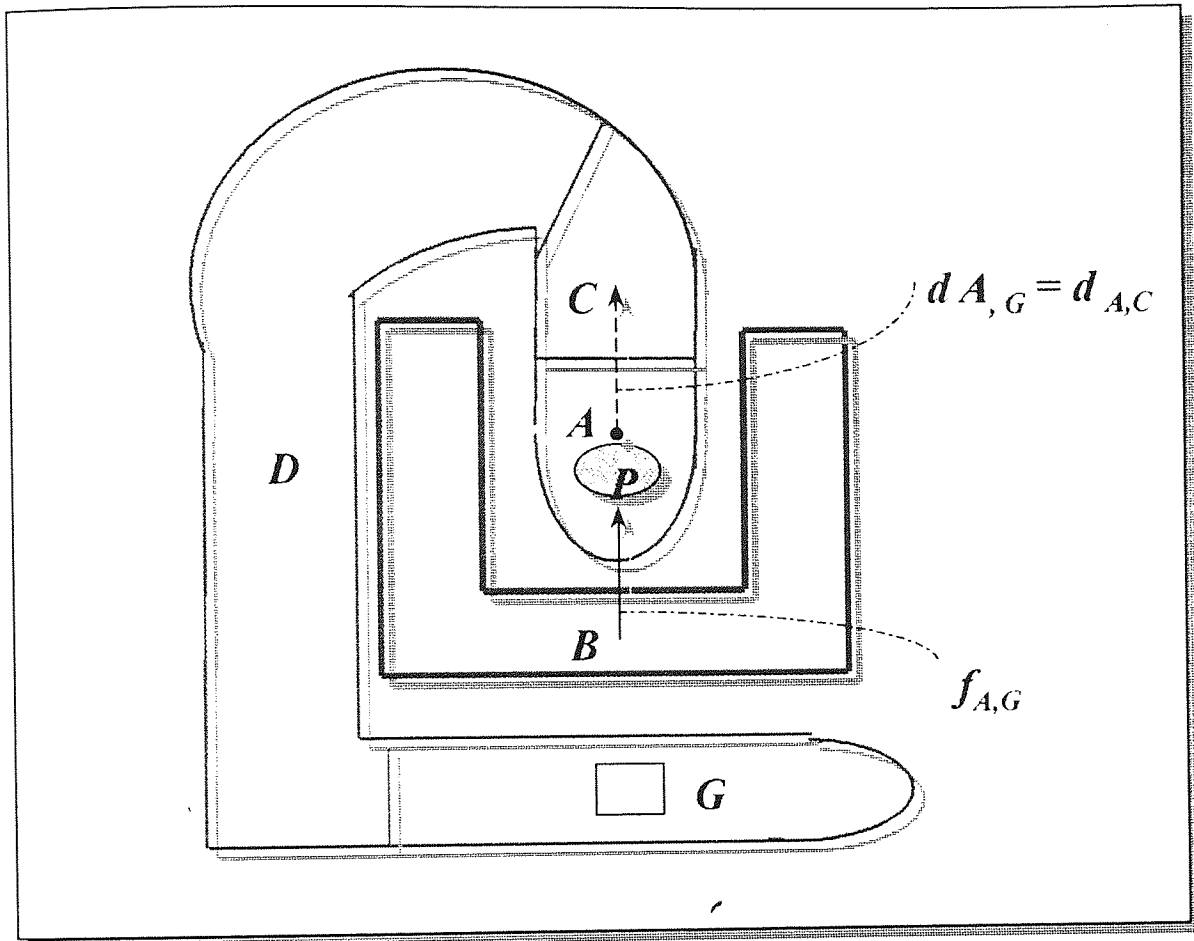


Figure 6

The force $f_{A,G}$ leads now to locomotion from A to C, in line with this changed meaning of the direction. This example illustrates how a psychological direction depends on the cognitive structure of a give situation... Learning, as a change in cognitive structure, has to deal with practically every field of behaviour. Whenever we speak of a change in meaning, a change of such cognitive structure has occurred. New connections or separations, differentiations or dedifferentiations, of psychological areas have taken place.'' (Lewin, 1952).

It has to be noted that the most powerful stakeholder, who in this thesis is regarded as a very likely candidate of the analysis work's initialisation, is facing a problem similar to that depicted in figure 6. He/she is motivated towards solving the perceived problem in the cases where money losses are observed, or conflict is open. In the first case the barrier he/she is facing is the objectified world of the market which 'refuses' him/her the profits, while in the second case other organisational stakeholders are the obstacles. The problem-free approach ensures a road away from the problematic area aiming towards gaining a systemic view of the interdependent areas making up the problematic situation. One might argue that this is SSM's approach as well, aiming at building a rich picture. This is true, but the difference lies in the fact that when the road away from the problem leads us to building the rich picture (using a different epistemology than SSM) which then is subjected to critique that will provide the stakeholder(s) with self-knowledge. SSM can not provide the stakeholders with self-knowledge to the fact that, as it was argued in chapter four, that the SSM epistemology is

circular because it is uncritical. In other words though the principle is the same (to build a rich picture) the BSPA epistemology is very much different.

Therefore, we believe that the most powerful stakeholder will go along when we provide him/her with the option of building a systemic picture depicting those business interdependencies entering the perceived problematic area's equation, thus changing his/her cognitive structure. The very interdependencies identified in the systemic picture make obvious the need for a self-critical stance because that will provide with true meaning any actions undertaken in the past or they are about to be undertaken in the future. That need will be reinforced by the emerging business environment demanding for more business interdependencies based on long term trust relationships (alliance capitalism, ECR, etc.). These arguments though do not necessarily guarantee that every analysis effort will produce an enlightened stakeholder, but we hope that the successes will surpass failures as we are moving towards a truly knowledge-based society.

7.7.1. The BSPA's Critical Systems Philosophy vs. The Soft Systems Philosophy

- A Break in the Cycle -

In BSPA the business systems are defined as special nature systems in the sense that they are designed systems (Checkland, 1989) pursuing instrumental purposes corresponding to humanity's technical interest (Habermas, 1984), but their content is a HAS (Checkland, 1981). Their birth is regarded as teleological (Aristotle taken from Checkland, 1981), being the result of the action(s) taken by a *strategic actor* (oriented to success – not based on mutually recognised validity claims with other stakeholders) (Habermas, 1989) - namely the entrepreneur - who created an 'expendable tool'. The 'tool's' structure and processes were designed in the beginning to achieve spiritual gains (namely to be admitted in God's Paradise after his/her death) through secular production activities (Protestant Vocational Ethic –birth of Capitalism- Habermas 1984). But the secular objective of the Protestant Vocational ethic, measured in terms of short-term monetary gains (namely profit maximisation), later on was differentiated from the spiritual sphere. This confined the organisational purposeful activity into the pursuit of a sole instrumental purpose only with the subsequent effect on organisational structure and processes, e.g. the effect on the organisation's accounting practices. That purpose is that of profit maximisation solely. Changes in the Western world's economic practices during the last hundred years demanded for the institutionalisation of the business system itself. Diffusion of its ownership from one stakeholder (owner) to many (shareholders), transformed them into social entities embedded in an instrumental design pursuing a purpose(s) that are perceived by the stakeholders as teleonomic due to the very complexity of the stakeholders' interaction and due to the objectified environment that they operate within, namely the contemporary capitalist system. The definition of the contemporary organisation's purpose(s) as teleonomic amount to a critical systems disposition vis-a-vis the organisational evolution of the last hundred years. A stakeholder's teleonomic stance regarding the business systems' purposefulness in the light of its structure and processes (teleology) admits to the realisation of the organisation's purposefulness as a highly complex process, the complexity of which can not be comprehended by one stakeholder only. A stakeholder's very realisation of the process's enormous complexity becomes the motivating force for submitting his/her

initial perception regarding the system's purposefulness and the system's structure and process (being a teleonomic one) to a discourse situation where different views are exchanged. The submission of a stakeholder's perception is made in order to enter a discourse situation aiming at exchanging his/her initial perceptions with other stakeholders for the purpose of critically evaluating their validity in an effort to comprehend and define the business system's overall purposeful behaviour, boundary and subsequently the system's structure, processes and subsequently the organisation's effectiveness and efficiency. A business system's behaviour is regarded as teleological by a stakeholder who does not intend to enter a discourse situation, but he/she remains loyal to his strategic actions aiming at designing or influencing the organisational structure and processes in accordance to his/her interests only (Habermas, 1989). A strategic action-oriented stakeholder unconsciously, in the best case, deceives himself into believing that the totality of conditions interacting for the definition of the systems purposefulness coincides, or at least it should coincide, with his/her purposefulness that is oriented towards servicing his/her material and informational interests only; or at least his/her interests predominantly in regard to the interests of the rest of the organisational stakeholders. The source of his/her deception, in critical systems terms, originates from the fact that he/she is not conscious (or he/she at least pretends to be so) of the fact that a business system's teleology can only be realised through *communicative action* (Habermas, 1989) with emphasis on consensual action through discourse (Habermas, 1989) [see diagram 7.-1.].



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A stakeholder that assumes a teleonomic stance when he/she describes a business system's behaviour "as if it were teleological", as well as when he/she makes a claim about the organisation's structure and processes effectiveness and efficiency, without worrying about whether it really is teleological, can not be defined as communicative action in critical systems terms; but rather as strategic-oriented with emphasis not only in systematically distorted communication (see diagram 7.-1.) practices (namely deceiving himself) but in possible manipulation (see diagram 7.-1.) practices (consciously trying to deceive others) as well. The realisation of the totality of conditions defining the system's purposefulness and subsequently the system's structure and processes effectiveness/efficiency criteria should be a strong motivation, indeed, to make the stakeholders want to enter a critical discourse situation with a systems perspective. A discourse situation that would help them to transcend their own ever-limited perceptions thus providing them with self-knowledge in regard to their material and informational interests; being the origins of their perceptions in the first place. The lack of this specific motivation amounts to strategic action and it can not be regarded as teleonomic in critical systems terms. It is true that even if we enter consciously a discourse situation we will never be in a position again to comprehend the totality of conditions that define the organisational purposefulness. But this should not be an obstacle in our search for the 'absolute', if one exists, based on the principle of universal contradiction⁶⁷ rather than that of the excluded contradiction⁶⁸. The important point is to realise the totality of conditions in critical system terms thus realising the essential need to enter into discourse situations that will never get us to the 'absolute' but it will ensure a continuous process towards truly democratic change and progress for the human kind with the use of complementary thinking. Ulrich (1983), quoting Habermas, explains the difference between communicative and strategic action as well as the role of discourse as the process of examining validity claims aiming towards mutual understanding and rational consensus as follows:

"The critical threshold in question concerns the calling into question of the four basic validity claims on which the possibility of mutual understanding and rational consensus rests: the claims for comprehensibility, truth, truthfulness, and (moral, etc.) rightness. In everyday communication, the validity of these claims is 'assumed naively', that is, the purpose of the discussion consists in the exchange of information but not in the examination of the underlying validity claims. In this case Habermas proposes to speak to communicative action (in contrast to strategic action, i.e., use of force/or deception, etc.), for such communication 'remains embedded within the context of action.' If for some reason the validity of the basic claims becomes problematic, normal communicative action breaks off and the participants are then confronted

⁶⁷ The dialectical **principle of universal contradiction**, on the other hand, applies to cases where two opposites exclude each other but do not exhaust the universe of possibilities. For example "blue" and "green" are two predicates that exclude each other in the sense that they cannot describe the same time, but they do not exhaust the universe of possibilities. In classical logic the case is called "contrary opposition". In symbolic logic it is termed "exclusion". (Ulrich, 1983).

⁶⁸ The **principle of excluded contradiction** [This is called in Logic *the law of the excluded middle*] applies only to cases where two opposites exclude each other and exhaust the universe of possible choices, i.e., there is no third possibility. For example, all animals are either male or female, and roses are either red or not red; one of the two must be true in each case. Classical logic designates this formal contradiction "contradictory opposition". In contemporary symbolic logic it is called "contravelance", "exactly one of the two holds," i.e., the falseness of the one implies the correctness of the other." (Ulrich, 1983).

with the following alternative: they can either switch to strategic action, renouncing the search for mutual understanding altogether, or they can attempt to settle the controversial claims argumentatively, so as to re-establish the lost consensual basis for communicative action. In this latter case, Habermas now speaks of discourse rather than communicative action:

'In actions, the factually raised claims to validity, which form the underlying consensus, are assumed naively. Discourse, on the other hand, serves the justification of problematic claims to validity of opinions and norms. Thus the system of action and experience refer us in a compelling manner to a form of communication in which the participants do not exchange information, do not direct or carry out action, nor do they search for arguments or offer justifications. Discourse therefore requires the virtualisation [suspension] of constraints on action. This is intended to render inoperative all motives except solely that of co-operative readiness to arrive at an understanding.'" (Ulrich, 1983).

In the BSPA philosophy the submission of the stakeholders' teleonomic perceptions to a discourse situation aiming to formulate the business systems purposeful behaviour and the subsequent requisite structure and processes (teleology) will not be regarded as true if the participants exchange only their perceptions or they engage in *communicative action* with emphasis to "*reaching understanding*" (Habermas, 1989).

Communicative action with emphasis on *reaching understanding* could lead to *phenomenological* illusions where the human spirit or rather the human consciousness is regarded as an independent force from the *material* and *informational* interests that condition, or rather define it, in the first place. Human spirit can only perceive itself and the world in a *phenomenological* way if it can reflect back on its *material* and *informational* interests that keep it in captivity. Captivity takes place when the *object* (the *subject's* outside world where its volition is directed) dominates the *subject* (a thinking creature endowed with consciousness and volition), or when the *subject* becomes or acts like an *object*. The human spirit (expressed through mental processes) then can be regarded as independent only in the case where its self-reflection on their material, informational, and emancipatory interests is realised at the level of consciousness simultaneously, and not on each one independently, by reflecting back on Man's knowledge-constitutive interests.

