

# **The Policy Processes and the Decline of the British Deep-mined Coal Industry from the mid-1960s to 1995.**

John H. Chapman

## **Summary of Thesis.**

This thesis challenges the existing literature on the coal industry which focuses on market changes and/or industrial relations to explain the decline. It argues that a fuller explanation of the industry's decline will need to include much more detail of policy-making and implementation. The thesis, therefore, explores the making of: the 1967 Fuel Policy White Paper; Plan for Coal 1974; the development of the 'Market Solution' pursued by Conservative Governments since 1979; and the implementation of Plan For Coal.

The thesis develops a multi-theoretic framework which has the network approach at its centre but brings in elements from rational choice and complexity theory. Policy-making in the coal industry is seen as being conducted by a number of institutions which have rational interests, are interacting in networks and are a part of complex systems. The thesis also adopts an historical approach and attempts to link the different eras in a more dynamic way than is achieved by the current literature.

In two substantive chapters it is argued that: in 1967 fuel policy was captured by the economists working in the Ministry; the reversal of policy in 1974 followed the shift of the power relationships within the policy network; and that the primary objective of the Conservative Governments was the establishment of an efficient and financially viable coal industry within the context of a competitive energy market. The industry's decline to its 1995 level was neither planned nor foreseen until the early 1990s.

The thesis also explores why two Plan for Coal investment programmes, 1950 and 1974, failed to halt the industry's long-run decline. Indeed it is argued that the implementation of those programmes contributed its problems. It is argued that investment decisions were driven by the short-term interests of the NCB/BC Areas and collieries, often against the long-term interests of the industry.

The thesis concludes that the industry was badly served by closed policy processes which failed to take account of rational interests. It also argues that Political Scientists need to include in their analysis the theoretical frameworks used by policy makers.

**The Policy Processes and the Decline of the British Deep-mined Coal  
Industry from the mid-1960s to 1995.**

John H. Chapman

LIBRARY  
SERIALS  
SECTION

For Marilyn, Rachael, Larissa, John, Victoria and Christian who coped with the obsession. For my mother who kept things in perspective. For my father whose contribution has been deeply missed.

# CONTENTS

<b>1. INTRODUCTION</b> .....	<b>4</b>
1.1 An Overview.....	4
1.2 Layout of the Thesis.....	10
<b>2. A REVIEW OF THE LITERATURE</b> .....	<b>13</b>
2.1 Introduction.....	13
2.2 The Critique of 'Traditional' Histographies.....	14
2.3 The Conservative Governments and the Decline of the 1980s and 1990s.....	26
2.4 Policy-making in the Coal Industry.....	34
2.5 Conclusion.....	38
<b>3. A THEORETICAL FRAMEWORK</b> .....	<b>41</b>
3.1 Introduction.....	41
3.2 Level of Analysis.....	42
3.3 A Multi-theoretical Approach.....	43
3.4 Theories in Public Administration.....	46
3.5 Dealing with Chaos and Complexity.....	74
3.6 Conclusion.....	80
<b>4. THE HISTORICAL CONTEXT</b> .....	<b>84</b>
4.1 Introduction.....	84
4.2 From Fragmentation to Nationalisation.....	86
4.3 The Reconstruction of the Coal Industry 1950-1965.....	90
4.4 Investment Decisions in the NCB.....	109
4.5 The Government and Coal Investment.....	111
4.6 Conclusion.....	117
<b>5. STRATEGIC POLICY TO 1979</b> .....	<b>120</b>
5.1 Introduction.....	120
5.2 Fuel Policy-making in the 1960s.....	122
5.3 Policy Processes and the Review of Fuel Policy.....	134
5.4 <u>Plan for Coal</u> 1974: Reversing the 1967 White Paper.....	147
5.5 The Making of <u>Plan for Coal</u> .....	154
5.6 Policy Networks and <u>Plan for Coal</u> .....	164
5.7 Conclusions.....	170
<b>6. THE MARKET SOLUTION</b> .....	<b>172</b>
6.1 Introduction.....	172
6.2 The Genesis of the 'Market Solution'.....	176
6.3 Implementing the 'Market Solution'.....	185
6.4 The Breaking of Strategic Networks.....	200
6.5 The Investment Policy Network.....	202
6.6 Policy Networks in the 1980s and 1990s.....	228
6.7 Conclusions.....	233
<b>7. CONCLUSIONS</b> .....	<b>235</b>

## LIST OF TABLES

Table 3.1 The Bureaucracy's Budget.....	53
Table 3.2 Types of Agencies by Characteristics.....	54
Table 3.3 Types of Policy Networks: characteristics of policy communities and issue networks.....	65
Table 3.4 Autonomy in Policy Networks: by level of cohesiveness and policy domain.....	71
Table 4.1 Output and Consumption: selected years 1913-1946.....	87
Table 4.2 Planned Output, Output and Capital Projects, by Region. ....	97
Table 4.3 <u>Plan for Coal</u> Expectations and Market Outcomes, by coal type. ....	102
Table 4.4 Actual and Planned Investment, by Region.....	104
Table 4.5 Investment: Nominal and Real 1947 to 1965.....	106
Table 6.1 'Think - Tank' Publications on Energy. ....	180
Table 6.2 Output and Investment 1976/7-1981/2, by Area .....	212
Table 6.3 Capital expenditure 1974-5 to 1981-2, Mean Saleable Output and Mean Operating Surplus 1976-7 to 1981-2, By Area. ....	213
Table 6.4 Rank Order of Capital expenditure 1974-5 to 1981-2, Mean Saleable Output and Mean Operating Surplus 1976-7 to 1981-2, By Area. ....	214

## LIST OF FIGURES

Figure 3-1 The Relationship between Budgets .....	55
Figure 3-2 The Bureaucrats Equilibrium Program Budget.....	56
Figure 3-3 A Model of Bureaucratic Behaviour.....	59
Figure 4-1 Coal Consumption by Sector 1947-1965 .....	100
Figure 5-1 The Nuclear Network .....	138
Figure 5-2 The Fuel Policy Review 1967.....	144
Figure 5-3 The <u>Plan for Coal</u> Network. ....	166
Figure 6-1 The Department of Energy Structure 1982.....	230

## LIST OF ABBREVIATIONS

AGR	Advance Gas Reactor
BB	Bureau Budget
BC	British Coal
CB	Core Budget
CBA	Cost-benefit Analysis
CEGB	Central Electricity Generating Board
CPRS	Central Policy Review Staff
CPU	Central Planning Unit (NCB)
DACE	Division of Adult Continuing Education (University of Sheffield)
DEn	Department of Energy
DTI	Department of Trade and Industry
EFL	External Financing Limit
ESI	Electricity Supply Industry
FSV	Free Steered Vehicle
MAFF	Ministry of Agriculture Food and Fisheries
MINOS	Mine Operating System
MinTech	Ministry of Technology
MMC	Monopolies and Mergers Commission
MRDE	Mining Research and Development Establishment
mt.	million tonnes
NCB	National Coal Board
NFU	National Farmers Union
NUM	National Union of Mineworkers
PB	Program Budget
PEP	Political and Economic Planning
PWR	Pressurised Water Reactor
ROLF	Remotely Operated Longwall Face
SCNI	Select Committee on Nationalised Industries
SCST	Select Committee on Science and Technology
SPB	Super Program Budget
SSEB	South of Scotland Electricity Board
UDM	Union of Democratic Mineworkers
WERG	Working Environment Research Group (University of Bradford)

## Preface

This thesis adds to the already significant volumes of academic writing on the British coal industry, its author cannot claim to be independent or disinterested. As a miner for fifteen years I experienced at first hand many of the events covered by this research. This, along with the often unacknowledged proximity of other writers to the industry, raises some important methodological issues which should be considered from the outset.

It will be argued in chapter two that several academic writers had close personal contact with the coal industry. It is also true that a large proportion of other writers have been sympathetic to the NUM's position and the cause of the industry whilst remaining more distant. It will be suggested that this proximity or sympathy led to distortions in the literature, as writers attempted to produce arguments opposing pit closures.<sup>1</sup> At the other end of the political spectrum writers associated with the New Right, such as Alex Henney, produced counter analysis of the industry that offered support and a rationale for the Conservative Governments. The thesis of Ken Moses, BC Board member in the 1980s and 1990s, on the other hand, is extremely sympathetic to the Board's actions. Clearly, proximity and perspective are critical in much of the writing on the coal industry. With this in mind, it seems incumbent upon this writer to acknowledge his own proximity to some of the events and issues covered in this thesis and his perspective on those events.

Between 1975 and 1990 I was an underground worker at Houghton Main Colliery, Barnsley. I was first employed as a haulage worker, transporting supplies to the coalface, then, after training, a development worker, driving new tunnels and faces. I became a union 'activist' in 1981, energetically supported the strike of 1984/5 and was elected to NUM Branch Committee in 1986, serving on the Consultative and Safety Committees. I enjoyed the experience. From this very brief resume two features are significant to this research.

First, I have a better appreciation of the physical processes of mining coal than many who have written on the industry. This is not to suggest that such intimate knowledge

---

<sup>1</sup> Indeed the relationship between some academics, the Communist Party of Great Britain, other 'left' groupings and the NUM would appear to offer a possible area for some detailed research.

of the process of mining is a prerequisite to write on the politics of coal, on the contrary we benefit from both insider and outsider analysis. However, such knowledge does bring some understanding of the constraints faced by the industry. So for example, anyone who has worked in poor geological conditions would not, as O'Donnell does (see chapter two), suggest that the major difference between 'profitable' and 'unprofitable' pits was the level of investment. In my experience, no amount of money, time, or effort could turn some coalfaces that were experiencing severe geological conditions into 'profitable' ventures.

Second, the enormity of the wasted effort of 1984/5 changed my perceptions and sowed the seeds for many of the views expressed in this work. As noted above at the time I actively supported the strike throughout its duration. I was involved in picketing, fund raising and the dissemination of propaganda. However, I was not an uncritical supporter of the NUM's position. Nor was I alone in adopting the paradoxical position of, on the one hand, supporting the strike and, on the other hand, believing it to be un-winnable. In the early months concerns over the NUM's position focused on the lack of unity, later the concern shifted to the apparent lack of a definition of 'victory'. Essentially the NUM's position was 'no pit closures except on the grounds of exhaustion' irrespective of the markets or need for coal. It was, to many of us, an unrealistic position but, so we surmised, it was a bargaining position and the strike would be settled on other terms. Unity, or even turning the lights out would not, in the long run, have resulted in all pits, with workable reserves, being kept open. We had after all 'triumphed' in 1981 only to witness the Board resume closures 'by stealth'.

As the strike wore on such thoughts dominated. In October 1984 Kim Howells, from the South Wales NUM, floated the possibility of returning to work without a settlement. From then on I believed that such a strategy was the only way to resolve the issue. We could have least returned with the degree of dignity we eventually managed in March 1985, but more united. The attrition between October 1984 and March 1985 was a senseless waste culminating in mountains of debt, a broken union, divided communities and many tears. In addition, the NUM generally, and its leadership particularly, should acknowledge the damage it inflicted on the industry. The events of 1984/5 and the NUM's continued intransigence, most notably at national



level, must have shaken the confidence of consumers and potential consumers. There can be little wonder that fuel diversification in the electricity supply industry became a priority.

Following the end of the strike I co-authored a discussion document which amongst other things called for: a realistic approach to the supply and demand conditions the industry faced; the concentration of the unions efforts on ensuring the best working conditions for those remaining in the industry, including early retirement; and adoption of a fully national structure by the NUM.<sup>2</sup> The document, which was circulated to all Yorkshire NUM Branches, Area and National offices, was castigated as ‘New Realism’ and a resolution, initiated by its authors, to Yorkshire NUM Annual Conference calling for a working party on the NUM’s structure was crushed. We were accused of setting out to destroy the Union!

This research is not about the strike or the politics of the NUM. Nevertheless it springs out of my experiences and is influenced by them. But this is not to suggest that a post-modern, relativist, epistemological position has been adopted. It is one thing to recognise the impact of experience and perspective but quite another to argue that all ‘facts’ are relative. This research has been approached from a critical realist perspective which sees:

knowledge as having some universal character. Individuals act in a world that is not of their own choosing and their actions often produce unintended structural effects. Yet the ability of individuals to understand the structure of the social world is seen as being limited. (Stoker 1995, 14)

The degree of success, or failure, in balancing the influence of experience with the positivistic undertones of such an approach and of the theoretical framework employed must be left to the reader.

---

<sup>2</sup> With Stephen Houghton, now leader of Barnsley Council.

## 1. Introduction

### 1.1 An Overview

On January 1<sup>st</sup> 1947 the British coal mines were nationalised, the NCB flag was raised, miners celebrated and the mood was optimistic. In December 1995 British coal mines were privatised, new logos appeared but there was little demonstrative activity and little optimism amongst miners. Between the two events much had changed. Most notably, by 1995 the industry was only a shadow of its former self.<sup>3</sup>

The decline of the coal industry has been accompanied by acrimony, industrial unrest and a plethora of claims and counter claims. Many commentators have attempted to analyse the fortunes of the industry, or more frequently, lend support to one side of the contemporaneous debate or the other. Today, many of those battles and debates lie behind us and it is, perhaps, a suitable time to begin the analysis of the era of the nationalised coal industry. As time passes it may be possible to re-open the debates and controversies in a less combative atmosphere and reassess the reasons for the apparent failure of nationalisation to provide the long sought after stability for the British coal industry. In short, there is a need for *meta* analyses. This thesis aims to contribute to meeting that need.

The decline has been set against a background, for the most part, of rising energy demand. Coal has not only been unable to win a share of that rising energy demand but has also failed to hold on to its existing market. The industry has declined in both absolute and relative terms. When demand for energy has fallen, or the rate of increase fallen below what was expected, coal has been an early victim as it lost out to oil, nuclear power and gas. It would appear that whenever alternative energy sources have become available governments have switched to them to the detriment of the coal industry. Britain appears to have pursued, since 1947, an 'anything but coal policy'. To be sure, no such policy has ever been espoused. On the contrary, governments have often stated their objectives as being the establishment of a strong and viable industry

---

<sup>3</sup> Throughout this thesis unless otherwise stated 'the industry' is defined in terms of the nationalised deep-mined coal industry.

and have twice financed massive investment programmes with the intention of increasing or stabilising coal output.

That nationalisation and the investment programmes of 1950 and 1974 failed to provide a stable environment for the industry or an efficient and financially independent industry is evidenced by its demise; the sterilisation of investment, of which the closure of Asfordby in 1997 is the latest dramatic example; numerous capital write-downs; the acrimony surrounding the industry; and its eventual sale at a fraction of its development cost.

There are, of course, numerous analyses that seek to account for this turbulent history and a review of some of the more recent contributions will be undertaken in chapter two but the two most prevalent are those which view the industry's problems as 'economic' and/or 'political'.

'Economic' explanations focus on the role of the markets. At the simplest level, it is argued that the post-war decline of the industry continued the decline that began during the inter-war years. By then the industry, which had fuelled the industrial revolution, was approaching one hundred years old. Coal, a finite resource, was subject to Hotelling's theory of depletion according to which the real price of exhaustible resources would rise as reserves became increasingly expensive to extract. In the case of coal the 'real price' should be measured by its relativity to alternative energy sources. So it is argued, that the cost of mining coal has risen above the cost of the alternatives because the best (cheapest) coal had already been mined and what remained became increasingly difficult (expensive) to mine. At the same time as the relative price of coal was rising it follows that the relative price of alternative fuels was falling. New energy sources, nuclear power, North-sea gas and, internationally traded energy were available at less cost. Coal lost its markets quite simply because it was not competitive.

'Political' explanations became prominent in the 1980s. Again at the simplest level, it is argued that the Conservative Governments since 1979 were antagonistic toward the industry generally and its workforce particularly. The spectre of 1972 and 1974 is assumed to have dominated Government thinking and subsequent policy. The objective was the marginalisation of the NUM so that it could not, in future, hold the country to

ransom with the secondary benefit of defeating the labour movement's 'Praetorian Guard' facilitating the Government's wider goals of breaking the unions. The attack on coal's near monopoly domination of fuel input for electricity generation was necessary to achieve those objectives. According to this explanation the 'economics' were only important in so far as they were deliberately distorted to achieve a political objective.

The range of problems within the 'economic' and 'political' explanations will be discussed in chapter two but despite the problems, the 'economic' and 'political' circumstances do provide us with a partial explanation for the industry's decline. It is true that many highly productive coal seams had been extensively worked by the 1950s and that older collieries had to develop more marginal reserves. It is also true that alternative supplies of energy have become available and customers, whatever the arguments over costs, have switched to those alternatives. The coal industry has, undeniably, had some difficulty in supplying coal at competitive prices. Moreover, in the 1980s and 1990s a premium was put on fuel diversification to limit the power of the NUM and the coal industry, whether through revenge, fear or the pursuit of economic restructuring. The Conservative Governments first initiated a large programme of nuclear power stations and, when that collapsed, acquiesced in the switch to gas-fired electricity generation. In both cases the economics were at best marginal.

However, the main contention of this thesis will be that neither 'economics' nor 'politics' can provide a complete picture of the industry's decline. 'Economic' explanations tend to overstate the marginality of Britain's coal reserves and the relative advantages of alternative fuels. Importantly for this thesis they also down-play the role of investment in reducing costs. 'Political' explanations have tended to reverse those arguments, understating the relative costs of coal production and overstating the benefits of investment. More critically, they have focused on the macro-politics of coal policy, most notably on capital - labour relations. Given the turbulent industrial relations since the early 1970s, or indeed throughout the entire history of the industry, such a focus is not surprising but it does tend to obscure as much as it reveals. The state, sometimes including the NCB/BC, is often portrayed as a unified structure making and implementing policies that were predetermined by other, assumed, interests such as the 'nuclear interest' the 'oil/gas interest' or the 'interests of capitalism'. That

the nuclear, oil and gas industries have, on occasions, won when coal has lost is undeniable. But correlation is not causation. We should not assume that because an interest appears to have benefited from a policy decision that the intention was that it should do so. Nor should we assume that the policy was the result of pressure from that interest or, in the case of the 'interests of capital', some predisposed structural affinity between capital and state interests. If such intentions, pressures and affinities do indeed explain the demise of the coal industry then it is beholden upon analysts to demonstrate how they were mediated through the policy processes. In short, 'political' and 'economic' explanations of the history of the coal industry remain unconvincing because they fail to explore the processes of policy formulation and implementation. They are largely deterministic.

This thesis argues that insufficient attention has been paid to the processes of policy-making and implementation and that those processes have themselves contributed to the decline of the industry. The contention is that we cannot understand policies without understanding the processes by which policies are made and we cannot understand outcomes without understanding the policies and their implementation. It was the processes of policy formulation and implementation in the 1950s, 60s, and 70s that laid the foundations to the crisis of the 1980s. Had the policy processes been different then it is arguable that whilst the industry would have been smaller than that of the 1950s more of it may have survived into the next century.

This thesis does not, therefore, argue against pit closures. Rather the contention is that the industry and its workforce has been badly let down by policy processes that failed to acknowledge the opportunities and difficulties of an extractive industry operating in a competitive and uncertain environment. In 1967 for example, the processes of formulation led to policies that worked directly against the industry. Then in 1974 policy formulation was carried out in an atmosphere of crisis and failed to analyse energy economics. The policy that emerged may, on the face of it, have been to the industry's benefit but within it were the seeds of the later crises. No understanding of the events of the 1980s can be achieved without a clear understanding of the formulation of the 1974 Plan For Coal.<sup>4</sup> In addition, throughout the period of

---

<sup>4</sup> References to Plan for Coal (1974) require some explanation - unlike its earlier namesake this does not refer to a detailed Plan. The actual document published by the NCB was a small pamphlet setting out the broad vision

nationalisation it is questionable whether policy was implemented in the long-term interests of the whole industry rather than the short-term interests of its constituent factions. In short, the key argument of the thesis is that how policy was made and implemented had a detrimental impact on the industry, resulting in its rapid and premature decline.

This implies that a detailed study of policy-making and policy implementation needs to be undertaken in order to assess the impact of policy processes on the industry's decline. It will need to be a study which disaggregates government and the NCB/BC and seeks answers to five key questions: what was policy? what were the aims of policy? who made policy? how did they make it? and how was policy implemented? It is these questions that have formed the primary focus for the research. They are also questions that need to be answered at two levels. At the strategic level, Government has set the overlying framework for the coal industry. This has been done through either dirigiste planning with the industry as in the 1950 Plan for Coal and the 1974 Plan for Coal, or dirigiste planning of the whole energy sector, most notably in the case of the 1967 Fuel Policy Statement or through ad hoc and piecemeal intervention like the introduction of external financing limits in the 1980s and numerous Coal Industry Acts. At the implementation level, we need to explore the NCB's /BC's investment programmes to determine their consistency with strategic objectives.

The emphasis this thesis places on the policy processes, rather than policies, shifts the analysis away from macro-politics and towards a micro-level study. The aim is to take a step back from analyses which 'read off' policies in the attempt to establish, or more frequently demonstrate, a presupposition about the nature of state-society relationships. The task here is to establish why policies were what they were by exploring how they were formulated. This is a task that can be approached without presuppositions on the nature of state-society relationships or the intention of generalising about those relationships. Of course state-society relationships are important but, as many have noted, we cannot make accurate predictions about the policies states would pursue from conceptions of states as pluralist, corporatist, elitist

---

of the future and handed out to miners at the pit-heads. The NCB did, however, submit a 'Plan for Coal' to the Coal Industry Examination, which with revisions formed the backbone of the Examination's final report (see DACE, 645). Throughout this thesis Plan for Coal 1974 refers to the stabilisation of the industry as embodied in the *Coal Industry Examination: Final Report*, Department of Energy (1974b).

or the state as the handmaiden to capitalism. States exhibit too much variety across policy areas and time to allow simple deduction. What I shall argue is that a greater understanding of phenomena can be gained from micro studies which trace policies from formulation through implementation and to the outcome.

The thesis has two primary aims, firstly, to develop a theoretical framework for understanding the policy process in the coal industry and locating that process in the wider political and economic contexts. Secondly, to use that framework to explain the decline of the coal industry. The focus on the policy processes implies a focus on the institutions through which those processes were mediated. Only by understanding how those institutions worked, what their interests were and how they related to other institutions can we understand policy output and outcomes. In one sense this is a return to 'old' political science that focused on the constitutional relationships of the institutions; however, a number of recent developments have given institutionalism a new lease of life. A theoretical framework will be developed in chapter three; for the moment it is enough to note that the most significant addition to our understanding of policy processes emerges from work employing the concept of networks. 'Network theory' emphasises the inter- and intra-relationships of institutions and points to the possibility of explaining outcomes through the nature of those relationships. This thesis aims to use the 'network' approach to explore the relationships within and between the coal industry actors and to give a partial explanation for the industry's decline.

The primary institutions for study are the sponsoring Ministry/Department and the NCB/BC and it is the intra- and inter-relationships of these bodies with which this study is most concerned. So for example, the relationship between the Minister/Secretary of State and his officials is of key interest. Who was most influential in policy formulation? How were policy options derived? Within the NCB/BC what were the relationships between the National Headquarters, the Areas and the pit managers? Who really determined where investment money was spent? Between the two institutions, how much control/influence did politicians or officials have over the industry? How was the investment programme settled? Of course other institutions including, the Prime Minister, the Cabinet, other Ministries, the NUM, the CEGB, European and international institutions were important actors within the policy processes and they will be included as and when their input became significant.

Finally, the policy area to be studied has been kept deliberately narrow. ‘Coal policy’ could potentially cover a wide range of issues including industrial relations, pricing policy, research and development, energy security, health and safety, the environment and investment policy. However, each policy area has its own set of actors with distinct relationships. So for example, industrial relations would bring into the policy process the Ministry of Labour and on occasions the Prime Minister and Cabinet, whilst research and development would bring in the Ministry of Technology. In this research the focus has been on investment policy, which in the long run is the primary, variable, determinant of the industry’s cost curve (relative to the cost curves of competing energy supplies) and hence its future size. Of course other policy areas are important, particularly pricing policy and wages policy. Again these will be included in the analysis when their impact has been significant.

The main conclusion of the thesis is that the detail of policy-making and implementation have had a significant impact on the fortunes of the coal industry and that this impact has been over and above the intentions of the policy-makers.

## **1.2 Layout of the Thesis**

As already mentioned, chapter two of the thesis undertakes a review of some of the recent literature on the history of the nationalised coal industry. Chapter three will focus on theoretical issues surrounding the study of institutions and the theoretical framework that has underpinned the research will be set out.

Chapter four focuses on the formulation and implementation of policies from nationalisation to the early 1960s. The aim is to set out the historical context of later policy decisions. The chapter begins with a brief overview of the industry’s problems during the inter-war period and the build-up forces that led to nationalisation in 1947. It then goes on to outline the rationale behind the 1950 Plan for Coal, followed by an analysis of market changes that undermined the Plan and an analysis of the NCB’s investment record. It will be concluded that the primary purpose of nationalisation was the industry’s restructuring to enable it to meet a rising demand for coal. That Plan For Coal was essentially a product of the NCB which at the time of its formulation was rational but which proved to be inflexible once market conditions changed. It will be seen that the main elements of the planned investment were implemented despite



changing circumstances, a feature which can be attributed to the weakness of the sponsoring ministry and the structure of the NCB.

Chapter five deals with two dirigiste strategic policies, The 1967 Fuel Policy White Paper and its reversal with the 1974 Plan for Coal. Both replicated a feature first noted in 1950, that of wildly inaccurate 'guesstimates' of future trends, Both set the framework for the NCB's investment, or lack of investment, decisions in the years that followed. Neither policy was in the long-term interests of the coal industry. How and why they were adopted are central questions to be answered. It will be argued that in 1967 fuel policy was captured, not by alternative energy interest groups, but by the officials, primarily the economists, working in the Ministry. In the name of scientific government a policy review was undertaken employing cost-benefit analysis, which had preconceived ideas about relative fuel costs and which institutionalised those ideas. The result was disastrous for the coal industry. The reversal of policy in 1974 followed the political and energy crises that shifted the power relationships within the policy processes. It will be argued that Plan For Coal 1974 was, like its predecessor, a NCB product, though then it had to win NUM approval. It will also be argued that the plan was not inevitable, or indeed rational. It rested on forecasts that within a short period of time had proved questionable. Yet despite this the Plan continued to inform strategic policy until 1979, a feature that may be attributable to the preferences of Tony Benn, the then Secretary of State.

Chapter six aims to determine what strategic policy was and what its aims were in the 1980s and 1990s. In one sense these are rather difficult questions since the aim of the Government was to repudiate the concept of a nationally determined energy policy. However, the Conservatives did have strategic objectives for the industry. The nature of those objectives and the motivations behind them are still subject to much debate and disagreement. I shall argue that the primary objective of the Conservative Governments was the establishment of an efficient and financially viable coal industry within the context of a competitive energy market. Throughout the 1980s they continued to invest in the industry in the belief that a substantial quantity of coal would be competitive. However, their strategy collapsed under the weight of the electricity supply industry privatisation and conflicting, environmental, strategies. In other words, the outcome, the closure of the greater part of the industry, was largely unintended. It

will not be denied that the Governments sought to reduce the power of the NUM and the coal industry. What is challenged is that they set out to engineer its collapse. Indeed it will be suggested that in the early 1990s the Government became a hapless bystander as a chain of events, many of which it had been the author, and circumstances unfolded. This lack of prescience is then, partly, attributed to changes in the machinery of government, again authored by the Conservative Governments.

Chapter six is also concerned with the implementation of coal policy, particularly the implementation of Plan for Coal, 1974, which, it will be argued, informed investment decisions long after the political and economic environments changed. The NCB's/BC's investment strategies and appraisal methods will be explored in detail, along with the ongoing relationships between the industry and government. The focus will be on the degree of autonomy enjoyed by the industry, consistency of investment decisions with strategic policies and the efforts of government to 'control' the coal industry. It will be concluded that, in a replication of past failures, investment decisions were driven more by the short-term interests of the NCB/BC Areas than the long-term interests of the industry this is, again, seen as a function of weak Government control and the structural arrangements within the coal industry.

Finally chapter seven will draw the main conclusions of the thesis and point to future research.

The thesis does not seek to present an in-depth statistical account of the decline of the nationalised coal industry, for convenience, a time series of the industry's key variables can be found in appendix 2.

## 2. A Review of the Literature

### 2.1 Introduction

The British coal industry has generated a great deal of literature, reflecting its once dominant position in the UK economy and its turbulent history (see Benson, Neville and Thompson, 1981 for a comprehensive bibliography). In the post-war period the publication of material has occurred in two waves. The mid 1970s witnessed a revival of analysis, which had in the 1960s mirrored the industry's own decline. Interest followed the quadrupling of oil prices and the subsequent commitment to coal's role as a primary energy source. The second, more prolific, wave followed the beginning of the 1984/5 miners' strike.

In this chapter the emphasis will be on recent contributions to the subject, though some reference will be made to earlier work. This is not to imply that the earlier work is unimportant in terms of this thesis. In any work that aims to develop a historical approach to the decline of coal industry the contemporary record and commentaries will prove invaluable.