"Orientation toward technical control, toward mutual understanding in the conduct of life, and toward emancipation from seemingly 'natural' constraint establish the specific viewpoints from which we can apprehend reality as such in any way whatsoever. By becoming aware of the impossibility of getting beyond these transcendental limits, a part of nature acquires, through us, autonomy in nature. If knowledge could ever outwit its innate human interest, it would be by comprehending that the mediation of subject and object that philosophical consciousness attributes exclusively to its own synthesis is produced originally by interests. The mind can become aware of this natural basis reflexively. Nevertheless, its power extends into the very logic of inquiry." (Habermas, 1989, my underlining).

This is the major philosophical difference between the BSPA and the SSM philosophies. In BSPA the synthesis between the subject and the object cannot be described only in the *materialistic sense*⁶⁹ either in terms of the *idealistic philosophy* only, but rather in critical systems terms. This is a complementarist position when it is based on Habermas's knowledge-constitutive theory. In BSPA, the analysis of social practice reproduced by society's dominant institution, namely the business system, is not confined only in the business system's instrumental purposes (*outside view*) only, either in the nexuses of *communicative action* (*inside views*) only regarding the business system's HAS content. The BSPA philosophy concentrates on both simultaneously with the aim to examine and analyse their interrelationship.

SSM's philosophy is based on Husserl's phenomenological philosophy (quoted in Checkland 1989 and Mingers 1995), which aims to suspend the "common-sense" beliefs based on the *transcendental power of pure consciousness*.

"Distinguishing between the 'natural attitude' in which, in order to live our everyday lives, we make common-sense judgements about the reality of the world and its events, and the phenomenological attitude, in which common-sense belief is suspended, Husserl tried to develop a new method for philosophical thinking based on the latter. According to this the philosopher makes a resolute attempt to suspend his naive beliefs about the nature of the world and to think his way to the data of pure consciousness. Borrowing an expression from mathematics, Husserl speaks of putting the real world 'between brackets'. It is not that the philosopher denies that there is a real outer world, rather that he signals that he is not going to take it for granted in his quest for the universal types among the data of consciousness. From this argument that the basic reality lies in our thinking about the world, rather than in the world itself, Husserl proceeds to build a philosophy which elucidates each type of cognition and the ways in which cognition correlates with the object. Philosophy becomes a study of meaning: according to Husserl the whole philosophical process is one of seeing, clarifying, determining, and distinguishing meanings." (Checkland, 1989, my underlining).

⁶⁹ "Synthesis in the *materialistic* differs from the concept developed in the idealistic philosophy by Kant, Fichte, and Hegel, primarily in that it does not generate a logical structure. It is not the accomplishment of a transcendental consciousness, the positioning of an absolute ego, or the movement of an absolute mind. Instead is the both empirical and transcendental accomplishment of a species-subject that produces itself in history. Kant, Fichte, and Hegel can recur to the material of spoken sentences, to the logical forms of judgement: the unity of the subject and predicate is the paradigmatic result of the synthesis as which the activity of consciousness, ego, or mind is conceived. Thus logic provides the substance in which the achievements of synthesis have been sedimented. Kant takes formal logic in order to derive the categories of the understanding from the table of judgements. Fichte and Hegel take transcendental logic in order to reconstruct respectively the act of the absolute ego from pure appreciation and the dialectical movement of the absolute notion from the antinomies and paralogisms of pure reason. If, in contrast, synthesis takes place in the medium of labour rather than thought, as Marx assumes, then the substratum in which it leaves its residue is the system of social labour and not a connection of symbols. The point of departure for a reconstruction of synthetic accomplishments is not logic but the economy. Consequently what provides the material production and appropriation of products. Synthesis no longer as an activity of thought but as one of material production. The model for the spontaneous reproduction process of society is the productions of nature rather than those of mind. That is why for Marx the critique of political economy takes the place held by the critique of formal logic in idealism." (Habermas, 1989).

Though we agree with Husserl's argument that the basic reality about the world lies in our thinking rather than in the real world we can argue that the very definition of that *reality*, namely the cognition about the world is, according to Habermas, *knowledge-constitutive*.

"Orientation toward technical control, toward mutual understanding in the conduct of life, and toward emancipation from seemingly 'natural' constraint establish the specific viewpoints from which we can apprehend reality as such in any way whatsoever." (Habermas, taken from Ulrich, 1989).

Therefore the "bracketing" of "common-sense" about the *real world*, being a transcendental act in itself, can and should be done in *critical systems terms* rather than in *phenomenological terms*. The BSPA philosophical position is described best by the comments Ulrich makes in regard to Habermas's theory of cognitive interests used as input in the development of a *transformed transcendental philosophy*:

"We should now begin to understand the systematic place of the theory of cognitive, or 'knowledge-constitutive', interests in Habermas' quest for the 'comprehensive rationality of reason that becomes transparent to itself.' In ascribing a 'transcendental' function to the three basic interests, Habermas avoids the problem of an absolute starting point for transcendental reflection without giving up the Marxian conception that the knowledge-constitutive (transcendental) categories must be sought in the basic historical categories characterising the social life-world, without however succumbing to Marx's reduction of social practice to production, i.e., to instrumental action. Thus the technical, practical, and emancipatory interests are given a constitutive role as three basic 'starting points' for transcendental reflection on the conditions and meaning of possible knowledge. They refer to the 'transcendental limits' of objective knowledge [meaning knowledge aware of its limitations], limits that are rooted in the three basic modes of social organisation: work (instrumental action), language (communicative action, mutual understanding), and power (ideological and institutional barriers to emancipation from oppression). Although no form of inquiry or rational discourse can ever 'outwit' these transcendental limits, it is always possible to reflect back on them as conditions on which meaningful description of 'reality' depends." (Ulrich, 1983, my underlining).

In BSPA we believe that there can be no interest-free road to 'true' knowledge. Heidegger, quoted in Mingers (1995), being a phenomenologist himself, argues that such an *idealist* approach is not possible.

"For Husserl, there is a road to true knowledge through disinterested contemplation. Phenomenologists should detach themselves from everyday concerns in order to gain access to the pure ideas of ego's consciousness. For Heidegger, there can be no such idealist representations of subject and object. Our natural attitude, our being-in-the-world, cannot be expressed in, nor does it consist of, conscious beliefs, ideas, rules, and intentions. Rather it is a

sub- or preconscious attitude socialised into us and embodied in our actions and skills. Being, our way of interpreting and dealing with the world, is inherent in the practices of our culture and society and is continually enacted by us in an unmindful way. We cannot uncover the beliefs or intentions behind what we do, for there are none; there are only skills and practices." (Mingers, 1995).

Heidegger argues in favour of the lifeworld's cultural immunisation from critique because according to Heidegger every understanding of a situation relies on and is bounded by the lifeworld's culture itself. This implies that the lifeworld itself can not be transcended with critique. But Habermas argues that cultural tradition (one of the three components of lifeworld, the other two are the society and the personality) can be put, and it should be put, to test from the *inside* through communicative action aiming towards its redefinition with the achievement of collective agreement based on the *force of the better argument*.

"Every step we take beyond the horizon of a given situation opens up access to a further complex of meaning, which, while it calls for explication is already familiar. What was until then 'taken for granted', is transformed in the process into cultural knowledge that can be used in defining situations and exposed to tests in communicative action. It is distinctive of the modern understanding of the world that the cultural tradition can be exposed to testing of this sort across its entire spectrum and in a methodological manner. Centred worldviews that do not yet allow for a radical differentiation of formal world-concepts are, at least in their core domains, immunised against dissonant experiences. This is all the more so, the less there is a chance that the 'unquestionable' character of my experience explodes. In the experiential domain of our cognitive-instrumental dealings with external nature, 'explosions' can scarcely be avoided even when absorbent worldviews restrict the scope of perceived contingencies. In the experimental domain of normatively guided interaction, however, a social world of legitimately regulated interpersonal relations detaches itself only gradually from the diffuse background of the lifeworld. If we understand lifeworld analysis as an attempt to describe reconstructively, from the internal perspective of members, what Durkheim called the conscience collective, then the standpoint from which he viewed the structural transformation of collective consciousness could also prove to be instructive for a phenomenological investigation." (Habermas, 1987).

Though we agree with Heidegger that there can be no disinterested contemplation we certainly do not agree with his uncritical position regarding social action. Based on Habermas's cognitive theory we can assume a critical stance in regard to the stakeholders' *Weltanschauungen* regarding the business system in focus. For this reason we strive for the identification of the origins of those *Weltanschauungen* in terms of material and informational interests which in the case of special nature systems (designed and HAS together) can be traced on the business system's structure and processes. The so-called "bracketing" of the "common-sense" can not be achieved only with the exchange and negotiation of *Weltanschauungen* concentrating on the cultural aspects

of the *lifeworld* (*practical interest*) only and neglecting the role of their material roots as well (*technical interest*).

In SSM stages 4 and 5 (see section 2.3.2.1.), the stakeholders are asked to suspend their *common-sense* regarding the choice of current *means* for the *ends* defined in stage 3 (*root definition*), in *phenomenological* terms, and produce *conceptual models*. Namely to produce *ideal* designs in order to tackle the *problematic areas* defined in stages 1 and 2:

“Now, any root definition may be looked at as a description of a set of purposeful human activities conceived as a transformation process. What is now done in stage 4 is to make a model of the activity system needed to achieve the transformation described in the definition. We now build the model which will achieve the transformation described in the definition. We now build the model which will accomplish what is defined in the root definition. The definition is an account of what the system is; the conceptual model is an account of the activities which the system must do in order to be the system named in the definition. Definitions are formulated without thinking: ‘this system ought to be engineered’. And note that the resulting model, when complete, is not a state description of any actual human activity system. It is no sense a description of any part of the real world; it simply the structured set of activities which logic requires in a notional system which is to be that defined in the root definition.” (Checkland, 1989, my underlining).

Checkland argues that in stage 5 a *phenomenological* comparison between the *conceptual models* and the *problem situation* in stage 2 allows for *subjectivity* to be compared with general *objectified* features of the *real world*.

“... in the stage 5 debate initiated by the comparison between conceptual models and the expression of the problem situation assembled at stage 2, the process is a formal way of elucidating, comparing, and contrasting, different individuals’ typifications of real-world events and structures, very much in the phenomenological manner. At this point the methodology offers a way of describing ‘the universal structures of subjective orientation in the world’ (which will also entail emergent properties of social wholes which transcend individuals) rather than ‘the general features of the objective world’, these quoted words being Luckmann’s (1978) account of ‘the goal of phenomenology’” (Checkland, 1989, my underlining).

It is interesting to note though that the conceptual model building process in stage 4 and subsequently the *phenomenological* comparison in stage 5, that the stakeholders, according to Checkland, find it hard to comprehend and implement:

"[continuing from the end of the quote regarding conceptual model building] This is a hard point to grasp, and once conceptual model building starts there is a noticeable tendency for it to slide into becoming a description of actual activity systems known to exist in the real world. This needs to be resisted because it negates the whole purpose of the approach, which is to generate radical thought by selecting some views of a problem situation as possibly relevant to improving it, working out the implications of those views in conceptual models and comparing those models with what exists in the real-world situation. If descriptions of the real world slip into the model comparison stage we shall be comparing like with like, and novel possibilities are unlikely to emerge." (Checkland, 1989, my underlining).

The problems faced by the stakeholders in stages 4 and 5 are not accidental but they have their roots in SSM's phenomenological approach that demands from the stakeholders to suspend common-sense regarding means selection for the ends identified in the root definition so that they would be able to reason 'freely' and to create *ideal type*⁷⁰ designs. These problems become even more acute if we take in account the fact that the SSM concentrates its phenomenological effort on the means selection and not on the ends formation themselves that are defined in an uncritical manner in stage 3. A major point missed in this approach is that the transcendental reasoning required for the definition of the notional system could be made transparent to itself only if it is made aware of its knowledge-constitutive interests. In SSM the stakeholders are asked to transcend their common-sense regarding means selection by engaging in communicative action with emphasis in action oriented to reaching understanding; without being made aware of those factors that make common-sense common and prevalent in people's minds, namely their material and informational interests. In other words they are asked to make propositions to enter the situations of an idealised discourse in the sense of Habermas's ideal speech situations. In Ulrich's explanation of Habermas's term of *discourse*, similarity with the SSM's demands in stage 5 is apparent except of the mentioning for Habermas's *force of the better argument* concept which Checkland calls *consensual debate*.

"In comparing Habermas's thought with soft systems methodology Mingers (1980) finds three major points of agreement. Firstly, both take seriously the problem of human action- at the same time purposive/rational (hence capable in principle of being engineered) and natural, or unchangeable, as a result of the characteristics of the human animal. Secondly, both conclude that hard systems analysis, tied to technical rationality, cannot cope adequately with the multi-

⁷⁰ "... the conceptual models built in stage 4 are explicitly 'ideal types' in Weber's (1904) sense... Each model of a relevant human activity system embodies a single one-sided concept of such a system, a view much purer than the complex perspectives we manage to live with in our everyday world....

Conceptual models may be validated or justified in terms of logic, not by mapping on the real world, since they do not purport to describe the real world...