It will be argued that some of the recent literature has added to our understanding of coal's long run decline because of its emphasis on industry / state relationships, but that it has done so at the cost of downplaying market forces. It will also be suggested that some of the criticism of the earlier work is not always justified. The debate between the older 'traditional', largely 'economic', and the more recent 'radical', largely 'political', explanations centre on two themes; the impact of demand conditions and the role of technology. This chapter will begin with a review of this debate drawing on the work of Bercovitch (1977); Ashworth (1986); Taylor (1991); O'Donnell (Fine, O'Donnell and Prevezer 1985; O'Donnell 1988; O'Donnell 1991); Gibbon & Bromley (1990); and Winterton (Burns, Newby and Winterton 1985 & 1988; Winterton 1985; Winterton and Winterton 1989). It will also be argued that some of this literature fails to arrive at proper definition of 'decline', which can be seen as a function of the prominence of the pit closure issue during the 1980s and 1990s.

The chapter then goes on to explore an alternative perspective of the impact of technology, which, although neglected, may offer some insights into the coal industry's decline in the late 1980s and 1990s. Cutler, Haslam, Williams and Williams (1985 &

1988) and Henney (1994) suggest that investment in high technology and heavy duty faces has reduced the industry's flexibility and therefore its ability to react to fluctuations in demand conditions. Cutler *et al.* and Henney perhaps provide a credible economic explanation, in terms of investment in the wrong projects, but fail to offer a political rationale for that investment.

Section 2.5 goes on to explore explanations that concentrate on events following the election of the Conservatives in 1979. The focus here will be on the three themes which can be detected in the existing literature: Government - NUM relations, characterised as 'the revenge theory'; the perceived lack of an energy policy and the role of the market, characterised as the 'triumph of ideology theory'; and, from a different perspective, the possibility that the industry's decline was both rational and desirable, characterised as the 'policy success theory'. Essentially, using Taylor, G (1991), Gibbon (1988), Parker & Surrey (1994) and Helm (1991 & 1993) each of these theories will be rejected as satisfactory explanations of the industry's decline.<sup>5</sup>

Finally, it will be argued, following G. Taylor (1991), that the existing literature has been dominated by the relationships between Government and/or the National Coal Board and the NUM. This is in spite of the fact that many studies conclude, to a greater or lesser degree, that the NUM and National Coal Board (NCB) have had only a limited impact on policy outputs. As Taylor noted, this feature points towards a study of the one actor, largely ignored in the literature, the Department of Energy and its predecessors. This thesis will, in part, undertake that study by exploring the role of the sponsoring ministry in the formulation and implementation of policy.

## 2.2 The Critique of 'Traditional' Histographies

'Traditional' explanations (Ashworth 1986, Bercovitch 1977) of the post-war coal industry's decline emphasise the severe market conditions the industry has faced and

---

<sup>5</sup> It should be made clear at the outset that whilst this thesis makes use of characterisations and typologies of explanations few such boundaries are evident in individual contributions. Different writers might use several explanations in their analysis and the association of particular writers with particular theories is not meant to imply those writers adopt mono-causal explanations. The characterisations used here are for analytical purposes only.

the consequences of increasing productivity.<sup>6</sup> In these accounts coal faced competition from oil, nuclear power, natural gas, imported coal, and in terms of deep-mined production, open-cast coal. The industry has been unable, for most of the period, to compete with alternative fuels on price or has lost markets because of technological change (the loss of the railway's market), convenience, or environmental pressure (the domestic markets). In addition, technological change within the industry has the effect of reducing the need for pits and miners for any given quantity of coal. In a static market this would inevitably result in closure, in a declining market the result has been dramatic contraction. These two features, demand and technology were summarised by Ashworth (1986, 37):

Two influences do more than any others to impose some sort of framework on the operations of an industry: the market for its products and the available techniques for turning out these products - the know-how. Neither is immutable and neither is beyond the power of business within the industry to alter. But both depend a good deal on conditions elsewhere and they can hardly ever be wholly controlled by producers.

Within this framework Ashworth describes the NCB's and Government's attempts to cope with the dramatic changes. This analysis has been challenged, most notably from the demand-side, by Fine, O'Donnell and G. Taylor, and from the supply-side by Burns and Winterton *et al.*

### 2.2.1 Demand and Decline

Turning first to the demand-side, O'Donnell argues that the 1960s closure programme was a function of the financial framework imposed by government on the industry and the NCB's investment strategy. She argues (Fine, O'Donnell and Prevezer 1985, O'Donnell 1988, O'Donnell 1991) that government interference in the Board's pricing policy and the subsequent reliance on Treasury funds for investment purposes, as opposed to self-financed investment, dictated the NCB's strategy. With access to limited investment, mines were classified according to their likelihood of continuity, past productivity and financial performance. Those which were expected to continue in the future were then given investment funds creating a 'virtuous cycle' whereby investment led to high performance and therefore more investment. Pits which were characterised as poor performers were then starved of investment and 'their

---

<sup>6</sup> The term traditional is used by Taylor to identify explanations which he perceives as being dominated by demand conditions. Whilst not necessarily agreeing with his critique of this literature the term does provide a useful shorthand.

classification as “dead-end” collieries [became] a self-fulfilling prophecy’. This analysis leads to the conclusion that:

the forces leading to the 1960s rationalisation programme were rooted more in the financial framework of the industry and the investment strategy than in external demand-side conditions. At best changes in demand were a catalyst - simply speeding up the process of reducing capacity rather than being the major causal factor. (O’Donnell 1988, 71)

In support of this position O’Donnell offers, as an example, the fact that Plan for Coal, 1950, had estimated that 350 to 400 collieries would close between then and 1965. The outcome of 418 closures was, therefore, only just above that planned. The problem with this analysis is that it ignores the failure of productivity to increase as much as had been expected in 1950. In other words, the Plan’s estimate of 350 to 400 closures was based on the expectation of increasing mine productivity, i.e. fewer pits would be needed for a given level of output. In the event, output was, in 1961 36m tons lower than that projected in Plan for Coal and was produced from a total of 483 collieries. If demand for output had equalled that projected by Plan for Coal then about 100 more collieries would have remained in production. Changing demand was far more significant in determining the number of collieries than O’Donnell suggests.

O’Donnell is, of course, right to argue that colliery closures were planned.

Rationalisation was a primary reason for the nationalisation of 1947 (Ashworth 1986, Arnot 1979, Bercovitch 1977, see chapter four of this thesis). It is, however, wrong to underestimate the impact of demand on the closures. O’Donnell, significantly, supports her arguments with data before the dramatic decline of the late 1960s and it must be clear that demand conditions were uppermost in the minds of government policy makers.

O’Donnell goes on to argue that similar conditions applied in the 1980s. The Board’s financial position was heavily distorted by the requirement to borrow for investment, incurring high and immediate interest charges on capital expenditure that would not make a return until the investment had been completed. She argues that:

two significant consequences flow from the NCB’s heavy interest payment burden. Firstly, it placed an additional constraint on the provision of internal funds for investment since interest payments represent a first call upon the industry. And secondly, after receiving government directives to break even (in the Coal Industry Acts of 1980 and 1983) over the short time horizon, it had little option but to begin reducing capacity again and in particular closing collieries making a negative financial contribution. (O’Donnell 1988, 72)

She goes on to suggest that the situation was exacerbated by the Government's pricing policy which increasingly related the price of coal sold to the Central Electricity Generating Board (CEGB) to the lower price of internationally traded coal. The impact of this was to turn a possible profit of £300m into projected loss of £300m for 1986/7 (1988, 73). Her conclusion is that just as in the 1960s:

it has been shown that rationalisation was perceived by management as the best (and perhaps the only) way of reconciling the often conflicting external constraints placed on the industry by government. (O'Donnell 1986, 74)

This analysis appears, on the surface, indisputable. There can be little doubt that the interest payments did present the NCB with a difficult financial framework and that the monopoly-monopsony relationship has been exploited in the CEGB's / Electricity Supply Industry's (ESI) favour (Prior, 1987, 11). However, two criticisms of this analysis can be made. Firstly, the notion of profit within the industry and between the industry and its main customer is something of a spurious concept. As O'Donnell notes, the basis of profitability within the industry has been attacked by Berry *et al.* (1988). Profit (or loss) in the industry is a function of proceeds minus costs. Proceeds themselves were awarded to individual collieries on the basis of output, *not* sales; and were calculated on the assumption that all production was sold. O'Donnell's implicit 'solution' to the problem of high cost pits, i.e. more investment, would only have worked in the context of the NCB accounts and the wider problem of excess supply would have been exacerbated. Secondly, the analysis takes no account of the impact that demand conditions may have had on government. Demonstrating that rationalisation was forced upon the NCB by government constraints does not rule out the possibility that government policy was influenced by market conditions.

O'Donnell's purpose is to bring government into the analysis of the industry's contraction. She is correct when she points to the constraints that were placed on the industry by successive governments, but wrong to imply that demand conditions have had little part in determining government policy and, therefore, NCB strategy. Her own analysis of the factors that have shaped policy suggests that the nationalised industries were a 'side-show' to government's macroeconomic strategies and that they were used as policy instruments to pursue macro objectives. Taylor, G also argues that governments have had a:

perpetual concern with the macroeconomic inflationary implications of the nationalised industries performance, rather than with their specific output and individual performance. (Taylor 1991, 100)

He goes on to discuss, briefly, the institutional structures within the industry and the relationship between coal and alternative fuels, particularly nuclear power, and concludes that:

The reasons for pit closures, then, are clearly more complicated; they do not, and have not, rested simply on economic criteria but rather in the complicated relationships that have existed between the industry and government. (1991, 108)

In addition, though somewhat un-appreciatively, he notes that '[u]ltimately, Labour's position in the 1960s was underpinned by the need to defend the right of the consumer to choose' (1991, 107). Whilst clearly viewing this underpinning as 'a betrayal', he nevertheless points to the utility of taking into account both economic and political factors in the decline of the industry. The problem, however, is that the analysis lacks empirical foundation. It is a matter of record, of course, that governments have used, or attempted to use nationalised industries for macroeconomic purposes. The holding down of prices in the 1940s and 1950s being an early example and Bromley (1996 92) argues that energy policy generally has been 'subordinated to that of macroeconomic policy'. What is less clear though is the impact that this had on the coal industry and the process through which such a policy has dominated. O'Donnell and Taylor argue that the industry suffered from a lack of investment funds from the beginning, i.e. a supply-side effect, an argument that will be challenged in chapter four below. Bromley's analysis, on the other hand, suggests that the effects may have been felt through the rapid emergence of competition to coal, i.e. a demand-side effect.

At issue, then, is not that energy policy and coal policy has, in some sense, been subordinated to the macroeconomy but how, and to what extent, such subordination has impacted on the coal industry? This suggests a study which attempts to place the coal industry in the context of the wider economic forces and, importantly, one grounded in the empirical evidence. As chapter four will argue, it is not enough to reject 'traditional' explanations for the decline of the industry by asserting that the industry has been starved of investment funds, as O'Donnell does, if the empirical evidence points the other way. Further, O'Donnell (1988, 76) has argued that the dominance of macroeconomic variables led to supply-side planning being 'noticeable by its absence'. By contrast a major contention of this thesis will be that supply-side



planning has been noticeable but has been distorted by the policy processes, more often than not, to the long run disadvantage of the industry. The result has been a smaller industry than might have been the case.

### **2.2.2 Technology and Decline**

The second critique of 'traditional' accounts focus on the role of technology. Here parallels can again be drawn between the 1960s and 1980/90s closures. During the 1960s, decline in demand had coincided with the impact of mechanisation and a dramatic increase in productivity (Ashworth 1986; Bercovitch 1977, 124). In the 1980s and 1990s, as market conditions again tightened, a similar increase in productivity occurred.

However, whilst productivity improvements have been a common feature associated with both periods of falling demand, there were important differences that have led to some debate within the literature. Firstly, as has already been noted, investment continued during the 1980s/90s at a higher level than in the 1960s; secondly, the motivation behind the technological changes and the reason for the advances in productivity are, to some degree, disputed.

Jonathan Winterton, either alone or in collaboration with others, has been the subject's most influential writer. (Winterton and Winterton 1995; Winterton and Winterton 1993; Winterton and Winterton 1989; Winterton 1985; Burns, Newby and Winterton 1985 & 1988; Burns, Feickert, Newby and Winterton 1983). The research for this work was initially carried out by the Working Environment Research Group (WERG) at The University of Bradford for the NUM (Burns *et al.* 1988, 256, 274). Briefly, it is suggested that '[t]he crisis in the coal industry arose from a combination of a static market coupled with increased productivity' (Burns *et al.* 1988, 253). These conditions 'translate directly into job losses' and because the NCB had concentrated reorganisation and new technology in the central coalfields then pits in the peripheral areas faced closure. New technology in the post 1974 period centred on the desire to automate as much of the process as possible, resulting in additional job losses even in the central areas (Burns *et al.* 1988, 254). The NCB adopted a systems theory approach to analysing coal production, setting as its objective functions, increased labour and capital productivity and greater control over all aspects of the industry's

operations (1988, 257).<sup>7</sup> By the mid 1970s, the NCB had developed MINOS (mine operating system) and, on a piecemeal basis, introduced the system's component parts at different locations. The primary purpose of the system was to identify the reasons for and eliminate, as far as possible, the two-thirds production time then being lost as a result of either man-made delays or machine breakdown (1988, 257). Burns *et al.* then calculate that 40,496 miners would be required to mine 1981s' output (about 110 mt.) if all avoidable delays were eliminated (1988, 270).

At issue here is the reasoning behind the NCB's desire to achieve such results. For Burns *et al.* much is made of the NCB's implementation of the sub-systems on a piecemeal basis, its refusal to engage in open dialogue with the NUM and its denial of an overall plan: a conspiracy theory that was supported by the discovery of the Miron Report by the Newsnight team in April 1985 (Burns *et al.* 1988, 274). The Report, written in 1973, anticipates that the:

NUM's Executive will become increasingly politically orientated and that the Left Wing (Communists, Marxists and their ilk, however organisationally fragmented) will maintain a unified strategy towards the ideological end - the overthrow of the present 'System'. (Quoted in Winterton and Winterton 1989, 10)

The Report goes on to suggest that the NCB should develop a strategy to:

get coal, or energy from coal, either without or with a minimum of mineworkers, or with skilled engineers or supervisory staff on one hand, or by processing or conversion without extraction on the other. (1989, 11)

Winterton (1989, 11) acknowledges 'that there is no evidence that the Report ever became official NCB policy' but notes that there is a 'remarkable congruence' between the content of the Report and strategy after 1973.

Taylor G (1991, 110) takes the argument further. He sees the establishment of the NCB's Mining Research and Development Establishment (MRDE) and its growing budget between 1974 and 1981 as evidence of 'the importance attached to the Miron Report.' Further, whilst usefully pointing to divisions within the NCB he writes:

By the late-seventies a consensus was beginning to develop on the MRDE's priorities. Its function was to pursue the search for microprocessor applications in the industry with the intention of establishing automated coal production. In this respect, once more, the Miron Report proved influential. (143)

---

<sup>7</sup> The systems approached used computers to model the whole production process from coalface to pit top in order to determine the best configuration of resources to achieve the desired result, i.e. the objective function.