Ideal Type: An intellectual construct to aid thinking (hence a concept of epistemology) not a description of something in the real world. The word 'ideal' is not normative, the function of ideal types being to enable comparisons to be made and theories to be developed; but they are usually constructed from empirically observable or historically meaningful components -for example, the individual activities in a *human activity system* are themselves meaningful in the everyday world." (Checkland, 1989).

valued complexities of the real world. Finally, both deny the inevitability of the divorce between rationality and values which characterises natural science., and both try to bring to the two together in rational communicative interaction. Habermas's communicative competence would enable social actors to perceive their social condition in new ways, enabling them to decide to alter it; Checkland's methodology aims at consensual debate which explores alternative world-views and has as criteria of success 'its usefulness to the actors and not its validity for the analyst'. The differences between the two approaches, for Mingers, stem from critical theory's more overtly political stance. Soft systems methodology does not yet have any theory on how the structure of society -especially it's stratification- might limit fundamentally the range of debate about change.' (Checkland, 1989).

But SSM, according to Mingers (quoted in Checkland, 1989), lacks a theory about the way that the society's stratification affects any debate for change.

"Discourse can be understood as that form of communication that is removed from contexts of experience and action and whose structures assure us: that the bracketed validity claims of assertions, recommendations, or warnings are the exclusive object discussion; that participants, themes and contributions are not restricted except with reference to the goal of testing the validity claims in question; that no force except that of the better argument is exercised; and that, as a result, all motives except that of the co-operative search for truth are excluded." (Ulrich, 1983).

SSM's stages 4 and 5 then appear to be idealist as Habermas ideal speech situation, that's why the stakeholders find it hard to grasp the immense importance that these stages hold for human emancipation. Therefore the stakeholders are very likely to skip basically *stage 5* and instead to move directly to *stage 6* where the only choices of means that exist are those that already exist as common sense. Since we argued that there can be no disinterested contemplation of reality even in phenomenological terms then we can argue that SSM's dividing line between the real world and the systems thinking one is illusory as a dividing line in epistemological terms. It would have meaning only if the perception of the real world was accepted as objective. But in SSM the real world, as well as in general phenomenological terms, is a perceptual entity expressed in the stakeholders' Weltanschauungen. This implies that the SSM epistemology is circular because it is uncritical. In addition, this means that in *stage 6*, when the stakeholders are asked to compare the conceptual models that originate from the systems thinking, with systemically desirable and culturally feasible changes in the real world of the problem, then they are always compare 'like with like' or better something with itself.

"The changes themselves are usually described as 'systemically desirable' and 'culturally feasible' (Checkland, 1981), and it is worth dwelling briefly on these phases because if they are understood, SSM is understood. The models of purposeful activity systems built within SSM are selected as being hopefully relevant to the problem situation. They do not purport to be models

of the situation. It is because of this that any changes coming out of the debate initiated by comparing the models with the real situation are (only) arguably desirable, not mandatory. They are systemically desirable if these 'relevant systems' are in fact perceived to be truly relevant. Implementation of changes will take place in a human culture, and will modify that culture, at least a little, and possibly a great deal. But the changes will be implemented only if they are perceived as meaningful within that culture, within its worldview.... What is perceived as 'meaningful' by a particular culture might range from a tiny incremental change to a major revolutionary one -it is not the amount of change which determines feasibility, but whether or not it is seen to be meaningful. Hence the changes introduced by SSM have to be culturally feasible in the sense that they have to be regarded as meaningful within the culture in question." (Checkland and Scholes, 1991, my underlining).

In stage 6 the comparison can be described, as Warburton (1993) argues in his critique of phenomenism that "it is like someone trying to remember the time of a train and having to check this memory against itself rather than against the real time-table." In the case of SSM we can argue that the feasibility precondition, as is defined by Checkland, does not apply only to the changes in stage 6 but to the perception of the problematic area in stages 1 and 2 in the first place. In addition, this implies that the *feasibility* precondition applies as well in stage 3 where *notional systems* are chosen for their *relevance*⁷¹, implying that within a cultural system only *meaningful* (namely relevant -something cannot be relevant if it is not meaningful) systems will be chosen. But according to Checkland the meaningful is embedded within the culture's worldview which in turn implies that *means* definition (to the relevant notional system chosen as root definition) in stage 4 is already preconditioned by the feasibility precondition. In other words, one, for a perceived/meaningful problematic area chooses a relevant/meaningful system (root definition); he builds a model of that relevant/meaningful system to achieve the transformation demanded by the relevant/meaningful notional system (root definition); and finally he assesses the systemicity and the cultural feasibility of the relevant/meaningful model with the very cultural system that defined it in the first place. In SSM there is no break, meaning a critical systems stance, in the cyclical relationship between its stages. One has to critically reflect upon the feasibility precondition (namely why meaningful is meaningful?) in the first place to break the cyclical relationship.

Therefore, we can argue that human emancipation can not materialise in phenomenological terms only but rather in critical systems thinking terms which aim not only at identifying the stakeholders' Weltanschauungen but also in explaining the process which produces them in the first place. In BSPA the use of the idealised design is not regarded as the expression of the stakeholders' free spirit but it is used to motivate the stakeholders to reflect back and become aware of their material and information interests. In BSPA we believe that the stakeholders will tend to design idealised designs which will ideally serve their interests as they are defined by their ideology and not any logic beyond their interests. In order to recognise that logic, or at least

⁷¹ "Root Definition, Issue-Based: A root definition describing a notional system chosen for its relevance to what the investigator and/or the people in the problem situation perceive as matters of contention." (Checkland, 1989).

become motivated to use it they will have to find out why this logic is not common sense in the sense that it does not describe the real world. They need to use critical systems thinking and not soft systems thinking.

7.8. Further Research

In chapter six we raised the issue of irreconcilable conflict between two or more stakeholders. We argued that insistence by one stakeholder on hiding information from other stakeholders, by censoring the AP(s), is a serious indication of irreconcilable conflict between two or more stakeholders. In addition, we argued that if the insistence originates from the more powerful stakeholder then we could say that in his/her 'eyes' the exercise of his/her power is connected directly with his/her request for the information asked to remain hidden. If the insistence originates from the less powerful stakeholder(s) then we can say that these are the points upon which the less powerful stakeholder places his/her strategy for undermining the more powerful one(s); or they are the points that he/she believes coercion (he/she being the coerced but he/she is afraid to challenge), originates. Because the information of the AP(s) refers directly or indirectly to organisational activities/tasks, communication links, or power bases, we can, in conjunction with the control overlap areas (overall organisation entropic number), define the material and informational organisational assets that might cause the system to 'break-up', or become more coercive in the case where the BSPA process fails. We will call these points Critical System Breaking-up Points" (CSBP) and they should be subject to future research to discover if any cybernetic-like principles exist in regard to the degree of irreconcilable conflict in conjunction with the types of material and informational interests perceived by the stakeholders to be the origins of the irreconcilable conflict. Any research on this field will provide us with the ability to 'predict' conflict, and will illuminate us as to the causes of the business systems' differentiation history. Further, it will help us to draw inferences in regard to the 'pure' types of power and coercion as well as providing us with the necessary experience to devise new and more powerful consensus strategies.

We hope in the future, if the basic BSPA Fuzzy Rule is confirmed empirically, to research thoroughly the possibility of building a computer-based generic business fuzzy system that would be customised for specific business systems. The proposed business fuzzy system will be used to track incipient organisational conflict and for the formulation of the business system's purposefulness in a coercion-free manner.

In addition, BSPA, as it was argued above it is a pure theoretical construction, but we believe that it adheres to the principles of Lewin's *action research*⁷². Lewin argues that a successful epistemological inquiry constructed for the enquiry of social groups should be based on a system of concepts where those very concepts have been defined in a way that:

⁷² "*Action Research* is collaborative, driven by a partnership between theorist/researchers and practitioners. It focuses on both theoretical and practical implications of issues. When viewed in the context of other work by Lewin, action research, is seen as focusing on the social context of behaviours and on the dynamics of situations in which behaviours occur. Action research provides a versatile, potentially powerful approach for use in applied research on groups and groups settings." (Maruyama, 1996).

“(1) permits the treatments of both the ‘qualitative’ and the ‘quantitative’ aspects of phenomena in a single system (2) adequately represents the conditional-genetic (or casual) attributes of phenomena, (3) facilitates the measurement (or operational definition) of these attributes, and (4) allows both generalisation to universal laws and concrete treatment of the individual case.”
(Lewin, 1952).

The BSPA epistemology appears to correspond to a system of concepts that are compatible with Lewin’s criteria, with the exclusion of course of point four that carries positivistic connotations. Bargal *et al* (quoted in Maruyama, 1996), identify six action research principles the following:

“They [Bargal et al] reduce action research to six features that characterise it: (1) a cyclical process or planning, action and evaluation; (2) a continuous feedback of the research results to all parties involved, including clients; (3) cooperation between researchers, practitioners, and clients from the start and throughout the entire process; (4) application of the principles that govern social life and group decision making; (5) taking into account differences in value systems and power structures of all the parties involved in the research; and (6) using action research concurrently to solve a problem and to generate new knowledge” (Maruyama, 1996).

The BSPA methodology meets, in theoretical terms, fully all the above criteria. Therefore, we would have to research and confirm the hypothesis that BSPA is an action research methodology as well.

7.9. Conclusion

BSPA aims to enlighten human’s knowledge in regard to the influence that is subjected to by power. The enlightenment process is based on the application of critique that is applied in order that one will acquire self-knowledge as to his material and informational interests. In addition, it aims to facilitate the exchange of value arguments for the attainment of a coercion-free consensus, as the result of the force of the better argument, by offering a rigorous but self-critical framework for social inquiry. The BSPA methodology overcomes the problems of being managerialistic and idealistic.

Further, BSPA’s two way intervention (outside-inside views) overcomes the criticism of the functional and instrumental reasoning of systems design. It creates a meta-framework in which it includes, in a complementarist manner, the two strategic schools of thought, namely the Porterian and the Peterian, along with the structural and behavioural aspects of the organisation.

Individualism is acknowledged in the modernist sense in regard to the perception of industrial environment of the business system in focus, the penetration of power and the activities of the organisation in a manner that adheres to the principles of general systems theory and to the principles of organisational cybernetics; as well as to the Freudian psychoanalytic paradigm and the findings of Discursive Psychology. The inclusion of the

concept of consumer sovereignty and the concepts of alliance capitalism, make BSPA the best candidate for the development of contemporary business structures and functions that fall within the philosophy of co-operation between different trading partners. The co-ordination of value-chains advocated by Porter can be facilitated through the creation of mission-critical systems employing noise-free channels carrying information for organisational learning and understanding. In other words the co-ordination of value chains can result in the minimisation of transaction costs, in the light of human emancipation. Such a co-ordination will prepare whole industries for the coming of the knowledge-based society.

In our opinion BSPA amounts to be a major breakthrough in the critical systems field because it deals with complex-coercive organisational relationships, in a critical systems manner. BSPA achieves that by combining at the meta-theoretical as well as at the meta-methodological levels (as a new methodology that corresponds to theoretical complementarism and deals with the power-relationships problematic without being a slave to the methodological one) the paradigms of strategic thinking, organisational theory, economics, sociology, psychology, general systems theory, information theory, cybernetics, systems analysis, and the best aspects of soft system thinking, critical system thinking, and Information Engineering, into one complementarist epistemological framework.

**GLOSSARY
OF
TERMS**

ACTORS' PROFILE: A summary of a stakeholder's perception about another stakeholder's power base(s) and control over organisational material and informational assets.

ALGEDONIC: "(άλγος, *pain*, ήδος, *pleasure*); pertaining to regulation in a non analytic mode. For example, we may train others to perform a task by explaining analytically the 'why' and the 'how', or algedonically by a system of rewards and punishments which offer no such explanation." (Beer, 1990).

ALGEDONIC LOOP: "a circuit for algedonic regulations, which may be used to over-ride an analytic control circuit. For example, acute discomfort may stop us from performing a task we perfectly understand and wish to complete; fail-safe devices may be used to switch-off a whole plant when some critical variable is exceeded, without knowing why it has happened." (Beer, 1990).

ALGEDONODE: "(algedonic+node); an algedonically modulated probabilistic switch. That is: algedonic information is used at this node to alter the probability that something (which could otherwise be decided either analytically or by chance) will happen." (Beer, 1990).

ALLIANCE CAPITALISM: "...the innovative and increasingly pervasive practice of bringing together a cluster of affiliated companies that extent across a broad range of markets. The best known of these alliances are the keiretsu, or enterprise groups, which include both diversified families of firms located around major banks and trading companies and vertical families of suppliers and distributors linked to prominent manufacturers in the automobile, electronics, and other industries." (Gerlach, 1992).

ANALOGY: "is a process of reasoning from parallel cases" (Flood, 1995).

AUTOPOIESIS: "The word derives from the Greek: ποιό means 'to make'. So an autopoietic system makes itself - continuously. What business is it in? *It is in the business of preserving its own organisation*" (Beer, 1979). In this thesis we adopt Morgan's (1986, taken from Mingers, 1995) definition of autopoiesis as a metaphor for the description of the business organisation. Morgan's work is summarised by Mingers as follows: "First, the relations an Organisation has with its environment are not determined so much by the environment as by the Organisation and its own internal self-image or identity. Organisations are continually concerned to re-create and maintain their image and identity by projecting themselves onto their environments, and what they monitor in the environment is, in turn, a reflection of their own concerns and interests.... Second, Morgan identifies 'egocentric' Organisations, which are overly concerned with maintaining their current identity despite it being inappropriate to their environment. Examples are companies that try to stick to their traditional practices despite changes in technology (e.g., watchmakers) or companies whose activities alter their environment t to their own long-term detriment (e.g., through pollution).... Third, in looking at the history of change and development of an Organisation, it should be concerned that its identity is flexible and compatible with its environment and context." In this thesis *egocentric organisations* are defined as *pathologically autopoietic*.

BLACK BOX: A subsystem which all its possible states are not observable, thus it is not transparent to a stakeholder. The black-box approach in management advocates that "it is not necessary to enter the black box to understand the nature of the functions it performs" (Beer, 1979).

BOUNDARY: "The conceptual division between a system and its environment; it may or may not correspond to recognised geographical, physical, legal or cultural divisions and will be drawn according to the observer's purpose." (Open Systems Group, 1987).

BOUNDARY CRITERION: "everything within the boundary can then be said to belong to the system, while everything outside the boundary belongs to the system's environment." (Ulrich, 1983).

BUSINESS ORGANISATION: see organisation.

BUSINESS STRUCTURE: see structure.

BUSINESS SYSTEMS: Special nature systems. Special is defined as being *designed systems* pursuing instrumental purposes, while their content is a *Human Activity System*.

CASUISTRY: "Casuistry asserted that rulers, because of their responsibility, have to strike a balance between the ordinary demands of ethics which apply to them as individuals and their 'social responsibility' to their subjects, their kingdom - or their company." (Drucker, 1981).

COMMUNICATION DISTORTION: "...meaning that motives other than that of a co-operative search for understanding and truth have determined the [a] consensus [situation], e.g. motives of power, competition, ideology, etc. This suspicion can be refuted only if each participant in the discourse is prepared (willing and able) to substantiate all the validity claims he raises." (Ulrich, 1983).

CRITICAL: The conscious effort to acquire self-knowledge regarding one's worldview. This implies the conscious search for the uncovering of the unconscious influences of material and informational interests being the origins of one's worldview. The dimensions of a critical disposition regarding the perceived social reality are both psychological, regarding the individual's unconscious material and informational interests, as well as social regarding the individual's normative environment.

CYBERNETICS: "The study of control and communication in living beings and machines often involving the application of information theory to the comparison of mechanical or electrical controls with the biological equivalents" (Open Systems Group, 1987).

COMMUNICATION NODE: A stakeholder is perceived to be an *information node* by another stakeholder(s) because he/she is connected to "many" (subjective judgement) communication links and he/she can pass on "consolidated" information (processed and summarised - subjective judgement) to another stakeholder, e.g. a divisional manager could be regarded as a communication node by the General manager, or the head of the secret-service by the Prime-minister. A communication node is most likely to be perceived as having resource power in the sense of controlling the flow of information as well as its timing.

COMMUNICATION FILTER: A stakeholder is perceived to be an information filter by another stakeholder(s) (subjective judgement) because he is not connected to many communication lines and he/she can not pass on "consolidated" information (processed and summarised - subjective judgement) to another stakeholder. The only process that the information is subjected to amounts to the application of one's conscious or unconscious bias. A communication filter can be regarded by another stakeholder as an information node only in the case he/she is controlling few but very important communication links or because the application of his/her bias on the information he/she is passing on to another stakeholder could be regarded as of great importance.

COMMUNICATIVE ACTION: Communicative action is central to HABERMAS's claim that interpersonal understanding is dependent on norms of truth, sincerity, justice and freedom. Whether acknowledged or not, uncoerced agreement requires that dialog partners have equal chances to deploy SPEECH ACTS, and utterances are comprehensible, true, appropriate, and sincerely spoken. Communicative action is illocutionary speech where validity claims are open to public scrutiny, making possible an ideal consensus based solely on the force of the better argument. This emancipatory dimension of language, however, is counterfactual -it is recovered through philosophical critique rather than empirical observation. Hence it is also known as the "ideal speech situation." (Payne, 1997).

COMPANY: An objectified business system, namely a system that employs an official boundary, a legal entity in society, as well as an official hierarchy and an official set of values and standards of behaviour, e.g. ICI, IBM, SONY, BMW, etc..

COMPANY VALUES: One of the four components of mission. "Values are the beliefs that underpin the organisation's management style, its relations to employees and other stakeholders, and its ethics." (Campbell and Tawadey, 1989).

COMPLEMENTARISM: In BSPA, a philosophical position that seeks to reconcile *paradigm incommensurability* at a meta-theoretical as well as at a meta-methodological levels, simultaneously, based on self-reflection and communicative action.

COMPETITIVE ADVANTAGE: "A firm gains competitive advantage by performing these activities [designing, producing, marketing, delivering and supporting its product(s)] more cheaply or better than its competitors.

COMPLEX-COERCIVE Problematic: The system in focus is defined as *complex* and the relationships between the *participants* as coercive. "In complex-coercive contexts, complexity characterising the situations of concern hides the true sources of power of the various participants." (Flood and Jackson, 1991).

COMPLEXITY THEORY OF ORGANISATIONS: "A complexity theory of organisation is built on the following propositions:

- All organisations are webs of nonlinear feedback loops connected to other people and organisations (its environments) by webs of nonlinear feedback loops.
- Such nonlinear feedback systems are capable of operating in states of stable and unstable equilibrium, or in the borders between these states, that is, far-from-equilibrium, in bounded instability at the edge of chaos.
- All organisations are paradoxes. They are powerfully pulled towards stability by the forces of integration, maintenance controls, human desires for security and certainty, and adaptation to the environment on the one hand. They are also powerfully pulled to the opposite extreme of unstable equilibrium by the forces of division and decentralisation, human desires for excitement and innovation, and isolation from the environment.
- If the organisation gives in to the pull to stability it fails because it becomes ossified and cannot change easily. If it gives in to the pull to instability it disintegrates. Success lies in sustaining an organisation in the borders between stability and instability. This is a state of chaos, a difficult-to-maintain dissipative structure.
- The dynamics of the successful organisation are therefore those of irregular cycles and discontinuous trends, falling within qualitative patterns, *fuzzy* but recognisable categories taking the form of archetypes and templates.
- Because of its own internal dynamic, a successful organisation faces completely unknowable specific futures.
- Agents within the system cannot be in control of its long-term future, nor can they install specific frameworks to make it successful, nor can they apply step-by-step analytical reasoning or planning or ideological controls to long-term development. Agents within the system can only do these things in relation to the short term.
- Long-term development is a spontaneously self-organising process from which new strategic directions may emerge. Spontaneous self-organisation is political interaction and learning in groups. Managers have to use reasoning by analogy.
- In this way managers create and discover their environments and the long-term futures of their organisations." (Stacey, 1996).

CRITICAL SYSTEM THINKING: The employment of the Kantian concept of systems thinking in sociological terms and Freud's *psychoanalytic paradigm* in psychological terms aiming to human emancipation from hidden presuppositions, false consciousness and coercion.

CULTURE: "It is the unseen and unobservable force that is always behind organisational activities that can be seen and observed". (Ott, 1989). "I use the term culture for the stock of

knowledge from which participants in communication supply themselves with interpretations as they come to an understanding about something in the world.... Cultural knowledge, insofar as it flows into situation definitions, is thus exposed to test: it has to prove itself 'against the world', that is against facts, norms, experiences. Any revisions have an indirect effect on nonthematized elements of knowledge internally connected with the problematic contents. From this view, communicative action presents itself as an interpretative mechanism through which cultural knowledge is reproduced." (Habermas, 1984, my underlining). Ott's definition is consistent with Habermas's; Habermas describes, further, the way culture is reproduced through communicative action. Robbins (1993) distinguishes culture into "national culture" and "organisational culture" corresponding to a country or an organisation.

DECISIONIST MODEL: "According to this model [Decisionist Model], the values or norms guiding practical action cannot be justified with reason, i.e., through rational discourse and reflection; they represent, rather, subjective 'decisions' prior to rational activity." (Ulrich, 1983).

DESIGNED SYSTEM: "A man-made entity which an observer elects to treat as a whole having *emergent properties*. Designed systems may be concrete (e.g. 'a tramcar') or abstract (e.g. 'mathematics')." (Checkland, 1989).

DOMINANT INSTITUTION: Responsible for the production and diffusion of the prevailing values and beliefs in society. Its dominant position in society depends on the preservation and acceptability by society of those beliefs and values which legitimises its material and informational interests. The influence of the dominant institution extends in society's political, metaphysical, ethical, ideological, economic, aesthetic, and educational aspects. A dominant institution enjoys special privileges derived from the legitimate management of the society's material and informational interests but it is charged with the responsibility of the society's welfare as well. Failure to assume its responsibilities in society could cause great harm to the dominant institution and to society itself.

ENTROPY: "The concept of entropy is closely related to homeostasis. It refers to the tendency of things to move toward greater disorder, or disorganisation, rather than maintaining order as homeostasis describes. Entropy is a 'force' working against homeostasis. (Flood and Carson, 1993).

EPIGENETIC LANDSCAPE: "Epigenesis stands for the accretion of design beyond the merely developmental process. Waddington's 'landscape' provides an image (with its hills and valleys) of this prior build-up of an evolutionary terrain - before the random experiment is made, and onto which the experimental die is cast." (Beer, 1979).

EPISTEMOLOGY: "A theory concerning means by which we may have and express knowledge of the world". (Checkland, 1989).

EFFECTIVENESS: Defining and pursuing the right ends. Subject to practical reason.

EFFICIENCY: Taking action in regard to predetermined ends in the most economical manner. Subject to theoretical reason.

EQUIFINALITY: The ability of an open system to "achieve a steady state from differing initial conditions and in differing ways (von Bertalanffy, 1950).

FALSE CONSCIOUSNESS: Being the product of the negative side of ideology. In real life it takes the form of half-truths, propaganda, unethical advertising, censorship, misinformation from the media, etc..

FEEDBACK: "The modification of a variable, process or system resulting from its own effects or outputs. In the strict sense the modification depends on the difference between the actual state

and a reference state, but the term is also used more loosely to refer to any relationship involving a causal loop.

Positive feedback increases the discrepancy between the actual state and the reference state.

Negative feedback decreases the discrepancy between the actual state and the reference state." (Open Systems Group, 1987).

FUNCTIONALISM: "(1) Doctrine or practice which emphasises practical utility or functional relations (2) Theory of culture which analyses the interrelationship and interdependence of patterns and institutions within cultural complex or social system and emphasises the interaction of these forms in the maintenance of socio-cultural unity." (Open Systems Group, 1987).

FUZZINESS: "The degree of quality of imprecision (or perhaps, vagueness) intrinsic in a property, process, or concept. The measure of the fuzziness and its characteristic behaviour within the domain of the process is the semantic attribute captured by a fuzzy set. Fuzziness is not ambiguity nor is it the condition of partial or total ignorance; rather, fuzziness deals with the natural imprecision associated with everyday events. When we measure temperature against the idea of hot, or height against the idea of tall, of speed against the idea of fast, we are dealing with imprecise concepts. There is no sharp boundary at which a metal is precisely cold, then precisely cool, then precisely warm, and finally, precisely hot. Each state transition occurs continuously and gradually, so that, at some given measurement, a metal rod may have some properties of warm as well as hot." (Kosko, 1995).

FUZZY LOGIC: "A class of multivalent, generally continuous-value logics based on the theory of fuzzy sets initially proposed by Lofti Zadeh in 1965, but that has its roots in the multivalued logic of Lukasiewicz and Godel. Fuzzy logic is concerned with the set theoretic operations allowed on fuzzy sets, how these operations are performed and interpreted, and the nature of fundamental fuzziness. Most fuzzy logics are based on the min-max or the bounded arithmetic sum rules for set implication." (Kosko, 1995).

FUZZY SETS: "A fuzzy set differs from conventional or crisp set by allowing partial or gradual memberships. A fuzzy set has three principal properties: the range of values over which the set is mapped, this is called the *domain* and must be monotonic real number in the range $[-\infty, +\infty]$; the degree of membership axis that measures the value's membership in the set; and the actual surface of the fuzzy set -the points that connect the degree of membership with the underlying domain. The fuzzy set's degree of membership value is a consequence of its intrinsic truth function. This function returns a value between [0] (not a member of the set) and [1] (a complete member of the set) depending on the evaluation of the fuzzy proportion X is a member of fuzzy set A. In many interpretations, fuzzy logic is concerned with the compatibility between a domain's value and the fuzzy concept. This can be expressed as How compatible is X with fuzzy set A?" (Kosko, 1995).

GENERAL SYSTEM THEORY: main points on organisational dynamics:

" - An organisation is an open system: a set of interconnected parts (individuals, informal groups such as departments and business units) in turn interacting with other organisations and individuals outside it.

- Interconnection means that a system imports energy and information from outside itself, transforms that energy and information in some way, and then exports the transformed result back to other systems outside of itself.

- An organisation imports across a boundary separating it from other systems, transforms the imports within its boundary, and exports back across the boundary. The boundary separates a system from its environment but also links it to its environment.

- Relationships across the boundary are always changing, the environment is always changing. The boundary therefore exercises a regulatory function: on the one hand it protects the system from fluctuations in the environment and on the other it relays messages and prompts changes within the boundary so that the system adapts to its environment.

- It is the role of leadership to manage the boundary, to regulate so that the system is protected and changes adaptively.

- Successful management keeps an organisation adapted to its changing environment through a process of negative feedback producing stable equilibrium.
- Adaptation to the environment determines the stable equilibrium balance between differentiation and integration, between maintenance control systems and change, required for success. Organisational paradoxes are thus solved in a unique way determined by the environment.
- Success is therefore a state of stability, consistency and harmony." (Stacey, 1996).

GESTALT: "A gestalt is an organised entity or whole in which the parts, though distinguishable, are interdependent; they have certain characteristics produced by their inclusion in the whole, and the whole has some characteristics belonging to none of the parts." (Gould and William, 1964).

HOMEOSTASIS: The ability of an open system to maintain a steady-state with its environment. In this thesis the concept of organisational homeostasis goes beyond the simple stimulus-response paradigm to include the organisation's spontaneous activity oriented towards creativity beyond stimulus.

HOLISM: "Theory or doctrine according to which a whole cannot be analysed without residue into the sum of its parts, or reduced to discrete elements." (Open Systems Group, 1987).