He argues that the MRDE, following Miron, believed that the future improvements in productivity would not emanate from mechanical improvements, which after the initial mechanisation of the 1960s would be 'limited and incremental' (140), but from automation. The aim was to increase the use of, mainly, existing machines. As Taylor (144) also notes, attitudes towards automation within the NCB had been formulated by the experience of ROLF (Remotely Operated Longwall Face) at Bevercotes colliery in the 1960s. This earlier attempt had failed because 'it was clear that the problems were too complex for the existing state of knowledge' (Ashworth 1986, 101).

This latter point raises an interesting question. Were the moves towards automation a deliberate and calculated response to the political situation within the industry, as suggested by Winterton and Taylor, or simply the re-emergence of past aims, facilitated by the invention of micro-processors? Several points can be made. Firstly, given the availability of cheap and reliable micro-processors it was, perhaps, only rational that mining engineers should seek applications within the industry. Secondly, the experience of ROLF had made local colliery managers suspicious of automation. In this context piecemeal implementation became necessary in order to convince operations management of the new system's utility. It also enabled field trials and testing before general application, a holistic and necessary approach entirely consistent with the industry's methodology. As Gibbon and Bromley (1990, 66) note in relation to a later generation of computer information systems to be adopted by the industry:

Predictably, these developments were largely planned and implemented in a piecemeal manner and difficulties have repeatedly arisen from the incompatibility of many of the systems described above (MINOS), not to mention their incompatibility with some of the boards central information systems.

In short, the piecemeal introduction of new systems and technologies is the norm in the coal industry to allow problems to be identified and solved.

Thirdly, Miron was wrong about future developments resting on automation. Mechanical improvements did not proceed on a 'limited and incremental basis'. The drive to eliminate breakdowns and facilitate speedy repairs led to the development of heavy duty equipment and modular designs. In addition, the earlier mechanisation phase had concentrated on the coalface, as Pryke (1981, 52) notes:

despite the use of cutter-loaders and self-advancing pit props, mining had only been partly mechanised.

Throughout the 1970s, advances were made in the elimination of labour for packing the gate sides and the cutting of stable holes. In the 1980s, mechanical and technological solutions were applied to underground transport and coal clearance and, in the 1990s, attention shifted to drivage rates and saw the gradual introduction of roof bolting.<sup>8</sup>

Fourthly, and related to the preceding point, productivity increases in the mining industry have not been solely, or even primarily, a result of MINOS and its sub-systems. Moore (1990, 371) states:

The improvement that has had most impact in the increasing productivity is the progressive rise in the number of retreat faces being operated.

Indeed, it is often difficult to account for the productivity increases. As Prior (1987, 8) notes, productivity, as measured by cost per giga joule of output, in the NCB's North East Area showed a dramatic improvement following the 1984-5 dispute. This transformation was not achieved:

by major investment; the North East has been effectively starved of investment for some years. Nor by new equipment such as heavy duty faces..... Nor by new working practices on the lines of the proposals by Albert Wheeler; the 4-day, 9-hour shift-cycle.

He goes on to suggest that:

[a] more likely explanation is simply that, after a year having little to do but contemplate their collieries, mine managers put into practice a set of relatively straight forward improvements in pit operations which reaped large and immediate returns. (1987, 8)

He argues correctly, that such improvements were always available.

Finally, MINOS systems had the most impact at the coalface. The move toward retreat mining, however, resulted in changes in the deployment patterns of man-power, away

---

<sup>8</sup> Gate side packing, necessary to protect the access tunnels to the coalface had traditionally been done by hand. Stable holes are small sections at one or both ends of a coalface which are mined in advance of the face and allow the coal cutter to be moved forward ready for the next strip. Again traditionally formed by hand in the 1970s many were eliminated altogether by the use of retreat mining or double ended shearers (with cutting discs at each end). Others were mechanised by the use of an additional shearer on the coalface. In the 1980s diesel/battery powered Free Steered Vehicles (FSVs) replaced labour intensive and inflexible rope haulage systems and the introduction of longer, faster conveyor belts increased coal clearance. In the 1990s roof bolting began to replace steel supports in roadways. These were quicker to install and less demanding on the underground transport system (See Pryke 1981 and Ashworth, 1986, Chapter 3 for detailed discussion on mining technicalities, also see contemporary issues of Mining Engineer for further developments).

from the coalface and towards development drivages. Here more traditional control mechanisms, incentives and supervision, have, arguably, been the norm.<sup>9</sup>

Taken together, heavy duty equipment, improved coal clearance, different methods of employing existing technology and retreat mining, probably account for a major proportion of the productivity improvements. Additionally, the introduction of roof bolting in the 1990s has had a significant impact on drivage rates. MINOS's systems have, probably, made only a marginal contribution to productivity increases.

A more accurate assessment of technological change in the industry is offered by Gibbon and Bromley when they argue that:

The existing critical literature on technical change in British mining perhaps inadvertently gives the impression that the main change in the last decade has been the introduction of micro-electronics and that the impetus behind this change has been to deskill the workforce and concentrate managerial control of the labour process. There is little doubt that micro-electronics do indeed centralize management control over information and deskill certain workers (especially fitters and electricians). But micro-electronics in combination with heavy duty technology is mainly intended to minimize downtime and hence increase unit output. Some elements of the new technology (e.g. FSVs) have a higher skill content for operatives than the technology they have replaced. Future technological development lies in the extension of heavy-duty mining methods *supported* by micro-electronics rather than the universal application of micro-electronics for the sake of deskilling. (1990,67)

What is not being questioned here is that the NCB were seeking and instituting methods and technologies with the express purpose of increasing productivity. What is being questioned is the impact of MINOS on productivity, and that either the NCB collectively (Winterton) or its engineers (Taylor) were driven by political motives. It will be argued below that Taylor, usefully, rejects the temptation to 'read off' from the Ridley Report and conclude the conflicts of the 1980s were a deliberate and coherent strategy. It is somewhat surprising then, that he 'reads off' the Miron Report to account for the development of technology in the 1970s-80s. It would be better to follow Ashworth (1986) and place the quest for productivity increases and the technological development in a historical perspective. As such, the primary motivation behind the introduction of technology throughout the industry's history has been to maintain coal's competitive position vis-à-vis other fuels. It is noteworthy that

---

<sup>9</sup> These comments are based on personal experience at one colliery so therefore need to be treated with caution. However, as far as I am aware no work has been done on the impact of technology on deployment patterns in the industry and the impact those patterns have on the sort of analysis carried out by Winterton.

Winterton and Winterton (1993, 99; 1995, 70) acknowledge that they failed to recognise the extent of the industry's decline in their earlier work. They attribute this failure to the unforeseen impact that gas would have on demand rather than a misreading of the NCB's motivations for seeking productivity gains. Again the focus on the number of pits and the number of miners employed appears to have distorted the analysis. By importing a political motivation and suggesting that the rationale behind the NCB's strategy was the achievement of a 'flexible firm', they shift attention away from the underlying supply and demand problems that faced the industry in the 1980s. By contrast this thesis will argue that the NCB and the Government were less motivated by political revenge or new capital accumulation strategies and, until the late 1980s, more by the desire to achieve financial viability with existing organisational structures. At the very least, the claims of Winterton and Taylor could, and should, be subjected to empirical testing.

So far the discussion has been critical of technological explanations which have conflated the industry's decline with its concentration. This does not, however, imply that technology is unimportant to explanations of decline. An alternative view on the relationship between technology and decline is offered by Cutler, Haslam, Williams and Williams in their Aberystwyth Report on Coal (1988).<sup>10</sup> For them the crisis of the mid-eighties was a consequence of the expansionary policies following the OPEC price hikes and the subsequent decline, rather than the projected increase in demand. When, in early 1980, it was recognised that there was likely to be an excess supply of between 5 and 10 million tonnes the NCB concluded that the only solution possible was the closure of 'high-cost, short-life' mines. The Board recognised that:

The NCB's return on the massive Plan for Coal investments would only come if the new capacity and new pits produced at full output. If new-capacity and new pits were brought into production in a situation of over capacity then old capacity and old pits would have to close. (Cutler *et al.* 1988,163)

Cutler *et al.* go on to argue that:

---

<sup>10</sup> The original Report was published in 1985. Here the amended version is used from Cooper and Hooper 1988.

management was placed in an awful dilemma at the outset of the crisis in 1980/1. As new capacity was brought in, the short-term balance between supply and demand was completely wrong because an expected growth in consumption turned into an unexpected fall. All this was fundamentally a matter of misfortune rather than mismanagement. (164)

Whilst implying limited Board culpability for the crisis that emerged in 1980 Cutler *et al.* are more critical of subsequent investment policy. They argued that the strategy of creating new, high tech, high cost capacity is:

precarious because it reduces management flexibility in response to changing market demands or opportunities. (171)

What Cutler *et al.* are suggesting is that, in the unpredictable market conditions the industry faced, the investment strategy was the reverse of that which would have allowed the industry to respond to changing demand. New capacity had to be worked as intensively as possible and in a declining market old capacity closed. The industry, by the late 1980s, was concentrating to a degree that limited flexibility. If, as happened, demand declined further closures would begin to occur where new capacity had been installed resulting in aborted investment.

As Cutler *et al.* note (165-6) this raises some interesting, and as yet unexplored, questions. Primarily, why, despite the crisis that had arisen did the NCB continue investment in new high-tech capacity? And why did the Government continue to finance it? A policy that appears to have pursued almost up to the 1992 crisis. As Cutler *et al.* suggest:

The surprising thing is not that this government has imposed such a constraint [on investment], but that it has seemingly tolerated (if not encouraged) a loss making nationalised undertaking to concentrate on expensive investment in new capacity. (1988, 166)

Similar arguments, though much more critical, have been advanced by Henney (1994). He argues that British Coal became obsessed with superpits using heavy duty, longwall mining methods, which because of geological faulting, poor market assessment and poor equipment, failed to achieve their expected potential. Citing the Boyd Report (1993), he suggests that there was 'no relationship between higher investment and higher productivity and lower costs' and that:

To protect its new superpits in a declining market, British Coal has closed pits that could have been economically mined. (1994, 9)

The issues of investment and the appropriate forms of investment are critical to any understanding of the nationalised coal industry. Perhaps, as several writers have asserted, discontinuity of investment strategies has, more than any other factor, contributed to the supply-side decline. The lack of investment in the 1960s has been seen as a major reason for stagnating productivity and the failure of the NCB to respond quickly to the increased demand in the early 1970s (Ashworth 1986, 331). The heavy investment following the OPEC oil price increases may have been ill conceived and lacking in rational justifications (Robinson 1974; Robinson and Marshall 1981). There was, almost certainly, a lack of co-ordination between the energy agencies during that period (Prior 1987). In the 1980s, the continuation of the 1970s investment programme, in a declining market situation, appears almost incomprehensible. If the analysis of Cutler *et al.* and Henney has any credibility then the strategy of the Board should have been to maximise output flexibility. Such a strategy might not have had a great immediate impact on the industry's market share but would have at least avoided the sterilisation of countless investment projects, and improved its future prospects.

### **2.3 The Conservative Governments and the Decline of the 1980s and 1990s**

All writers, of course, recognise the schism in the development of the history of the coal industry following the election of 1979. In this review the 'pits' crisis' of 1992 is used as a convenient focus though many of the arguments deployed emerged during or after the 1985/85 miners' strike.

The literature reveals a high degree of consensus about the immediate causes of the 1992 crisis. All writers agree that the source of the crisis lay in the conditions created by the privatisation of the electricity supply industry (ESI). Indeed the difficulties for BC had been foreseen by commentators from widely differing perspectives. Robinson (1989) suggested that the relationship between the two industries was such that any change in the structure of either industry was bound to have a detrimental effect on the coal industry. Robinson's preferred option was for a joint privatisation, and liberalisation of the two industries (Robinson 1987). When this was rejected he argued that if coal privatisation were to be delayed until the 1990s the industry would be much smaller than an early privatisation would facilitate (Robinson 1989, 25).



From the opposite perspective, Prior (1989) also made pessimistic forecasts of British Coal's position. He anticipated the conflicting position that a government would find itself in if it faced pressure to intervene to save coal. Something which, he argued, could only be achieved through long-term contracts for coal that would be uncompetitive with world traded coal.

What sense, it might be asked, does it make to privatise an industry in the name of free competition when in its initial formation there is enshrined a fixed price non competitive long-term contract for its major cost component held by just the kind of state monopoly the government is said to despise. (Prior 1989, 214)

Both Robinson and Prior expected the threat to BC to come primarily from imported coal, though Robinson (24) does allow for other fuels, including gas, to enter into the equation. In the event, gas was to dominate much of the debate in 1992. This was seen as a direct consequence of the ability of regional electricity companies, RECs, to generate up to 15% of their own electricity requirements, (Coyne 1992a,12; Parker and Surrey 1993 & 1995, 408; Powell 1993, 227; Bromley 1996, 105. These issues will be taken up in greater detail in chapter six of this thesis).

Whilst commentators have agreed on how the privatisation of the ESI led to the crisis of 1992, no such consensus surrounds the Government's motivations behind the policies that led up to the crisis. For Coyne:

In one sense, all this represents the final battle in the war between the miners and the Tories, which began so memorably in 1972. Revenge is palpably in the air and was far too succulent a dish to refuse. But the execution of the coal industry is also a paradigm of much that has gone wrong in Britain. At root the problem is the vacuity of Tory energy policy, or to be more exact, their repudiation of the whole concept. (Coyne 1992a, 14)

Here, the three themes: revenge; the absence of an energy policy; and the, related, ideology of the market that have dominated the coal debate since 1979, are offered as explanations for the terminal decline of the industry. These will now be explored in detail.

### **2.3.1 The revenge theory**

The revenge theory came to prominence in the literature during, and following, the 1984/5 coal strike. The strike is viewed as being deliberately planned for, and engineered, by the Conservatives to bury the spectre of 'Saltley Gates' and the 1974 electoral defeat. As Beynon and McMylor (Beynon 1985, 34) put it:

Without doubt the power of the miners and their union burned deep into the psyche of those directly involved in that [1974] administration. Walker and Thatcher ('wet' and 'dry' in the cabinet) share equally in feelings of hostility and anger towards the power of organised labour generally, but especially when coherently organised against the government and state.

The revenge analysts then go on to cite the Ridley Report (leaked to The Economist in 1978), the enactment of its social security provisions, the climb down in 1981, the subsequent build up of coal stocks, and the provocative appointment of MacGregor as evidence of an offensive policy against the NUM (Beynon and McMylor 1985; Saville 1986; Goodman 1985; Callincos and Simons 1985; Fine 1990; Burgi and Jessop 1991; Winterton, and Winterton 1989; Powell 1993; Milne 1994). Parker and Surrey (1995, 823) adopt a more sophisticated approach and argue that the desire to defeat the miners and to denationalise the industry became 'two elements on the political agenda [which] reinforced each other'.