HIERARCHY OF NEEDS THEORY: "There is a hierarchy of five needs - physiological, safety, social esteem, and self actualisation - and as each need is sequentially satisfied, the next need becomes dominant." (Robbins, 1993).

HYGIENE THEORY: Mankind has two sets of needs. The animal needs their origin of which is biological and the human needs which demand for psychological growth. Animal needs are cyclical and their gratification aims to avoiding pain. Human needs are not cyclical and their gratification aims to creating human happiness.

HUMAN ACTIVITY SYSTEM: "A notional *purposive* system which expresses some purposeful human activity, activity which could in principle be found in the real world. Such systems are notional in the sense that they are not descriptions of actual real-world activity (which is an exceptionally complex phenomenon) but are intellectual constructs; they are *ideal types* for use in a debate about possible changes which might be introduced into a real-world *problem situation*." (Checkland, 1989).

HYGIENE FACTORS: "Those factors - such as company policy and administration, supervision, and salary - that, when adequate in a job, placate workers. When these factors are adequate, people will not be dissatisfied." (Robbins, 1993).

IDEALISED PLANNING: The definition by a stakeholder of the ideal *BSPA Value Chain* for the system in focus.

IDEOLOGY: Is the autopoietic process that produces and sustains meanings, values, signs, shared realities, cultures, world views or Weltanschauungen and beliefs originating from humans' material and informational interests in life. The positive side of the ideology (autopoietic process) provides a social group or the society itself with unity into perceiving the social world. In addition, it provides a HAS with homeostasis, cohesiveness, synergy and orientation in regard to pursuing technical and social goals as well as a framework for perceiving and solving problematic areas. The negative side of ideology (pathological autopoietic process) helps to legitimise a dominant political force, it resists social change and it can be used to distort communication systematically thus creating false consciousness or in other words illusions about the reality of the social world. Organisational mission ("*purpose*", "*strategy*", "*company values*", "*standards and behaviours*"), are the products of organisational ideology which acts as their epigenetic landscape.

INDUCTION: "... a genetic procedure for gaining universally true statements about reality from particular experiences." (Ulrich, 1983).

INFORMATIONAL LINKS: Organisational informational links are distinguished into official communication links and unofficial (corresponding to the unofficial organisation). Further the communication links are decomposed, on the basis of the perceived type of object they are carrying. In other words they are decomposed into "materials communication links", "information communication links", and "report communication links", being a special type of the information links. The identification and the classification of an information link lies with the stakeholders and not with the analyst.

INSTRUMENTAL REASON: See theoretical reason.

INSIDE VIEW: A critical systems and emancipatory view of the organisations. The aim is to eliminate the obstacles that a business organisation's HAS content faces in reaching a coercion free consensus regarding the definition of its instrumental objectives.

INTRINSIC FUZZINESS: "(or imprecision) The property of fuzziness that is an inseparable characteristic of a concept, event, or process. The universe at large consists of mostly fuzzy processes, that is, measurable events that cannot be calibrated or separated into distinct groups. The simplest and most commonly used example is the concept of tall associated with height. At what precise point does a height measurement move from short, to average, to tall? We can demonstrate the ineluctable notion of imprecision by attempting to separate tallness from non-tallness. Let set T be the set of the tall people. At any chance division point $[S]$, we note that the adjoining value $[S]-\epsilon$ (where ϵ is any arbitrarily small number approaching $[S]$) is excluded from the set, yet this point, if sufficiently close to $[S]$, shares nearly all the properties of set T . We can solve this problem by moving the division point left by ϵ . Applying the same separability analysis to this new division point $[S_1]$, we find the same indistinctness. Now, we can resolve this by moving the separation point continuously to the left. At some point, however, the membership of set T no longer represents its semantic property of tall. Thus, in attempting to resolve imprecision we are forced to abandon any precise separability. This means that tallness is an intrinsic imprecise fuzzy characteristic of height." (Kosko, 1995).

KNOWLEDGE-CONSTITUTIVE INTERESTS: Habermas's (1984) categorisation of Man's motivation (interest) for acquiring knowledge about the natural and the social worlds and about himself. Three types of knowledge-constitutive interests are identified the following: 1) Technical interest in controlling and predicting the physical world; 2) The practical interest in communicating with other people and reaching intersubjective meaning; and 3) the emancipatory interest from false ideas.

LIFEWORLD : "...the cultural interpretative systems or worldviews that reflect the background knowledge of social groups and guarantee an interconnection among the multiplicity of their action orientations." (Habermas, 1984).

LIFEWORLD SYMBOLIC REPRODUCTION : "In the symbolic reproduction of the lifeworld, speech acts can simultaneously take on the functions of cultural transmission, social integration, and the socialisation of individuals only if the propositional, illocutionary, and expressive components are integrated into a grammatical unity in each and every speech act, such that semantic content does not break up into segments but can freely converted from component to component." (Habermas, 1987). The reproduction of the structural components of the lifeworld, namely culture-society-personality, as well as the reproduction processes are defined by Habermas (1984) in the following table:

Contribution of Reproduction Processes to Maintaining the Structural components of the Lifeworld
(Habermas, 1984)

<i>Reproduction Process</i>	<i>Structural Components</i>		
	<i>Culture</i>	<i>Society</i>	<i>Personality</i>
<i>Cultural Reproduction</i>	Interpretative schemes fit for consensus ("valid knowledge")	Legitimisations	Educational goals
<i>Social Integration</i>	Obligations	Legitimately ordered interpersonal relations	Social memberships
<i>Socialisation</i>	Interpretative accomplishments	Motivations for actions that conform to norms	Interactive capabilities ("personal identity")

MANAGEMENT COHESION INDEX (MCI): The quantification of agreement or disagreement between the members of the management team performed on the basis and measured against system five's SSR.

METAPHOR: "is the application of a descriptive form to an object or action to which it is not literally applicable." (Flood, 1995).

METASYSTEM: "a system over and beyond a system of lower logical order, and therefore capable of deciding propositions, discussing criteria, or exerting regulation for systems that are themselves logically incapable of such decisions and discussions or of self-regulation (because the metalogic is inaccessible to the system's logic, or the metalanguage is capable of statements inexpressible in the system's language).

Note: a metasystem is of higher *logical* order than a system, and not necessarily of higher 'seniority' in the sense of command. For example: the school timetable is metasystemic to the timetable of a single class." (Beer, 1990).

MISSION: The definition of organisational mission given in this thesis is based on Campbell's and Tawadey's (1989) "*Ashridge Mission Model*". According to their model organisational mission includes four elements the following: 1) "Purpose (why the company exists)", 2) "Strategy (the commercial rationale)", 3) "Company values (what senior management believes in)", and 4) "Standards and behaviours (the policies and behaviour patterns that guide how the company operates)" (Campbell and Tawadey, 1989). According to the above definition the organisational mission statement answers the following questions: 1) "what business are we in?" (strategy rationale), 2) "why are we in this type of business (ethical justification)?", and "what is our ideological background?". In this thesis, based on the concept of "*alliance capitalism*" we have to add the question "with whom do we collaborate with?"; this question complements the commercial rationale in the contemporary business environment. In BSPA the four elements of mission refer in the outside view to the "*company*", but in the "inside view" to the "business system".

MODERNISM: "Modernism is the philosophical stance which upholds reason and believes that rationality can be used to promote and perfect human life. Modernism originates from Enlightenment which upholds that history is a progression towards the emancipation or towards the perfect working of the society as a system. Modernism is distinguished into "systemic modernism" and "critical modernism" (Cooper and Burrell, 1988). Systemic modernism is

associated with the use of the systems approach in describing an programming society towards predetermined ends. Critical modernism opposes systemic and especially opposes the functionalist use of the systems concept used as a tool in social planning.

NATIONAL CULTURE: "The primary values and practices that characterise a particular country" (Robbins, 1993).

ONTOLOGY: "Ontology deals with the nature of existence. That is, what kinds of objects and entities do we take to exist in the world and what are their modes of existence? In other words, what might be the object of our descriptions?" (Mingers, 1995).

OVERALL ORGANISATION ENTROPIC NUMBER: The quantification of the organisational entropy originating from perceived material and informational conflict located upon the organisation's value chain.

ORGANISATION: "refers to the relations between components that define and specify a system as a composite unity of a particular class, and determine its properties as such a unity... by specifying, a domain in which it can interact as an unanalyzable whole endowed with constitutive properties." (Maturana and Varela, taken from Mingers, 1995). In BSPA business organisation refers the relations between the stakeholder's organisational material and informational interests that determine its properties as such a unity.

ORGANISATIONAL ASSETS: Material and informational inputs, processes, outputs. The timing of the above assets is defined as an organisational asset as well (time asset).

ORGANISATIONAL CULTURE: "A common perception held by the organisation's members; a system of shared meaning." (Robbins, 1993).

OUTSIDE VIEW: Systemic, functionalistic view of the organisation's instrumental purposes in the light of systemic integration, cohesiveness and synergy.

PARADIGM: "An intellectual framework" (Open Systems Group, 1987).

PARADIGM INCOMMENSURABILITY: Perceptual differences between two (or more) stakeholders regarding the nature or the operations of the same object or entity; that being a physical, a social, or psychological object or entity. Paradigm incommensurability occurs when "two groups of scientists see different things when they look from the same point in the same direction". (Kuhn, 1970).

PERSONALITY: "By personality I understand the competencies that make a subject capable of speaking and acting, that put him in a position to take part in processes of reaching understanding and thereby to assert his own identity." (Habermas, 1984).

PETERIAN: A name given after Peters (1982) to the school of thought that regards organisational strategy as a pattern.

PHENOMENOLOGY: "... the term referring to the method of enquiry developed by Husserl, following his own teacher Brentano. It is supposed to begin from a scrupulous inspection of one's own consciousness, and particularly intellectual processes. In this inspection all assumptions about the wider and external causes and consequences of these internal processes have to be excluded ('bracketed'). Although this sounds like a programme for a psychology of introspection, Husserl insisted that it was an *a priori* investigation of the essences or meanings common to the thought of different minds'. (Flew, 1979, p.266) Phenomenology is generally accepted as the theory which most clearly underpins the methodological work of P. B. Checkland (1981), although Fuenmayor (1985) gives the only rigorous account of how phenomenology can be used to construct a systems approach based on ontological and epistemological considerations. These efforts have led to a position of relativism in systems thinking and systems practice, which poses some genuine difficulties with respect to choice in 'problem solving'." (Flood, 1990).

PHENOMENOLOGICAL STANCE: "A philosophical position characterised by a readiness to concede primacy to the mental processes of observers rather than to the external world; this contrasts with a *positivist stance*." (Checkland, 1989).

POST-MODERNISM: Post-modernism concentrates on image rather than depth, truth, justice, and reason (the ideals of Enlightenment) are regarded as mere products of particular historical circumstances. Individualism and relativism, in all its forms, is the basis of Post-Modernism.

PORTERIAN: A name given after Porter (1980) to the school of thought that regards organisational strategy as a position.

POSITIVISM: "the denial of the very possibility of a transcendental reflection on the conditions and meaning of knowledge, and the elevation of the procedures of empirical-analytic science itself to a guarantor of meaningful knowledge." (Ulrich, 1983).

POWER: Is defined as the possession or control over organisational material or informational resources. The capacity to possess or control organisational material and informational assets amounts to its exercise as well either through imperialistic actions or even defensive actions regarding the preservation of those possessions or control. Abdication of power amounts to the loss of control or possession of material or informational assets.

POWER BASES: The platform, made up of informational and material possessions, upon which a stakeholder's strategic actions are based. In BSPA five types of power-bases are identified; 1) *Bureaucratic power*: legitimate power over an organisational material or informational resource; 2) *Resource power*: management or possession of organisational material or informational resources. It does not have to coincide with bureaucratic power; 3) *Expert power*: irreplaceable or highly necessary skills; 4) *Patron power*: considerable support by another stakeholder, preferably more powerful than the one in question; 5) *Reward control power base*: reward node or reward filter.

The definition of the a stakeholder employing one or more of the above power bases is performed by other organisational stakeholders and not by the analyst.

PRACTICAL REASON: Reason "is practical when it helps us determine what ought to be or what ought to be done, i.e., when the problem involves our will.... only practical reason can tell us how to use our freedom of choice so as to realise better human (social) systems....The challenge to practical reason consists in using this freedom reasonably, that is, in determining the ends and means of one's actions 'with reason'." (Ulrich, 1983).

PRIMARY ACTIVITIES: "...are the activities involved in the physical creation of the product and its sale and transfer to the buyer as well as after-sale assistance." (Porter, 1985).

PROBLEMATIC AREA: "A problem, usually a real-world problem, which cannot be formulated as a search for an efficient means of achieving a defined end; a problem in which ends, goals, purposes are themselves problematic. (Checkland, 1989).

PSYCHOANALYTIC METAPHOR: Freud's (1924) non-adversarial dialectical method between the analyst and the patient aiming to uncover the unconscious causes of the patient's behaviour. The uncovering of the hidden causes provides the patient with the ability to criticise his/her own behaviour. The psychoanalytic metaphor is used in the critical systems field as an aid for the uncovering of the false consciousness phenomenon and of the influence of hidden (namely unconscious) material and informational interests.

PURPOSE: One of the four components of mission. "Purpose is the most philosophical part of mission. It provides an explanation of why the organisation exists; or to put it in another way, for whose benefit is all the effort being exerted." (Campbell and Tawadey, 1989).

QUASI-TRANSCENDENTAL CRITICISM: "...an argument that does not explain the necessary a priori conditions of empirical knowledge (such as transcendental criticism is supposed to do)

but rather the sources of possible deception contained in the unavoidable a priori component of all knowledge and thought." (Ulrich, 1983).

QUASI-METAPHYSICAL CRITICISM: "... the reflection on the real-world implications or our conceptions of (social) reality, with special regard for the "subjective" concerns of those who live social reality in question... The difference between quasi-transcendental criticism and quasi-metaphysical criticism it is basically a difference " of emphasis with respect to the "critical instance" to which cogent criticism must refer - rational argument and discourse in the first case, lived social reality in the second." (Ulrich, 1983).

REDUCTIONISM: "A doctrine in which explanations are sought in terms of events that operate at a 'lower' level, e.g., the behaviour of a cell is sought in terms of the properties and behaviour of cell constituents and so on down to subatomic level" (Open Systems Group, 1987).

REIFICATION: "From the Latin *res* (thing) and *facere* (to make), the term literally means to make a thing. In Marxist terminology, reification is a specific form of ALIENATION in which the consciousness of the individual is so overwhelmed by his or her identification with the means and fruits of production and the artificial designation of value that the dialectical process of identity is arrested, a psychological closure taking place that denies individual growth, as well as any meaningful social interaction. Hence human beings lose their humanity and become fixed properties in the assumption of capital, wholly defined by their purpose and utility in the capitalist drama." (Payne, 1997).

REWARD NODE: A stakeholder is defined as a reward node by another stakeholder when he/she is perceived to be the final decision maker for the allocation of one or more types of rewards.

REWARD FILTER: A stakeholder is defined as a reward filter by another stakeholder when he/she is perceived to be passing on information to a reward-node regarding the appraisal of another stakeholder.

SEMIOTICS: "comprises three branches studying three different aspects of the use of signs (symbol, language): syntactics, semantics, and pragmatics. Syntactics deals with the formal relationships of signs to one another apart from their meaning; semantics deals with the relationship of signs to the objects or ideas to which they refer, i.e., their connotations; and pragmatics, finally, deals with the relationships of signs to their users." (Ulrich, 1983).

SHARED REALITIES: Commonness expressed by a group or a social class in perceiving the social world. Commonness in perception is the result of ideological identification between the members of a group or a social class.

SHELF-REFLECTION: In BSPA is the process of developing an awareness of one's own operations and reasoning about the material and informational origins of his ideology and worldview.

SOCIETY (as Lifeworld plus system): "Every theory of society that is restricted to communication theory is subject to limitations that must be observed. The concept of the lifeworld that emerges from the conceptual perspective of communicative action has only limited and empirical range. I would therefore like to propose (1) that we conceive of societies simultaneously as systems and lifeworlds. This concept proves itself in (2) a theory of social evolution that separates the rationalisation of the lifeworld from the growing complexity of societal systems so as to make the connection Durkheim envisaged between forms of social integration and stages of system differentiation tangible, that is, susceptible to empirical analysis." (Habermas, 1984). Society and business organisations in this thesis are perceived as systems and lifeworld simultaneously.

SOCIAL WORLD: see society.

STANDARDS AND BEHAVIOURS: One of the four components of mission. "Behaviour standards are instructions about how managers and employees should behave." (Campbell and Tawadey, 1989).

STEADY-STATES RANGE [a stakeholder's organisational ideology] (SSR):

a) *The general concept (ideology):* The ideological limits, depicted diagrammatically as a straight line, that expands between a plus sign representing a stakeholder's identification with a particular organisational ideology, and a minus sign representing a stakeholder's rejection of a particular organisational ideology. Intermediate states are allowed. A stakeholder's perception of problematic and solution is made meaningful within the ideological limits.

b) *The specific concept (organisational ideology):* The ideological limits, depicted diagrammatically as a straight line, that expands between a plus sign representing a particular stakeholder's strategic vision ('*what business we should be in?*'), or in other words the desired strategic domain, called *desired strategic position (DSP)*; and a minus sign representing the current strategic domain ('*what business are we currently in?*'), or in other words the current strategic domain, called *current strategic position (CSP)*. The middle point, represented by an "0", is defined as the current strategic positioning, ('*what type of competitive advantage we are employing by being in the current strategic domain?*'), or in other words it corresponds to Porter's generic strategies and it is called *intermediate strategic position (ISP)*.

c) *The extended concept:* The ideological limits, namely the CSP and the DSP are supplemented with three types of diversification strategies: *related diversification*, *linked*, and *unrelated diversification*. The definition of the organisation's position in regard to these three types of diversification strategies correspond to a stakeholder's ideological limits regarding the concept of alliance capitalism.

STRATEGY: One of the four components of mission. "*Strategy is the pattern or plan that integrates an organisation's major goals, policies, and action sequences into a cohesive whole. A well-formulated strategy helps to marshal and allocate an organisation's resources into a unique and viable posture based on its relative internal competencies and shortcomings, anticipated changes in the environment, and contingent moves by intelligent opponents.*" (Quinn, 1980). "Strategy is the second element of mission. Strategy is the commercial logic of business. It is one of the logics that link behaviour and decision to purpose. To define strategy, management must define the business domain in which the company is going to compete. It must also provide some rationale that identifies, the competitive advantage or distinctive competence that will enable the company to hold a special position in the chosen business domain." (Campbell and Tawadey, 1989). Quinn's definition amounts to a generic definition of strategy, that defines strategy as either a position or a pattern. Campbell's and Tawadey's definition defines strategy as a position and it is compatible with the Porterian paradigm of strategic thinking, advocated in this thesis.

STRATEGIC DOMAIN: "*What business are we in?*" (current strategic domain)?; or "*what business we should be in*" (future strategic domain).

STRATEGIC POSITIONING: What is the type of competitive advantage (cost leadership, differentiation, or focus) (Porter, 1985) we are employing by being in a particular strategic domain (current strategic positioning). And what type of strategic positioning we are seeking (should be employing) by being in this particular strategic positioning (future strategic positioning).

STRUCTURE: "refers to the actual components and the actual relations that these must satisfy in their participation in the constitution of a given composite unity [and] determines the space in which it exists as a composite unity that can be perturbed through interactions of its components, but the structure does not determine its properties as a unity. (Maturana, 1978, taken from Mingers, 1995). "Here however, structure refers to both the static and dynamic elements. The distinction between the reality of an actual example and the abstract generality lying behind all such examples." (Mingers, 1995). In BSPA we adopt Maturana's definition of structure but we

distinguish it in terms of static elements (bureaucratic business structures) and dynamic elements (business processes).

SYSTEM FIVE: The top executive, namely the person responsible for the systemic management of the organisation who provides the organisational system with closure, namely he/she is the embodiment the system's identity. In real life examples of system five are the CEO or the General Manager of a business organisation, the Prime-Minister, The President of the United States, the Head of the General-Staff, etc..

SUPPORT ACTIVITIES: "Support activities support the primary activities and each other by providing purchased inputs, technology, human resources, and various firmwide functions." (Porter, 1985). In this thesis they are called secondary activities as well.

TELEOLOGY: "The philosophical doctrine that developments happen as a result of the ends served by them (rather than as a result of prior causes)" (Checkland, 1989). For a business organisation organisational purpose should define organisational structure and process. In case that it does not then the organisation is pathologically autopoietic.

THEORETICAL REASON: "Reason is theoretical, according to Kant, when it produces understanding or knowledge of what is or what happens;.... Theoretical reason can give us insight into the causal laws and the evolutionary processes of natural systems..." (Ulrich, 1983).

TRANSACTION COSTS: The meaning of transaction costs in this thesis coincides with the definition of *compliance costs*, meaning the costs incurred by businesses, state and local governments in meeting the requirements of the regulatory commissions. Transaction costs are proportional to organisational conflict.

TRUTH: "Truth.... means intersubjectively warranted assertability of statements about objects of experience, i.e., assertions of "facts"; it applies to the a priori of argumentation. Facts are not to be confused with objects." (Ulrich, 1983).

VALUE ACTIVITIES: "Value activities can be divided into two broad types, primary activities and support activities." (Porter, 1985).

VARIETY: "The measure of complexity is called Variety. Variety is defined as the number of possible states of whatever it is whose complexity we want to measure." (Beer, 1979).

TOTAL QUALITY MANAGEMENT (TQM):

"Total quality means that everyone should be involved in quality, at all levels and across all functions, ensuring that quality is achieved according to the requirements in everything they do....

.... *Quality* means meeting customer's (agreed) requirements, formal and informal, at lowest cost, first item every time....

..... *[Management]* refer to the need for everyone to be responsible for managing their own jobs, which incorporates managers with workers and anyone else associated with the organisation." (Flood, 1993).

UNIVERSAL PRAGMATICS: The name given by Habermas to his research program aiming to reconstructing universal and pragmatic, instead of only syntactic and semantic competencies, regarding an "ideal speech situation" made up of "ideal speakers".

VALUE CHAIN: "A systematic way of examining all the activities a firm performs and how they interact is necessary for the sources of competitive advantage.... The value chain desegregates a firm into its strategically relevant activities [designing, producing, marketing, delivering and supporting its product] in order to understand the behaviour of costs and the existing and potential sources of differentiation." (Porter, 1985).

WELTANSCHAUUNG:

a) "Literally 'world view'. An individual (or collective) viewpoint, which is conditioned by environment, background, beliefs, upbringing, etc. It is not itself a set of beliefs, but a framework which underlies one's beliefs." (Open Systems Group, 1987).

b) "In CATWOE the (unquestioned) image or model of the world which makes this particular human activity system (with its particular transformation process) a meaningful one." (Checkland, 1989).

In BSPA *Weltanschauung* is defined as a stakeholder's uncritical holistic image or model of the organisation's existence and operations. It originates from the stakeholder's material and informational interests and basically it is a product of the stakeholder's ideology (ideology is the process which produces *Weltanschauungen*). A stakeholder's *Weltanschauung* is defined as a shared reality when it coincides with that of other stakeholders. In that case different stakeholders should have compatible material and informational interests. In case their material and informational interests are not compatible, then at least one of the actors is a victim of false consciousness.