Even if, for the moment, we accept this interpretation of the lead up to the 1984/5 strike, it is not at all clear why the Conservatives should pursue the total destruction of the greater part of the coal industry after 1985. The NUM had been defeated and marginalised, coal was beginning to lose its predominant share of the electricity generating market and privatisation, along competitive lines, would have further weakened the NUM's industrial strength. More importantly, revenge theories cannot resolve the paradox of continued government financed investment throughout the 1980s. As Henney (1994, 8) points out, the government invested £4 billion between 1982/3 and 1987/8 and a further £1.7 billion between 1988 and 1991/2. Investment that was unnecessary in terms of placating the miners and investment in mines which had already closed and in which 'much more [would] be wasted, entombed as rusting machinery' (Henney, 1994, 9).

George Taylor (1991) offers further reasons for discounting the revenge theory, even in its original use as an explanation for the 1984/5 strike. He argues:

Firstly, there is a tendency to minimise the influence of the period in which the preparation of the Ridley report took place. Given the political atmosphere surrounding energy politics during the 1970s it is hardly surprising that the report should attempt to outline a series of contingency measures which could be taken in the event of the a crisis. (Taylor, G., 224)

In other words, given the trauma of the early 1970s it was rational for any government or prospective government to plan to offset the potential damage that a shut down in

the coal industry could inflict. Beynon and McMylor (1985, 38) also note, though somewhat anachronistically, that preparations to ensure power supplies in the event of miners' strike were a feature of the 1970s. Oil-fired stations were mothballed and power stations were made more self sufficient in terms of oil and chemical supplies.

In addition, Taylor, G. (1991, 224) argues that before privatisation of the ESI government energy policy was entirely consistent with all post-war governments energy policy, which traditionally gave fuel diversity a high priority. Proposals to build more nuclear power stations should therefore be seen in the context of fuel diversification rather than as a deliberate and direct attack upon the coal industry.

Gibbon (1988, 146) also doubts that the Ridley Report should be seen as a 'game plan' suggesting that the empirical evidence does not support such an argument. 'What,' he asks, 'is one to make, for example of the appointment of Peter Walker to the key post of Secretary of State for Energy?'. Whilst this question may be answerable in terms of concern over 'public image' and, as pointed out above, his role in the events of 1974, Gibbons' second point is more difficult.

More significantly, the present very low world coal price - which the CEGB has used to force down NCB prices and hence intensify its financial crisis and its closure program - is a product of serious investment errors by the oil companies, rather than a master plan by them..... The CEGB, with the support of the British government, has simply taken advantage of [the] situation. (Gibbon 1988, 146)

Similarly Taylor, G. (1991) argues that the Conservatives could not have foreseen the sudden drop in the price of oil in the 1980s and that:

had oil prices risen, as many in the 1970s expected, then the Governments predetermined decisions to contract the industry would have been led seriously astray. (Taylor, G. 1991, 234)

He concludes that the Ridley report should be viewed as a 'strategically defensive document.' and that:

Conservative Government policy has been rather more cautious, pragmatic and inconsistent than has hitherto been acknowledged. (Taylor, G. 1991, 235)

One might also add that it has been opportunistic, for as Helm has noted:

The 1980s provided a particularly benign environment: world energy prices fell throughout the early 1980s to reach a new low in 1985, electricity capacity was in excess, and the gas industry was reaching market saturation. (Helm, 1993, 412)

Whilst few of these circumstances could have been foreseen by Ridley in the mid- and late-1970s, it is clear that the coincidence of events created the environment for

Conservative policy-making in the energy sector. These are issues which will be explored in detail in chapter six.

### **2.3.2 Energy Policy and the Triumph of Market Ideology.**

The second of Coyne's themes, the Conservative's 'repudiation' of energy policy, is common to other explanations of coal's decline in the 1980s and 1990s. According to Coyne (1992a, 14), policy has implications 'of rational connections between causes and effects, planning, consultation and all the detritus of a bygone era.' In other words, what was needed was a return to the presumed orthodoxy of planned responses to offset the vagaries of the market. It was assumed that such energy planning would naturally favour the coal industry. Winterton and Winterton (1989, 258) make similar claims, suggesting that adoption of Labour's 1987 Energy Policy document would have resulted in the avoidance of 1960s type closure policies. Here two points need to be addressed. Firstly, did the Conservatives have an energy policy and secondly, would a dirigiste policy have saved the coal industry from decline?

Parker and Surrey (1993, 396) have argued that:

The essential components of an energy policy, as of any sectoral policy, are firstly, clear objectives and general principles by which incremental changes in government policies in the energy sector are to be guided and, secondly, specific measures and rules which give effect to those objectives and principles. On this definition, the government certainly has an energy policy.

They then suggest that the problem for the coal industry was that the policy was based on market forces and opposed to any protective measures for the industry. For Parker and Surrey culpability for the crisis of 1992, whilst recognising the political content of the government's objectives for coal, shifts away from government and towards the market.

This view has been criticised by Welsh (1994, 350). He argues, following Winterton and Winterton (1989), that the long-term investment strategy has been consistent with the contraction of the industry and its eventual privatisation and that the structures of the privatised ESI were disadvantageous to the coal industry. Government then declined to intervene to alleviate the effects of previous policy, something that he views as interventionist in itself. He goes on to argue that the government's commitment to the market was such that they would accept the complete destruction of the coal industry and that:

any government prepared to contemplate the eradication of an indigenous energy source in its entirety does not have an energy policy which honours the state's responsibility to the nation it is supposed to represent. (Welsh 1994, 351)

To Welsh, and others who make similar arguments about the absence of energy policy, it is the lack of an 'integrated' policy that has been critical in the decline of the coal industry. Their arguments rest on economic criteria and the need to regulate for market failure, which, as Helm points out, is a feature of the energy sector:

From an economic perspective, the inefficiency of market fuel choice stems from several distinct market failures. These are: the failure of individual decisions to produce a social optimum (the co-ordination problem), short-term time horizons (short-termism), failure to take proper account of the finite nature of fossil fuels (the depletion problem) and the pervasive presence of externalities (the pollution problem). (Helm 1991, 3)<sup>11</sup>

Helm offers persuasive arguments for the 'reinvention of energy policy' in its dirigiste form. But, in contrast to Coyne, he also indicates that such a policy would not necessarily favour, or even halt, the decline of the coal industry. Helm (1991) rehearses much of the debate that followed the 1992 closure announcement. One possibility, he suggests would be to let market forces dominate and BC's economic output level be determined by coal's import price. He rejects this as an optimal solution, firstly, because increased UK demand for foreign coal would drive up the price (see also Rutledge and Wright 1985). Secondly, the ESI was far from a competitive market. National Power and Power Gen could use their considerable market power in negotiations with BC. Thirdly, coal mine closures are irreversible and have significant social costs. Finally, coal is the largest non-transport source of greenhouse gas and acid rain pollution. He suggests that long-term optimality might be achieved by the break-up and privatisation of BC and the introduction of more competition in the ESI. In the short-term, he argues that 'a number of factors may point towards decline' of the coal industry.

New gas CCGTs [combined cycle gas turbines] may be more economical than 'clean' coal technologies for power generation. Tough CO<sub>2</sub> targets may be enforced, and more nuclear power stations may be built after the 1994 review. (Helm 1991, 10)

In order to avoid premature closure he then argues for a temporary, and reducing, subsidy until UK coal prices converged with world prices. Under such conditions the

---

<sup>11</sup> This point will be developed fully in chapter five. For the moment it is enough to note that the purpose of 'policy' was to change the outcome from what would result from 'unfettered' market forces. The justification for 'policy' expressed in terms of 'market failures'.

industry could have a stable environment under which it could be privatised, nevertheless it would continue to decline. In other words, in contrast to those who have seen the integrated energy policy as coal's saviour, Helm argues that, as the industry stood in the early 1990s, further decline was the most likely outcome.

Much of this literature, particularly that which has been written from a perspective sympathetic to the NUM's cause, can be characterised as 'triumph of ideology' theory. The Conservatives pursued an objective which elevated the role of competition and market forces. It then becomes relatively easy to demonstrate that the energy markets 'fail' and that coal has become a victim of those failures and the Government's refusal, on ideological grounds, to intervene. There is, of course, a strong element of truth in this analysis. However, the concentration on events after 1979 appears to reduce the introduction of market forces, or the commercialisation of the industry to an ideological and exogenous variable; one that simply arrived with the election of Thatcher. Two notable exceptions to this analysis can be found. Roberts *et al.* (1993, 191) suggest that 'Thatcherism developed as a response to the inherited problems of the 1970s, the problems of corporatism and overload'. More recently Bromley has argued that:

The Conservative changes in the energy sector, as in many other areas of industrial policy, have been driven by the belief that old forms of (quasi) corporatist regulation merely results in the entrenchment of increasingly inefficient producer interests within the policy-making process. (1996, 109)

Similarly, in this thesis it will be argued that is too simplistic to view the Conservative's policies exclusively in terms of ideology. Rather it will be argued that the 'market' became the 'solution' to past policy failures. In other words, it may be possible to endogenise policies pursued since 1979 within the context of the history of the industry. There is no need to appeal to the total dominance of macroeconomic policies, macro-structural forces or changing patterns of capital accumulation to explain Conservative coal policy. A central argument of the thesis will be that policy and policy change can be understood through the micro politics of policy-making and policy implementation. Energy policy, as it related to the coal industry (its formulation and implementation) will, therefore, form the backbone of this thesis.

### 2.3.3 The Policy Success Theory

So far the analysis has centred on critics of Government policy and the pit closures. This, however, misses the possibility that the closures announced in 1992, along with their predecessors, and the policies from which they emanated were essentially correct. Certainly, as will be seen in chapter six, this is a view favoured by those ex-Ministers who had some involvement in the events of the 1980s and 1990s. For them the newly privatised, de-monopolised and regulated energy sector is a great improvement on what they inherited in 1979. Energy policy generally has been a policy success. In terms of the coal industry the exposure to market forces has merely demonstrated the level of inefficiency that had been allowed to develop in the past.

In several respects this too is a difficult perspective to argue against. Critics of the privatisation programme can argue that the industries were sold off too cheaply, that too many advisors were paid too much money or from another perspective that insufficient competition was introduced into the markets. What is difficult to argue is that what privatisation replaced, nationalisation, was a success story. As the opening paragraph of this thesis suggested the 'passing' of nationalisation was not mourned, even by those who had expected to gain most in 1947, the miners. Indeed the underlying question of this research is: why did nationalisation fail?

The problem with the 'policy success' theory, however, is that there is a strong tendency, particularly by those involved, to reconstruct events with the benefit of hindsight. It is difficult to detect that level of consciousness about policies and actions in the contemporaneous accounts which is displayed in later recollections and theories. In fact 'policy success' is merely the antithesis of the 'revenge theory'. As such the means justified the end, the break up monopoly, self serving, interests which nationalisation had sheltered for too long. However the analysis suffers from the same shortcomings noted above.

This review has been critical of existing explanations for the coal industry's decline. Popular explanations such as the revenge theory have been rejected. It has been suggested that more complex analysis such as 'flexibilisation' often falls short of offering empirical evidence to substantiate the claims made. Other explanations, such as the impact of the market, have been accepted as offering partial explanatory

power though they are incomplete either because the need updating (Ashworth) or because they focus on events after 1979 and do not link those policies to the previous policy failures. It has been argued that the failure to provide an adequate understanding of the industry's decline is due to the omission of previous work to account for the policy-making process. There would appear to be no ready answers to the simple questions: who made coal policy? how did they make it? and how was policy implemented? The final section in this chapter begins to examine some of the literature on policy-making and implementation in the coal industry.

#### **2.4 Policy-making in the Coal Industry**

Most of the current literature on the coal industry identifies three actors, the Government, the NCB and the NUM. With some notable exceptions - Taylor, G (1991) in the case of the NCB and Howell (1989) for the NUM - there has been a tendency to view these actors as homogeneous bodies. A key contention of this thesis will be that a proper understanding of the coal industry can only be achieved by disaggregating the actors and exploring the relationships within and between the various constituents. The Government clearly stands out as a focus for such a study for as Taylor, G. suggests:

It appears almost perverse that so much of the current literature should concentrate upon the NUM and the NCB when the thrust of such arguments has been to stress the declining importance of such actors within the decision making process. (Taylor, G.1991, 245)

And that:

Further research, therefore, is needed to examine the Department [of Energy] and its relations with both the NCB and the NUM. (Taylor, G.1991,245)

This should not be taken to imply that the literature has been silent on the issues of government / NCB relations. Indeed as Taylor, A. J notes, there is considerable disagreement over who actually determines coal policy:



There are two broad schools of thought concerning the political management of the coal industry. The first argued ministerial interference prevented management from carrying out its duties under the [Coal Industry Nationalisation] Act [1947] to avoid the political costs of unemployment and placate a powerful trade union.

Consequently the management became incapable of effective decision making and looked to government to solve its problems. An alternative view is that ministerial control was lax. Lacking technical and business skills, ministers and civil servants were content to allow the industry (dominated by mining engineers concerned with output) to run itself. Being a monopoly it had no efficiency incentive, and a comfortable relationship developed between the board and the ministry largely free of detailed scrutiny. (Taylor, A. J, 1992, 53)

Writers like O'Donnell and Taylor fall, broadly, into the 'strong' government 'school'. O'Donnell's contribution has already been reviewed and centres on the government's control of prices and the provision of investment funds. Taylor, A. J. (1992) suggests that 'Government, is, in the final analysis, the dominant influence.'