APPENDIX A1

Functional Organisation

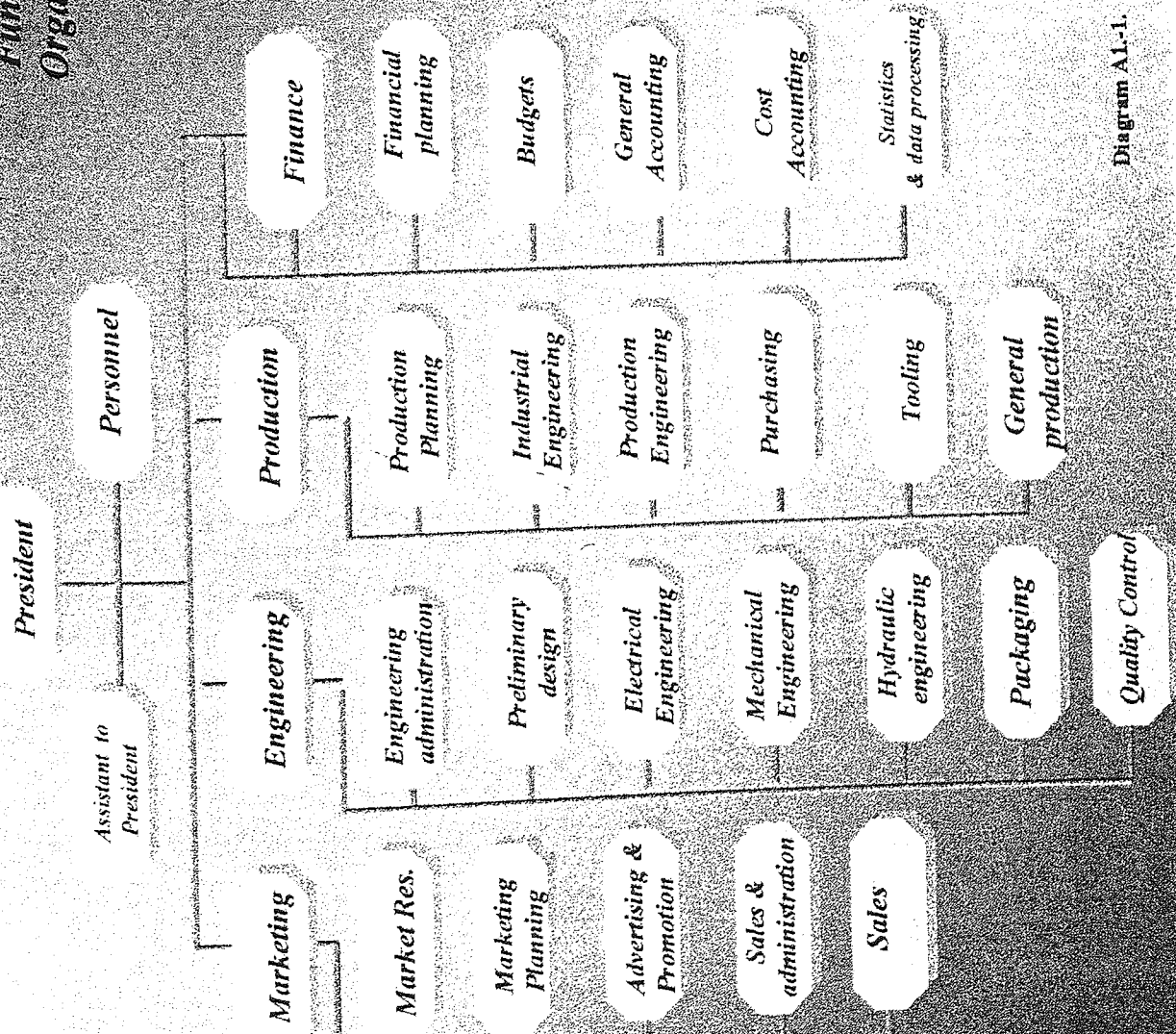


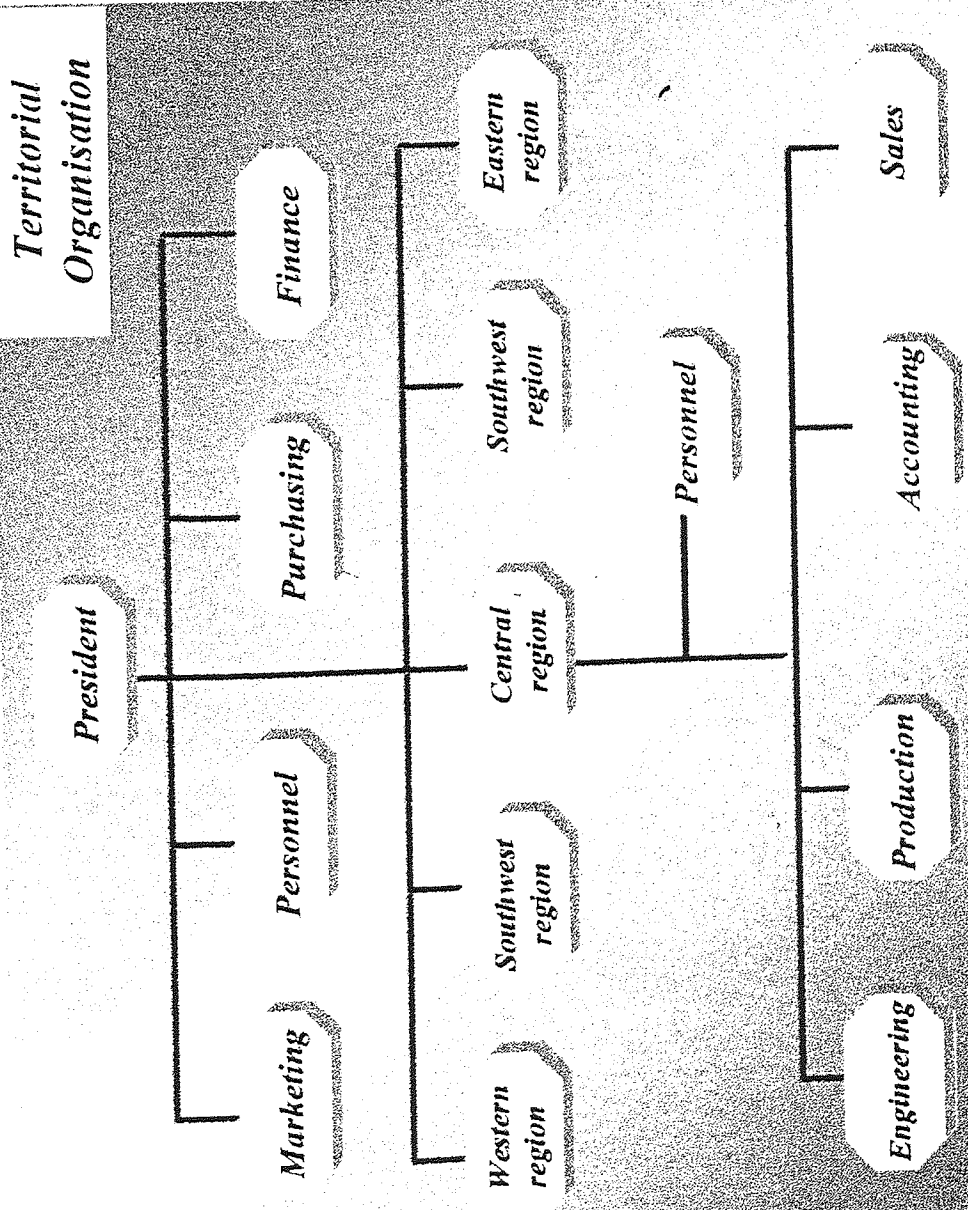
Diagram A1-1.

Advantages

- Is logical reflection of functions
- Follows principle of occupational specialisation
- Maintains power and prestige of major functions
- Simplifies training
- Means of tight control at top

Disadvantages

- Responsibility for profits at the top only
- Overspecialises and narrows viewpoints of key personnel
- Limits development of general managers
- Reduces coordination between functions
- Makes economic growth of company as a system difficult



Advantages

- Places responsibility at a lower level
- Places emphasis on local markets and problems
- Improves co-ordinates in a region
- Takes advantage of economies of local operations
- Better face-to-face communication with local interests
- Furnishes valuable training ground for general managers

Disadvantages

- Requires more persons with general manager abilities
- Tends to make maintenance of economical central services difficult
- Increases problem of top management control

Diagram A1-2.

Product Organisation Grouping

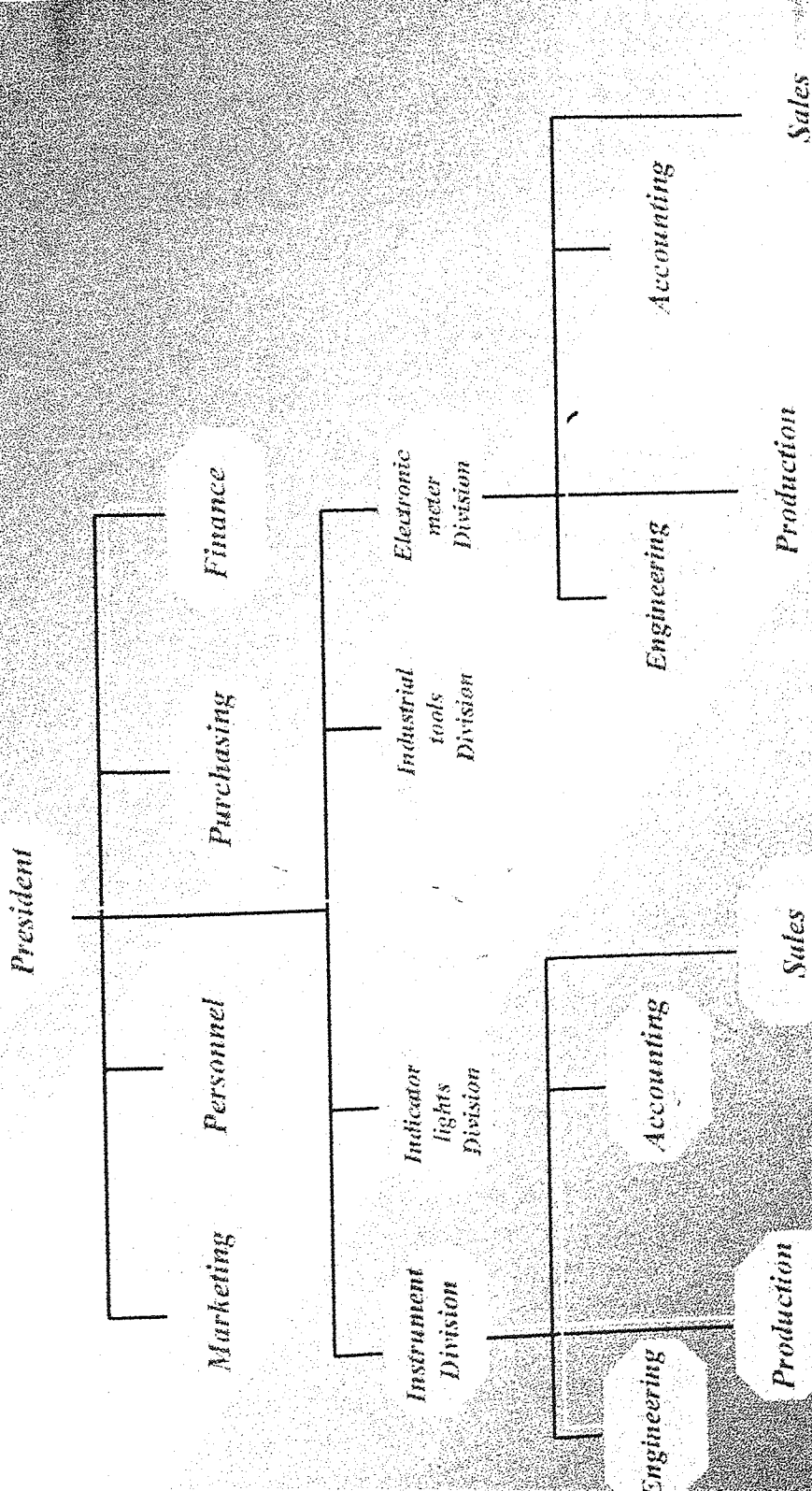


Diagram A1-3.

Advantages

- Places attention and effort on product line
- Places responsibility for profits at the division level
- Improves coordination of functional activities
- Furnishes measurable training ground for general managers
- Permits growth and diversity of products and services

Disadvantages

- Requires more persons with general manager abilities
- Tends to make maintenance of economical central services difficult
- Presents increased problem of top management control

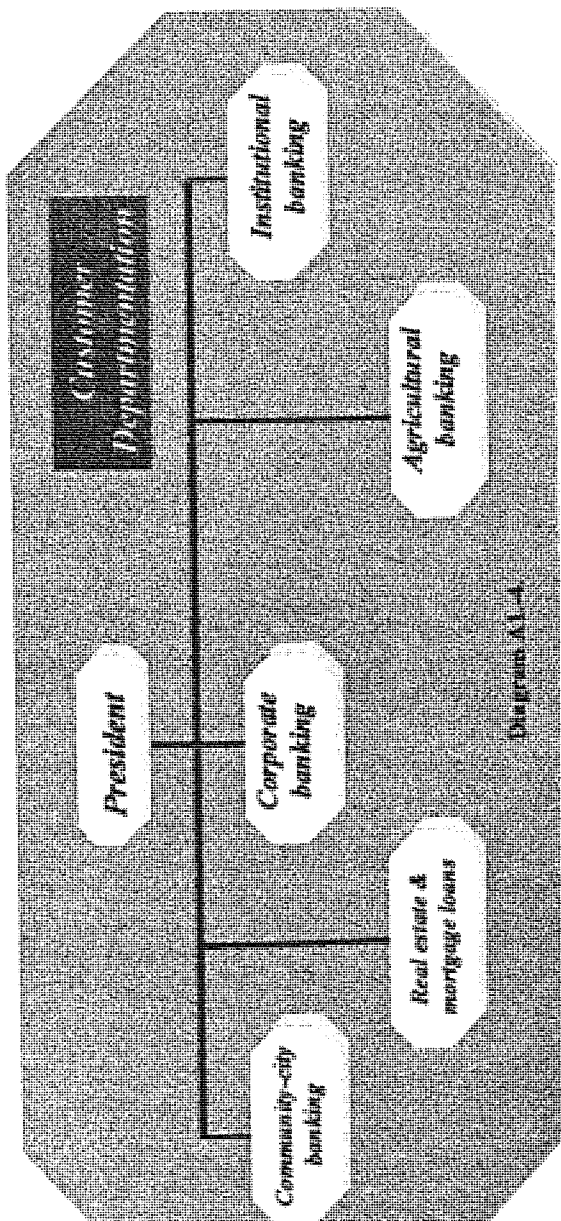
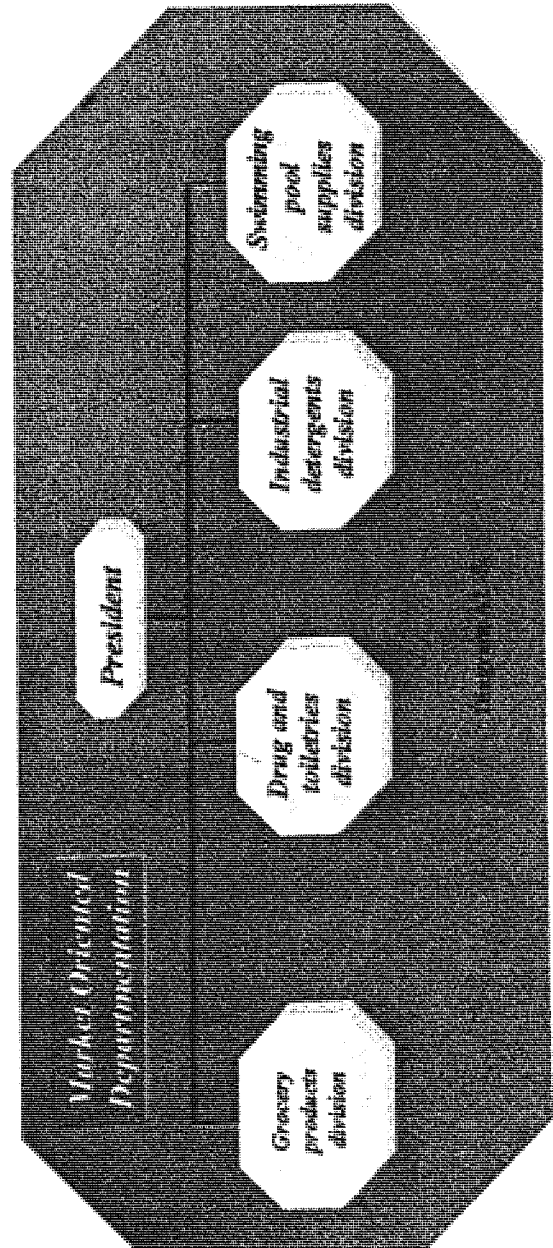


Diagram A1.4



Disadvantages

- May be difficult to coordinate operations between competing customer demands
- Requires managers and staff expert in customer's problems
- Customer group may not always be clearly defined (for example, large corporate firms vs. other corporate business)

Advantages

- Encourages concentration on customer needs
- Gives customers feeling that they have an understanding supplier (banker)
- Develops expertise in customer area

Disadvantages

- Loss of concentration on product growth & profit
- Problems in training people to think in terms of markets rather than products
- Problems in allocating products & changing costs of manufacture when the same product is marketed through two or more divisions but manufactured in one
- Problems in obtaining coordination of product research, engineering, & production efforts in multidivisional marketing

Advantages

- Makes possible concentration on markets and marketing channels in each area
- Develops opportunities for more efficient marketing activities

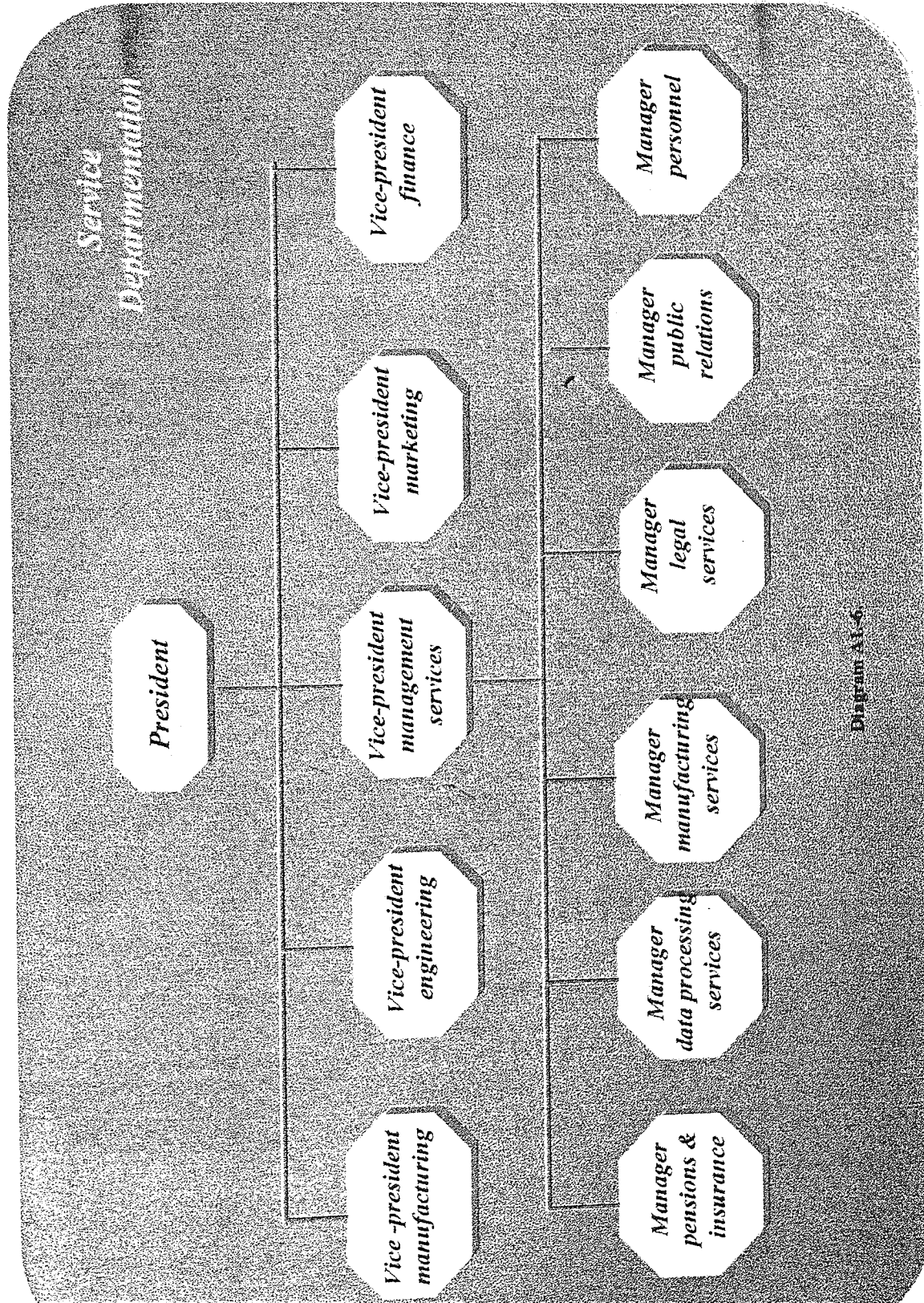


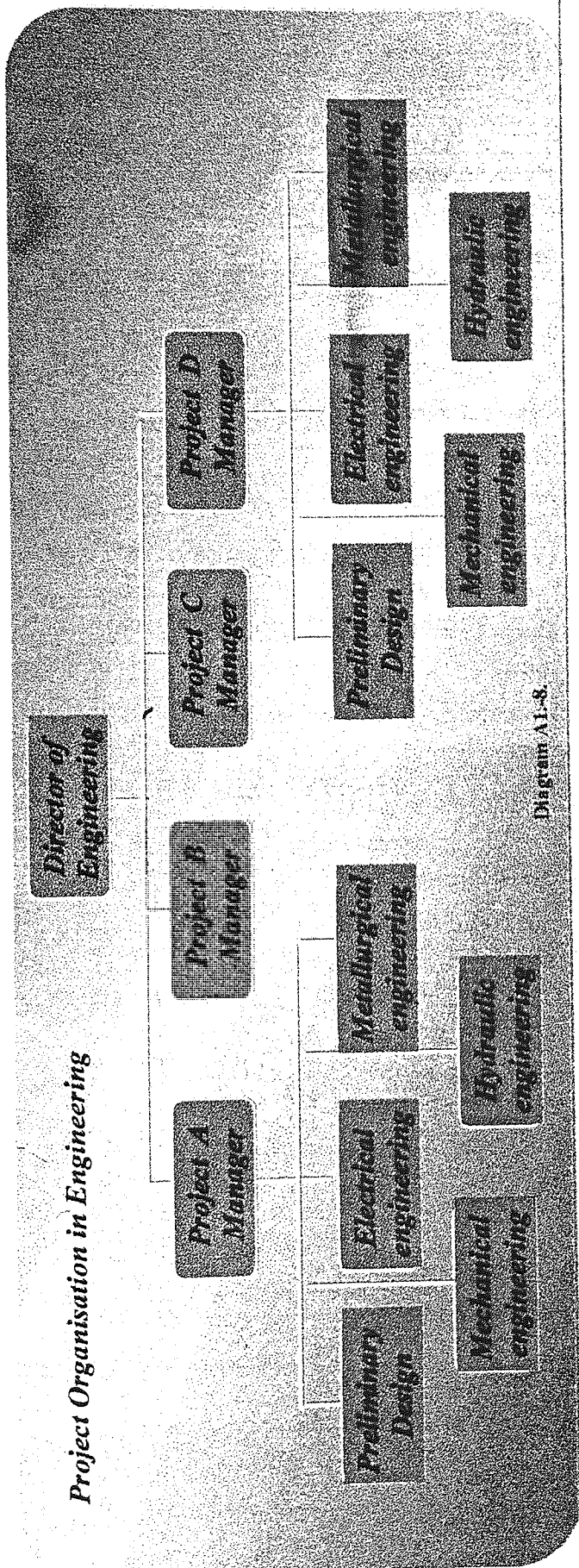
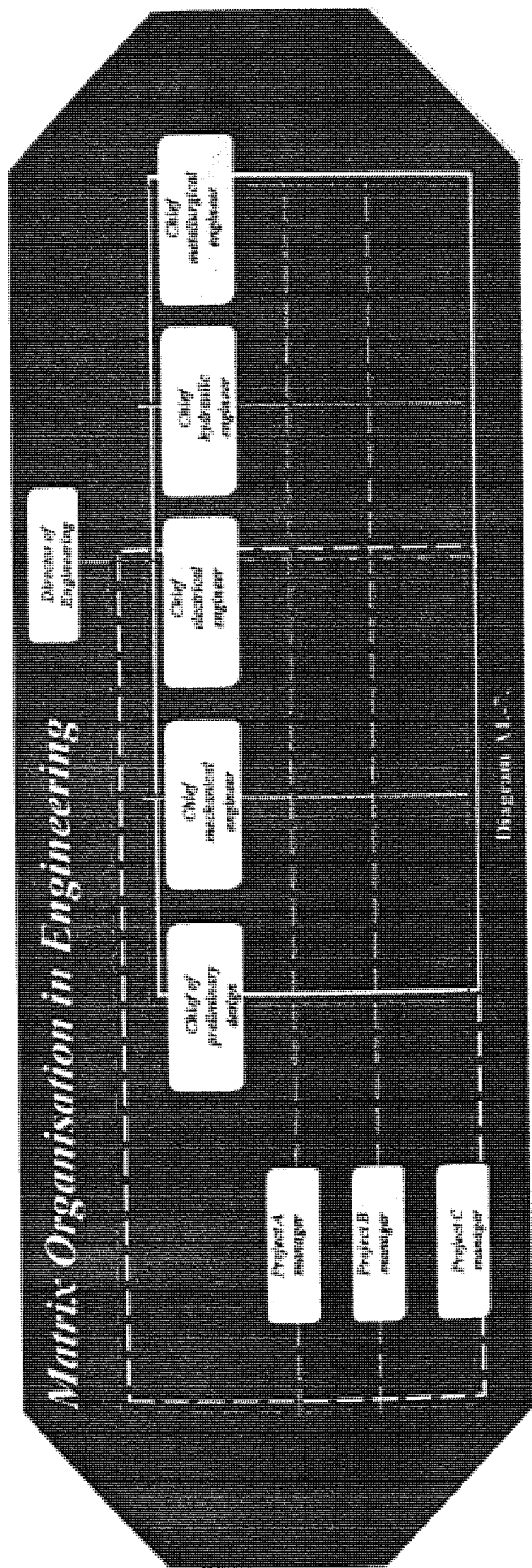
Diagram A1-6

Advantages

- Cost saving in concentrating service activities in special departments
- Development of high degree of expertise in specialist service areas

Disadvantages

- Dangers of 'efficiently' insufficiently'
- Danger of service departments exercising too much control
- Problem of obtaining adequate service for users



Strategic Business Unit Organisation

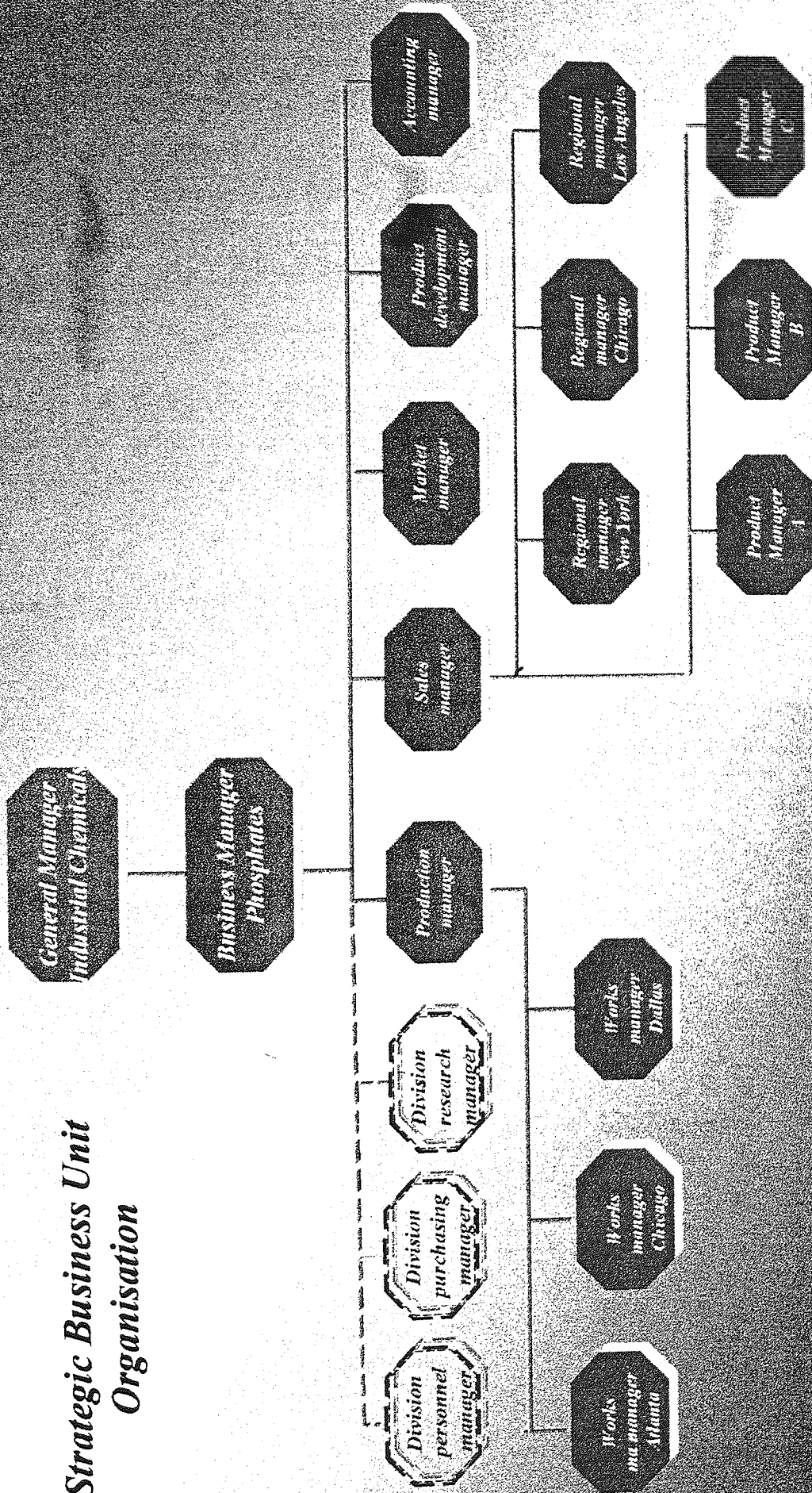


Diagram A1-9.

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