Other writers would appear to fit into the second 'school', which invests the NCB with a great deal of autonomy from government control. Interestingly, the debate crosses the 'left - right' political spectrum. Whilst the strong government school is, perhaps, dominated by writers from the left of centre, writers from both sides of the divide have made contributions to the autonomous school. From the 'free market' right, Henney has argued that the institutions and structures of the industry:

- gave British Coal a monopoly of expertise;
  - enabled British Coal to pursue a number of misguided policies;
  - maximised the power of the NUM;
- and
- created an unsatisfactory relationship between British Coal and the CEGB.
- (Henney 1994, 8)

He describes BC as a secretive organisation which maintained a hold over the UK's mining consultants, academics and engineers. Using this they were able to maintain 'a conspiracy of silence about its poor performance' and:

In consequence the public, Parliament and civil servants in the Department of Energy had no cross-check on its performance. (Henney 1994, 8)

Prior, from the left of the political spectrum, makes a similar point when he suggests that in the mid- 1970s:

the National Coal Board, along with the electricity and gas agencies, was effectively handed the task of fashioning a new energy policy for Britain. They were given the task because, perforce, there was no other body capable of undertaking the job given the weak and inexperienced Department of Energy, which was given a new name but little else in the planning capability. (Prior 1987, 6)

Ashworth (1986) suggests a changing relationship between government and the NCB. During the 1950s he argues, citing PRO, POWE 37/100, that the NCB had a great deal of autonomy and that their control by government had, in general terms, been 'weak and irrational'. He suggests that:

[t]he available information was too limited and approximate and too subject to frequent revision in the light of changes in prices and the availability of resources; and that government had few instruments of control other than the arbitrary imposition of cash limits and steel quotas. (Ashworth 1986, 589)

During the 1960s, however, as the Board became more dependent on the government for finance, this autonomy was weakened. By the late 1960s, he argues that the NCB had no influence on the formulation of energy policy which:

created market conditions more extreme than would otherwise have existed and compelled the NCB to contract at an almost unmanageable rate. (1986, 637)

He goes on to point out that, during the period of contraction, the NCB's relations with government became more diffuse and remote as

the Ministry of Power was abolished and the NCB came under the aegis of a succession of vast, composite ministries..... This further weakened the NCB's position, for the sponsoring department was not only the source of immediate control over a nationalised industry, but was also the medium through which the needs of the industry were represented to other areas of government, of which the Treasury was particularly significant. There was less chance of successful representation if they had to be made through a medium with a reduced interest and a smaller fund of relevant specialism. (1986, 637)

Following the OPEC price hikes, Ashworth argues that: 'the NCB's position *vis-à-vis* the government was strengthened' (639) but the relationship did not return to that of the 1950s. The institutional changes and the two national strikes left a legacy which were to impact on the government / industry relations throughout the 1970s.

Overall, Ashworth concludes that government has, throughout the period 1947 to the early 1980s, kept the NCB's activities within the context of an overriding energy policy (642). Nevertheless he acknowledges that concentration of expertise within the NCB placed government at a disadvantage as far as the form of investment strategy was concerned. He suggests that a division of labour occurred whereby government set a financial and strategic framework and the NCB operated within this, with more or less autonomy, depending on market conditions, personalities or dominant ideologies (Ashworth 1986 640 & 644).

Ashworth's analysis makes a number of important points relevant to this thesis. Firstly, that the forces within the policy-making processes have changed over time. Secondly, that the institutional arrangements and personalities matter; and thirdly, that the actors are drawn together by resource dependencies. However, the analysis is incomplete. Whilst he makes some distinction between Ministers, Parliament and civil servants, government is generally treated as a whole rather than a number of differentiated actors. His analysis also lacks a theoretical framework, at least from a political perspective, and finally, it only takes the analysis to the early 1980s.

Gibbon and Bromley also chart a changing policy-making environment, taking the analysis up to the late 1980s and accounting for the impact of the 1984-85 strike. They argue that in 1984-85 the 'predominant interest of the government in relation to the coal industry was to reduce its call on state expenditure and that:

Clearly, this was against the general background of an energy policy in which coal was to be run down and sources of supply internationalised, and an industrial relations climate in which 'union power' was to be curbed. These objectives were part of the consensus among British parliamentary parties (except possibly the nationalists); party political differences on them were largely tactical, concerning the pace of change and how it was to be publicly handled in relation to the state's corporatist trappings. (1990, 89)

For Gibbon and Bromley the party consensus dates back to 1956, however, the run down of the industry was constrained by the social and political cost associated with it. Even in 1979 the Conservative government did not envisage the 'consignment of coal to the role of a minor player (in the energy sector)' (1990, 91). By changing the power relationships in the industry, and removing the political costs, the essential impact of the strike was to facilitate the implementation of the consensus by a government unconcerned about the social costs. The NUM was no longer a principle actor. Also the strike:

certainly, irrevocably terminated any power the NCB had to deflect, obstruct or slow down the British party-consensual objectives of contracting coal and expanding the role of other fuels within an increasingly internationalised internal market. (1990, 90)

There is much that can be said for this analysis. Britain does appear to have pursued an 'anything but coal' policy since the 1950s and the political environment has shifted over time. The problem is that whilst the analysis highlights the changing power relationships within the industry it fails to articulate how those relationships are played

out. If we reject economic determinism then we do not know why the closure of a large part of the coal industry became policy in the 1960s or why such a policy was reversed in the 1970s. If we reject conspiracy theories we cannot explain the sudden collapse of the industry in the 1990s, nor can we resolve the paradox of Conservative Government policy in the post strike period, that of continued investment in the industry.

The key feature that can be drawn out of this brief review of policy-making in the coal industry focuses on the issue of the autonomy of the industry. Clearly, it is an issue which is central to the questions of: who made coal policy? how did they make it? and how was policy implemented? The analysis of the chapter suggests two further questions might also be posed: what were the policies and what was the aim of those policies? So, for example, there is no agreement on what the policies of the 1980s were or why they were pursued. These will be the fundamental questions explored in this thesis.

## **2.5 Conclusion**

This chapter has been critical of some of the recent accounts on the decline of the coal. In particular, it has been argued that the 'radical' critique of 'traditional' explanations, whilst pointing to need to bring government back into the analysis, has failed to develop a satisfactory explanation for the industry's decline, nor has the critique always been justified. Ashworth's analysis does include the influence of government though it does so through the impact it had on demand rather than, as O'Donnell argues, the failure to develop supply-side policies. O'Donnell and Taylor, G. rely to a great extent on the dominance of macroeconomic objectives over the interests of coal industry, a feature also noted by Bromley. However, whilst not denying the considerable impact of macroeconomic objectives on the coal industry, they do need to be placed in the context of demand conditions and supply-side policies. O'Donnell and Taylor, G. go too far when they argue that the dominance of the macroeconomy led to insufficient investment and the closure programs of the 1960s and 1980s. As this thesis will demonstrate, except for the 1960s and early 1970s, the industry has not been starved of investment. Indeed it will be shown that the industry embarked on two large investment programmes which became locked into over optimistic projections of demand, leading in both cases to the misallocation of investment funds in projects

which were subsequently aborted. It will be argued that this feature was a consequence of distortions within the supply-side policy formulation and implementation structures, rather than absence of such policies. It will also be suggested that those structures were characterised by asymmetric information and vested interests.

The second theme of the 'radical' attack on 'traditional' explanation, i.e. the role of technology, has also been criticised. It has been argued that writers failed to distinguish between the concentration of the industry and its decline as the need to counter the Government's arguments for pit closures, by writers associated with or sympathetic to the NUM's position, led to a distortion in the literature. Winterton, particularly, has argued the NCB pursued a politically motivated strategy of concentration, aiming to automate as much of the productive process as possible in order to reduce the influence of the NUM. The level of political motivation has been questioned, an issue which will be developed later in chapter five. It has also been suggested that this analysis draws attention away from more important features surrounding energy policy, primarily, the Party consensual policy of reducing Britain's dependence on coal for its energy requirements. It has been argued that the alternative account of the role of technology offered by Cutler *et al.* may have more to offer. On that account the NCB pursued and the Government financed an investment strategy that actually reduced flexibility.

Explanations for the post-1979 history of the industry have been characterised under three headings: the 'revenge' theory; the 'triumph of ideology' theory; and the 'policy success' theory. The revenge theory and the policy success theory have been discounted as credible explanations for Conservative Government policies. The revenge theory imports a level of consciousness into the policies of the Government that are difficult to detect in the events. Chapter six will show that similar arguments apply to the policy success theory. Most significantly, both fail to account for continued investment in the industry during the 1980s. The triumph of ideology theory, on the other hand, may offer a partial explanation. The energy sector was liberalised and competition, albeit imperfect, did become a feature. The coal industry was unable to compete in what many see as a rigged market and the Government refused to intervene on ideological grounds. However, most accounts which focus on the 'market' fail to articulate why it became the dominant feature in the energy sector. The

'market' is often seen as an exogenous variable imported to the energy sector with the election of Thatcher. This thesis will argue that the reasons for the 'market solution' were rooted in the policy mistakes of the past and that the 'market' played an important role in policy before 1979.

### 3. A Theoretical Framework.

#### 3.1 Introduction.

In chapter two it was argued that current explanations of the turbulent history of the coal industry have failed to take the policy process into account. In this thesis it will be argued that the outcome, the decline of the industry, cannot be understood without an adequate understanding of the way successive governments have derived their overall objectives for the industry and the processes used to implement those objectives. In contrast to O'Donnell and Taylor, G. I have suggested that whilst governments have had supply-side policies for the coal industry they have been ones that have exacerbated already difficult market situations and have been inconsistently implemented. This chapter is concerned with the development of a theoretical framework for understanding these features and locating them in the wider political and economic contexts.

The chapter is divided into four substantive sections. Section two discusses the appropriate level of analysis and concludes that, in this case, much might be learnt from a micro- level analysis of the policy process. Section three will consider recent calls for a multi-theoretic approach to the analysis of political phenomena and it will be argued that such an approach may facilitate a better understanding of the policy process than has hitherto been offered. Section four draws on Rhodes' (1991) review of theories in Public Administration and concludes that both public choice and organisational theories might be of some value in explaining the course of the post-war nationalised coal industry.<sup>12</sup> These two approaches are then discussed in some detail. In each case it will be suggested that adaptations are necessary in order to deal with specific problems raised by an analysis of the nationalised coal industry. Section five focuses on the problems of dealing with change in the policy process. This is a problem of particular relevance to the energy sector where change has been endemic. Finally, section six will conclude the chapter by drawing together the threads and outlining how the models will be integrated to provide a guiding framework for this study.

---

<sup>12</sup> Capitalisation is used to denote the academic sub-discipline.

### 3.2 Level of Analysis

As Taylor, G. (1991) has noted much of the work on the coal industry has been atheoretical. In common with Public Administration generally the work has tended to describe and evaluate policies rather than develop theoretical frameworks (Rhodes 1991; 1995). Where theory has underpinned the analysis of coal, Marxist ideas have dominated. The work of Allen, Fine and O'Donnell represents a 'classical' Marxist approach whilst that of Jessop and the Wintertons is neo-marxist. This feature alone may explain why the policy process has been an under researched area. For classical Marxists the actions of the state are largely economically determined and even neo-marxists have had difficulty escaping economism (Marsh 1995b, 284). Taylor's work, on the other hand, points to the need to bring state actors into the analysis and usefully disaggregates the NCB, but his focus on the impact of macro economic policy diverts attention away from the policy-making processes.

Marxism is perceived as a macro theory in common with elitism and pluralism: one that attempts to provide an all encompassing view of state/society relationships. The aim of this thesis is less ambitious. In attempting to explain the role of the policy process in the decline of the coal industry the focus of the work will be at a micro-level of analysis, that is the relationships within and between actors and institutions in the energy and coal sectors.

This is not to imply that wider state/society relationships are unimportant. As David Coates has argued:

Industrial policy is not shaped just by the exigencies of particular industrial problems. It is also shaped by the persistence of more entrenched and longer established habits of mind and ways of acting in the political system and industrial structures of which it is a part. (Coates 1996, 27)

Coates goes on to develop a framework which overlays discrete policy initiatives with a typology of state systems. At one end of the continuum a liberal state aims at freeing markets and is associated with privatisation policy initiatives. At the other extreme a command economy aims to replace markets and is associated with nationalisation policy initiatives. In between corporatist and developmental state systems seek to manage markets by using indirect incentives, administrative guidance, regulation and planning agreements. Coates argues, and the edited case studies illustrate, that the categories represent ideal types and that in reality:



'States invariably combine elements of one or two of these models: either by policy changes over time (now more liberal, no less), or by creating policies for one sector which fit one model, and for other sectors which fit another'. (Coates 1996, 28)

Thus Simon Bromley (1996), writing the energy case study, argues that energy policy formation before 1979 'was broadly corporatist in relation to the public sector' and 'liberal' in the post-1979 period.

Coates and the contributors to this work are clearly pointing to the need to place micro-supply-side industrial policies in the context of the prevailing macro purposes of the state. However, it is also clear that the diversity of industrial policy implies that we cannot 'read off' supply-side policies by simple categorisation of the state. Rather, the relationship between the underlying nature of the state and specific policies must be an empirical question; a problem that this thesis aims to address for the coal industry by focusing on the policy process. What is needed, therefore, is a theory or methodological framework based at the micro-political level. Within the sub-discipline of public administration a number of alternatives suggest themselves. However, before moving on to outline these approaches the recent calls to develop a multi-theoretical approach should be discussed.

### **3.3 A Multi-theoretical approach**

The proliferation of theories and models within political science and the awareness that policy-making and policy implementation are complex activities has led to repeated calls for a 'multi-theoretic' approach to analysis. Three strains of thought can be detected in the literature.

The first follows Graeme Allison's study of the Cuban Missile crisis and subjects the same event or phenomena to analysis using different models or theoretical perspectives.<sup>13</sup> The main purpose of this approach is to allow 'explicit comparison of the defects and merits of these theories' (Rhodes 1991, 551; see Dunleavy 1995 for an example of application), though Allison also suggested (a point which will be developed below) that good analysis would 'manage to weave the strands [of various] conceptual models into their explanations' (Allison 1971, 258 cited in Brady and Catterall 1996).

---

<sup>13</sup> Here I follow the literature which uses 'models', 'theories' and approaches more or less synonymously.

The second approach involves integrating theories or models in order to produce a better explanation of a phenomenon (Dowding 1994, 1995; Smith 1993, Smith *et al.* 1993; Marsh 1995a Marsh and Stoker 1995). It is an approach which may be more relevant to this thesis given that the aim is to analyse a phenomenon rather than explore the merits and de-merits of a number of theories.

Disaggregating the state to explore specific policy areas has led to the recognition that policy is made by individuals working within organisations, in the context of a broader political structure, and is constrained by social, political and economic circumstances. The motivation behind the appeals for integrating theories is the suggestion that different theories emphasise different aspects of the policy process. Thus, Marsh and Stoker (1995, 293) argue that full explanations can only be achieved by integrating micro-level analysis, which could be based on rational choice theories, with policy network analysis, which is described as a meso-level concept, and macro state theories which focus on the wider political environment.<sup>14</sup> Rational choice could be used to explore the behaviour of, and exchanges between, individuals and groups; network analysis will explore the constraints and opportunities that flow from the structural arrangements; and macro state theory will put the actors and structures in the context of broader state/society relationships and answer the ‘heroic’ question: In whose interest is policy made?

The third approach has emerged from the ESRC funded Whitehall Project and draws on the earlier work of Allison and also has roots in the classical institutional approach (see Rhodes 1995). It focuses on the juncture of politics and history and given the historical nature of much of the analysis contained in this thesis it is an approach worthy of consideration. Brady and Catterall (1996, 13) conclude, after outlining a number of models drawn from decision making, organisation and group dynamic theories, that ‘each model would appear to offer only partial explanations’. They go on to argue that the ‘utility [of each model] can only be genuinely recognised *after* the empirical research’ (Brady and Catterall 1996, 13, original emphasis). For them, the purpose of the individual models is to ‘inform’ the analysis rather than to ‘drive’ it. The

---

<sup>14</sup> Marsh and Rhodes use of the term ‘meso-level concept’, has been the source of some confusion in the literature, originating from, as Marsh 1995a acknowledges, an initial failure to give a precise definition. In this thesis ‘meso-level concept’ is avoided and network analysis is defined in terms of a micro political model.

quest for the 'holy grail of *the* model' they suggest will lead to incomplete accounts and, they imply, will 'ignore factors on dogmatically methodological grounds' (Brady and Catterall 1996, 16). Rather than adopt a single model or attempt to develop a multi-theoretic - super-model Brady and Catterall's propose to draw on the models as seem appropriate and to attempt to synthesise those models with a historical approach. History, because it deals with the particulars of events will enable the generalities of political science models to be verified or illuminated.

These three approaches to multi-theoretic analysis are not, of course, mutually exclusive. Adoption of the third approach, a detailed account of a phenomenon, would enable different models or syntheses of models to be tested and, intuitively, this is an approach I find appealing. It offers the opportunity to trawl through the historical material with a relatively open mind yet retains the organisational properties of the theoretically driven analysis. However, this might be something of an ideal situation, as operationally there are several difficulties.

Firstly, Brady and Catterall are developing this framework in order to assess the role of cabinet committees between 1945 and 1966. Their research will be complemented by the use of official documents, something that will not be possible, at present, for the main period of this study. Secondly, an analysis that covers a period of nearly fifty years and excludes none of the plethora of models which may offer some explanatory power would appear to be a mammoth undertaking. It should also be noted that, in practice, even historians approach their work with presuppositions. As Carr has argued:

[Facts] are like fish swimming about in a vast and sometimes inaccessible ocean, and what the historian catches will depend, partly on chance, but mainly on what part of the ocean he chooses to fish in and what tackle he chooses to use - these factors being, of course, determined by the kind of fish he wants to catch. By and large the historian will get the kind of facts he wants. (Carr 1964, 23; cited in Brady and Catterall 1996)

This and, from a critical realist position, the limitations of competence, time and space suggest that some methodological constraints need to be applied. The purpose of the rest of this chapter is to make explicit the 'tackle' which will be used in this research.

### 3.4 Theories in Public Administration

In his review of the contribution of political science to British Public Administration Rhodes (1991) identifies five approaches which have 'staying power': organisation theory; rational choice; neo-marxist state theory and public management. These theories have been products of the 1970s and 1980s but have not supplanted the atheoretical 'traditional' approach (Rhodes 1991, 551). Of these, two approaches have already been criticised. The traditional approach because it is atheoretical, leading to description and evaluation rather than analysis and the neo-marxist approach because it fails to deal with the detail of policy-making. In addition, and in so far as neo-marxism is associated with post-Fordism and interpretations of Thatcherism, because it attributes 'a degree of policy coherence and consistency [which is] hopelessly at odds with the contradictory pragmatism of [Thatcherism]' (Rhodes 1991, 545). As chapter two argued, the decline of the coal industry in the 1980s and 1990s cannot be attributed to the deliberate attempt by Government to restructure the industry along 'flexible' lines.

Public management is concerned with implementation rather than policy formulation and is essentially a practitioners field (Rhodes 1991, 548). Nevertheless, it and the debates that have surrounded new public management throw up one interesting question: Should we judge the record of the British coal industry against what we expect from a private firm or was it a public service to be judged on different criteria? The question is, of course, unanswerable other than normatively. The provisions of the Coal Industry Nationalisation Act (1946) charged the industry with the efficient production of coal and a public service duty. Different governments, and the same governments at different times, have changed the emphasis from one to the other, setting up a conflict that was not resolved until the 1980s.

However, the focus of the work will be on the decline, or size, of the industry and the effect that policy formulation, policy and policy implementation has had on it. The primary determinant of the industry's future size, at any given moment, is the level, type and location of past investment. All governments have assumed that investment will lead to greater efficiency and have *attempted* to make 'commercial' decisions. Those decisions have been formulated in, and implemented by, 'public' institutions. The outcome has been inconsistency, millions of pounds worth of sterilised investment

and, arguably, an industry run down to a level below its commercial potential. But, correlation is not, except in this case for the New Right, causation. One key aim of the research is to find out why the charge that public enterprise will always invest in the wrong project at the wrong time appears to be true of investment in the British coal industry. Whilst this may be 'grist to mill' of new public management, the focus on policy suggests other frameworks might be more applicable.

Of the remaining two approaches both public choice and organisation theory would appear to offer some explanatory power for the decline of the coal industry and will be debated in greater detail below.

### **3.4.1 Public Choice**

Until recently public choice, the application of individualistic rational choice theory to the public domain, has received scant attention amongst British political scientists. However, through the work of, amongst others, Dunleavy, James and Dowding rational choice theory has become an accepted, though little used, tool in British political science (Rhodes 1991). For political practitioners, on the other hand, it is at least arguable that public choice theory has been extremely influential in the formulation of policy since 1979. This might be particularly true in the case of energy policy.

Until now analyses of the coal industry employing public choice models have been undertaken by researchers associated with the New Right (see chapter six). However, as Dunleavy (1991) argues the methodology is not their exclusive preserve. An analysis which draws on the methodology of public choice, but does not have as its primary goal the prescriptive conclusion that liberalisation of the markets will increase economic efficiency, might be worthwhile. In the context of this thesis the contribution of public choice to the understanding of bureaucracy is the most relevant.

Niskanen (1973) sets out an economic model of bureaucratic behaviour. His principle aim was to explain why the Government's share of total economic activity in modern economies was growing and appeared to be beyond the control of the electorate and politicians. In 1973 he makes the implicit assumption that government spending was above the level of that desired by electors, though he admits (p15 footnote 2) that he side steps the demand side of the equation. In later work (Niskanen 1993, 151) the

assumption of over-supply is made explicit by citing electoral survey studies and migration studies that suggest that only half of the increase in government spending can be explained by increased constituent demand. The conclusion of over-supply in the public sector leads to the deduction that to explain government growth what is needed is a theory of supply, i.e. one which examines:

- a) the distinguishing characteristics of bureaus, b) the nature of the relations between bureaus and their environment, and c) the maximand of bureaucrats.
- (Niskanen 1973, 7)

In addition to the assumption that government spending is above the level desired by the constituents, and therefore economically inefficient, Niskanen also assumes instrumental rationality. All agents are assumed to maximise their individual utility and conform to the axioms of rational choice (see Hargreaves Heap *et al.* 1992, 4-14). Briefly, he argues that bureaucrats maximise utility, which is a function of income, reputation, power, prestige and other self-interest variables which are positively related to the size of the bureau's budget. Bureaucrats are constrained by the sponsoring body to the extent that the costs of supplying the service are not greater than the benefits to the constituents. They are assumed to have monopoly power over the sponsoring body. This, it is argued, follows from the assumption that they offer a level of service for an annually settled budget; power emanates from an asymmetry of information in the bureau's favour and the absence of alternative supply sources. The result of this is the '2x' bureaucracy where the bureau appropriates the consumer surplus and, providing the marginal value of output is positive, expands production to twice the optimal level.

Niskanen has been criticised on a number of grounds (see below) and he himself recognises that 'the simple models of earlier publications now seem to be romantic rationalisations of democratic theory' (Niskanen 1993, 151). However the model has been influential in New Right ideology and in terms of the coal industry, perhaps, retains some explanatory power.

A Niskanen analysis would require two assumptions. First, we would have to view the NCB/BC as bureaucracy rather than an industrial organisation, which may be reasonable given that they were not profit maximisers, and second, assume that the utility of NCB/BC personnel, at all levels, was positively related to the size of the industry. A Niskanen interpretation would then suggest that both the sponsoring

department and the NCB/BC would seek to maximise coal output. With falling demand, this led the industry into successive crises and to eventual, inevitable, decline. Oversupply was a feature of the industry between 1957 and the early 1970s and again from 1976 onwards. Asymmetric information was also a feature as the NCB had a monopoly on mining engineers and expertise.

Niskanen was primarily concerned with the quantity supplied. Vickers and Yarrow (1988, 32-35) however, adapt the Niskanen model to focus on the cost of output. They argue that a civil servant's utility is a function of the department's output *and* the rent accruing to the officials. It is also assumed that civil servants have some control over the cost of the output, i.e. they can manage either efficiently or less efficiently. They then show that the bureau will supply any given output at up to twice the 'economically efficient' cost. Implicit in the model is the neo-classical assumption that work represents disutility. If managing efficiently requires more effort than managing inefficiently and in the absence of financial inducements then civil servants have no incentive to pursue least cost production.

Again the model developed by Vickers and Yarrow, and the assumptions that lie behind it, have been influential in New Right ideology. The absence of competitive pressure and the ineffectiveness of bureaucratic control has, it is argued, resulted in inefficient production in the public sector and led to the policy prescriptions of privatisation and quasi-markets. In terms of the coal industry, the model might be applied at two levels. On one level it can be argued that civil servants, in the sponsoring department, have failed to control the industry in the 'national interest'. At another level it might be argued that the national Board of the coal industry has failed to control its Area managers, a point which will be developed later in chapter six. The consequence has been higher costs and a consequent decline in demand.

The main problem with the above analysis is that politics are largely ignored and both models credit the bureaucracy with a great deal of control over the eventual outcome. In terms of the Niskanen model, the bureaucracy appears to be in total control and it is impossible to explain the closure programmes of the 1960s and 1980s. The model only works in periods of government expansion. The Vickers and Yarrow model can be similarly criticised, primarily because, although it allows politics to determine the level of output, politics do not feature in coal's cost function. Mining costs are a function of,

inter alia, capital employed, wage levels and the location of production variables that have been subjected to a high degree of political intervention.<sup>15</sup> In other words, in so far as coal costs have been above 'least costs' inaction by the sponsoring department cannot be the only explanation, its proactive measures must also be considered. In addition, the Vickers and Yarrow model cannot explain the rapid movement towards lowering the real cost of coal production from the mid-1980s to privatisation, suggesting that there is nothing inevitable about public sector inefficiency.

The role of politics in the relationships between bureaucrats and governments has been explored by Peter Jackson. Jackson (1982, 125) suggests that the relationship between the two 'is best described as one of bilateral monopoly'. The bureaucracy is, in many instances, a monopoly producer of the goods or services and the sponsoring department is a monopsony (single) buyer of those goods. Jackson then argues that in any bilateral monopoly relationship the outcome, how much is produced, cannot be precisely determined (as Niskanen suggests) but will be a function of 'the relative power and bargaining strengths of the two sides' (Jackson 1982, 125; see also Brown and Jackson 1990, 199-203; and Else & Curwen 1990 chapter 19; Gravelle & Rees 1992 chapter 14 for more general, and technical, expositions of the bilateral monopoly relationships). Jackson follows Niskanen and allows for the possibility that the bureaucracy will seek to produce twice the optimal output but argues that the actual outcome will be determined in the political arena. In the context of the coal industry, maximisation of the industry would remain the rational choice but government has been able to limit the amount of coal supplied through the NCB's dependence on government finance for investment. Yet though the Jackson model raises the issue of politics, they remain exogenous.

From political science the main challenge to Niskanen's model has come from Patrick Dunleavy. The bureau shaping model offers a more sophisticated account of the bureaucrat's utility function and, to an extent, internalises the political relationship between the bureaucrat and government.

Dunleavy criticises two key assumptions made by Niskanen. Firstly, he argues that Niskanen's claim that 'all bureaus are monocratically run by a single top official'

---

<sup>15</sup> Both before nationalisation and during it there have been wide differentials in the cost of production between the geographical areas (see Plan for Coal 1950 and MMC 1982 for examples).



ignores internal politicking (Dunleavy 1991, 164). Secondly, that Niskanen's utility function is internally inconsistent because he includes 'output'. Dunleavy suggests, following Jackson, that larger departments may be more difficult to manage and it would be irrational for policy-making officials to seek larger budgets because this would lead to increased workloads. Rationality would require a commensurate increase in the civil servant's welfare to offset such disutility which, given the civil service pay structures, would not be forthcoming (Dunleavy 1991, 166).

To answer these criticisms and build an alternative 'economic' explanation, Dunleavy firstly, restructures the bureaucrat's utility function and secondly, disaggregates bureaucracies both in terms of membership and the budgets they control. His analysis is completed by differentiating bureaucracies according to their budget characteristics.

Dunleavy assumes self interested utility maximising bureaucrat's. To establish what arguments might lie in their utility function he draws up a list of strategies which would increase the bureaucrats welfare (Dunleavy 1991, 175). The list begins with individual strategies: vertical promotion, hierarchical transfers, lateral transfers, upward job regrading and workload reduction. Further down the list strategies become more collective: general improvements in working conditions, general pay increases and last of all, budget maximisation. He then argues that since the effect on individual welfare of collective strategies would be indeterminate so rational bureaucrats will pursue individual strategies first. Collective strategies, such as budget maximisation, will only be used once individual strategies have been exhausted (Dunleavy 1991, 176).

Rank will play a critical role in a bureaucrats choice of maximising strategies. He suggests that policy-making bureaucrats, i.e. top ranking officials, will pursue more individual strategies and low ranking officials collective strategies.

Rank also effects the advocacy costs of seeking a budget increase: higher officials facing higher costs because papers have to be written and meetings attended; in addition higher officials have greater opportunities to improve their welfare outside the bureau. All this implies that they would have to be certain that a budget increase would benefit them, over and above the disutility of any extra work involved, before advocating one. Dunleavy summarises these arguments in the condition that:

$$(B_j * P_j) - C_j > A_j$$

Which argues that to pursue budget maximising strategies then the benefit,  $B$ , derived by individual  $j$  multiplied by the probability,  $P$ , that the individual will effect the outcome, minus the cost of recommending a budget increase must be greater than the return available,  $A$ . In addition the benefit available through output maximisation must be greater than that available from pursuing individual strategies or the welfare enhancing opportunities from other, non maximising, collective strategies.

Dunleavy disaggregates the bureaus budget, as illustrated in Table 2.1. Briefly, he identifies four different budgets; and the relationships between these are critical to his analysis. The core Budget,  $CB$ , is defined as expenditure which is spent directly by the bureaucrats. In education, for example, this would include money spent on the Department's London offices, staff and equipment, but would exclude the greater part of the total education budget which is spent by local government. The Bureau budget,  $BB$ , is defined as the core budget plus any expenditure the bureau controls but which is passed to the private sector. This is differentiated from money which is passed to other government bureaus, which with the inclusion of the  $BB$  and  $CB$ , define the program budget,  $PB$ . Finally if money raised by other agencies, but controlled by the 'top tier' bureau, is added to the program budget we have the super program budget,  $SPB$ .<sup>16</sup>

---

<sup>16</sup> Following Dunleavy's use of the American spelling of program.

Table 3.1 The Bureaucracy's Budget, (Dunleavy 1991).

Salaries		
Other Personnel costs		
Agency running costs		
Materials used by direct labour organisations		
	=	Core Budget [CB]
The Core Budget plus		
Major capital works		
Debt interest		
Money for client groups		
	=	Bureau Budget [BB]
The Bureau Budget plus		
Funding supervised by agency but spent by other agencies		
	=	Program Budget [PB]
The Program Budget plus		
Funding raised by other agencies but under the bureaus control		
	=	Super Program Budget [SPB]

Using the arguments in the utility function Dunleavy suggests that the most relevant budget for analysis is the CB. Increases in the core budget will have a direct impact on the top bureaucrat's individual utility. Given this, he argues, Niskanen's budget maximising would only be rational if the CB and the PB were strongly correlated. To explore this Dunleavy differentiates between agency types.

He identifies five major types of agencies. Table 2.2 gives a brief summary of the major features, whilst Figure 2.1 illustrates the relationship between the budgets for delivery, regulatory, transfer, contract and control type agencies for cases where the BB is strongly related to the PB.

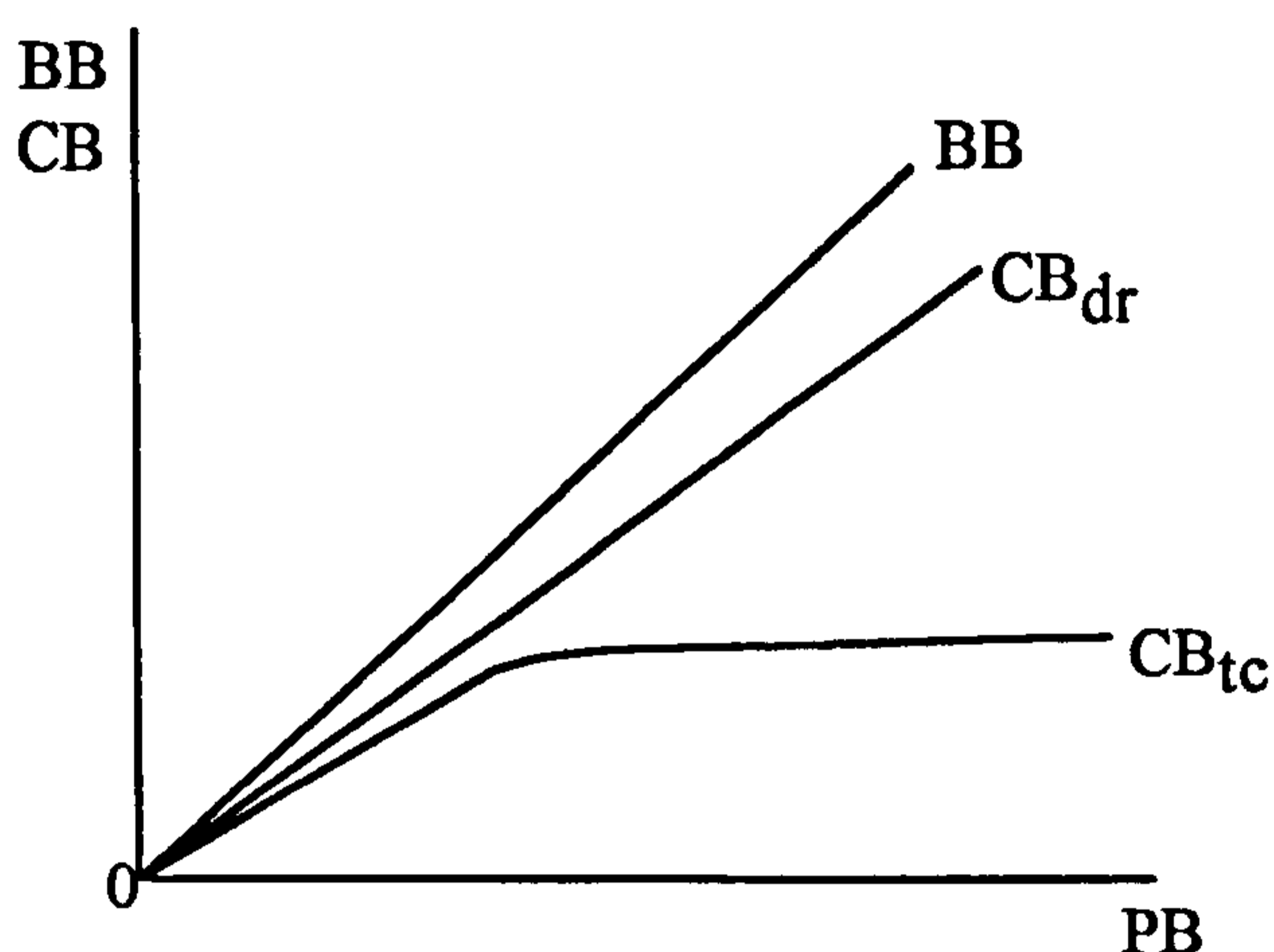
Table 3.2 Types of agencies by characteristics, (Dunleavy 1991).

Type of Agency	Size of Program Budget	Function	Budget Relationships
Delivery	variable	Direct supply of goods and services, labour intensive	CB & BB closely related to PB
Regulatory	small	To limit and control others	CB & BB closely related to PB
Transfer	variable	Pays out subsidies and entitlements to private individuals and firms	CB small in relation to the BB & PB which are closely linked
Contracts	variable	Research and development + other capital projects which are contracted to private sector or nationalised industries	CB & BB small in relation to the SPB
Control	variable	Supervise the funding of other government agencies	CB small in relation to the BB & PB

The core budget of delivery and regulatory agencies  $CB_{dr}$  is positively correlated to the program budget, however the core budget for control and transfer agencies  $CB_{ct}$

initially rises but then flattens as a given number of resources can handle larger contract or transfers. This result leads to Dunleavy's main conclusions. Firstly it would not be rational for policy level officials in transfer (some minor exceptions excluded) and control agencies to pursue budget increases. Secondly it would be rational for bureaucrats in delivery and regulatory agencies to attempt to 'shape' their bureaus along the lines of control agencies.

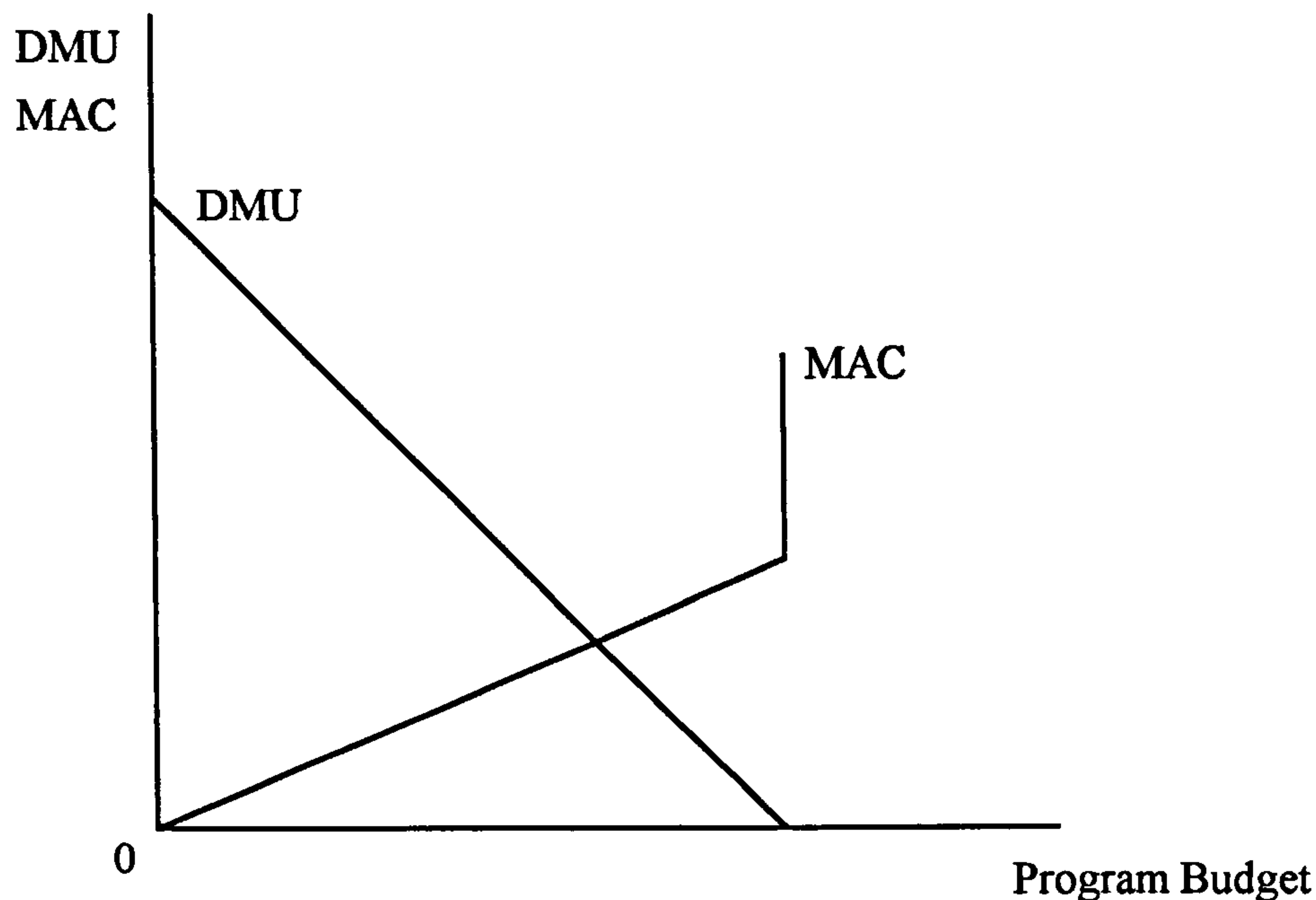
Figure 3-1 The Relationship between Budgets, (Dunleavy 1991, 185).



From this analysis Dunleavy develops a supply and demand model which identifies the bureaucrats equilibrium program budget. Here some of his arguments are less convincing. Figure 2.2 repeats Dunleavy's analysis (Dunleavy 1991, 198). The DMU curve represents the policy-making official's discounted marginal utility. At low levels of output it will be high, illustrating that the official will gain high, marginal, levels of utility from small increases in the PB. Conversely, marginal utility gains will be smaller at high levels of PB, falling to zero where the DMU cuts the horizontal axis and thereafter being negative; here total utility diminishes as more effort is required to manage the program budget. The position and slope of the curve are determined by the official's rank, higher officials' curves being further away from the origin, and the bureau type, control and transfer agencies having steeper curves than those of delivery and regulatory agencies. The MAC illustrates the marginal cost of advocacy. Its slope is determined by the existing budget (larger budgets will prove harder to increase); the external hostility to budget increases (leading to the vertical section where hostility is total and effective); and rank: higher officials will have steeper curves than lower ones because the net costs take account of alternative welfare boosting opportunities (the

opportunity cost of advocating a PB increase is represented by the rewards available in other sectors, which for top officials are considerable) and because advocating higher budgets will necessarily involve them in more work.

Figure 3-2 The bureaucrats equilibrium program budget, (Dunleavy 1991, 199).



From this position the standard economic marginal conditions will apply and the bureaucrats preferred PB will be at the intersection of the DMU and MAC. Dunleavy goes on to use this model to demonstrate that under certain conditions bureaucrats will re-shape rather than seek budget maximisation in the Niskanen sense. Thus the model explains the lack of opposition by top civil servants to 'Next Steps' agencies.

Dunleavy's model, particularly the more sophisticated utility function, the classification of bureaucracies and the recognition that bureaucrats face political constraints is, intuitively, more appealing than earlier models. In terms of the coal industry the sponsoring department would conform to a control agency.<sup>17</sup> 'Rationally', higher officials utility would be maximised where the program budget was minimised, subject to the core budget being maximised. That is, they should oppose increases in the size of the coal industry unless such increases lead to commensurate rises in the core

<sup>17</sup> As Dunleavy (1991, chapter 8) notes the Department of Energy was not a mono-functional department and some activities would involve it acting as regulatory, delivery or transfer agency. Here the emphasis is on the Department's role in the investment decision making process - a major determinant of the future size of the industry.

budget. In addition, crises of oversupply in the industry would inevitably increase the department's management difficulties leading 'rational' bureaucrats to bring supply in line with demand by cutting supply, at least up to the point where the CB was unaffected. In terms of the NCB, again in so far as the NCB can be characterised as a bureaucracy, the Board would correspond to a delivery agency. With no opportunity to re-shape, programme budget maximisation, in the Niskanen sense, would be rational since it is highly correlated with the core budget. In other words Dunleavy's bureau shaping model suggests a perpetual conflict between the NCB and the sponsoring ministry. The former seeking budget maximisation, the later program budget minimisation subject to maximising the core budget.

However, the demand and supply model appears to be time-specific. The model may offer some insights into the events of the 1980s and 1990s when budget cutting and agencification have been dominant themes but it is unable to account for programme budget increases in sectors where control and transfer agencies are found. How then, can we account for the rapid rise in coal's program budget that began in the mid 1970s. To be sure, exogenous factors may account for the initial reaction to the OPEC price shocks but, as will be argued in chapter five, the rationale for Plan for Coal soon evaporated. When it did the Department of Energy policy makers should have been keen advocates of reducing the planned expenditure. Whether they did or did not is an empirical question. If they did Dunleavy's model offers an explanation why, but no explanation for why Plan for Coal continued to underscore the NCB's investment programme. We might have to conclude that sponsoring departments preferences had no impact on the outcome. If they did not argue to cut the program budget the model has nothing to say: we might have to conclude that the bureaucrats were acting irrationally, i.e. against their own interests. In either case and in direct contrast to Niskanen, the bureau shaping model cannot account for program budget increases. As constructed the model is time bound to periods of budget cutting and as Tullock has noted:

both we Americans and Professor Dunleavy tend to assume the bureaus are more powerful than they are. They are in fact powerful, but they don't control the world totally. The outside environment can impose on them a shrinkage or restriction and indeed normally does impose rather modest salaries for their highest officials. It can also terminate Dunleavy's 'bureau-shaping' activity as readily as it can Niskanen's expansionist theories. (Tullock 1993, 181)

However, the model could be adapted, following Dunleavy's own arguments, to give it more generality.

To explain, Dunleavy argues that the MAC curve is elastic at lower levels of PB and becomes inelastic at a point where no amount of advocacy will lead to an increase in the program budget, the political constraint. This implies that sponsors and government have an upper limit but no lower limit to the size of the PB. Yet Dunleavy argues that:

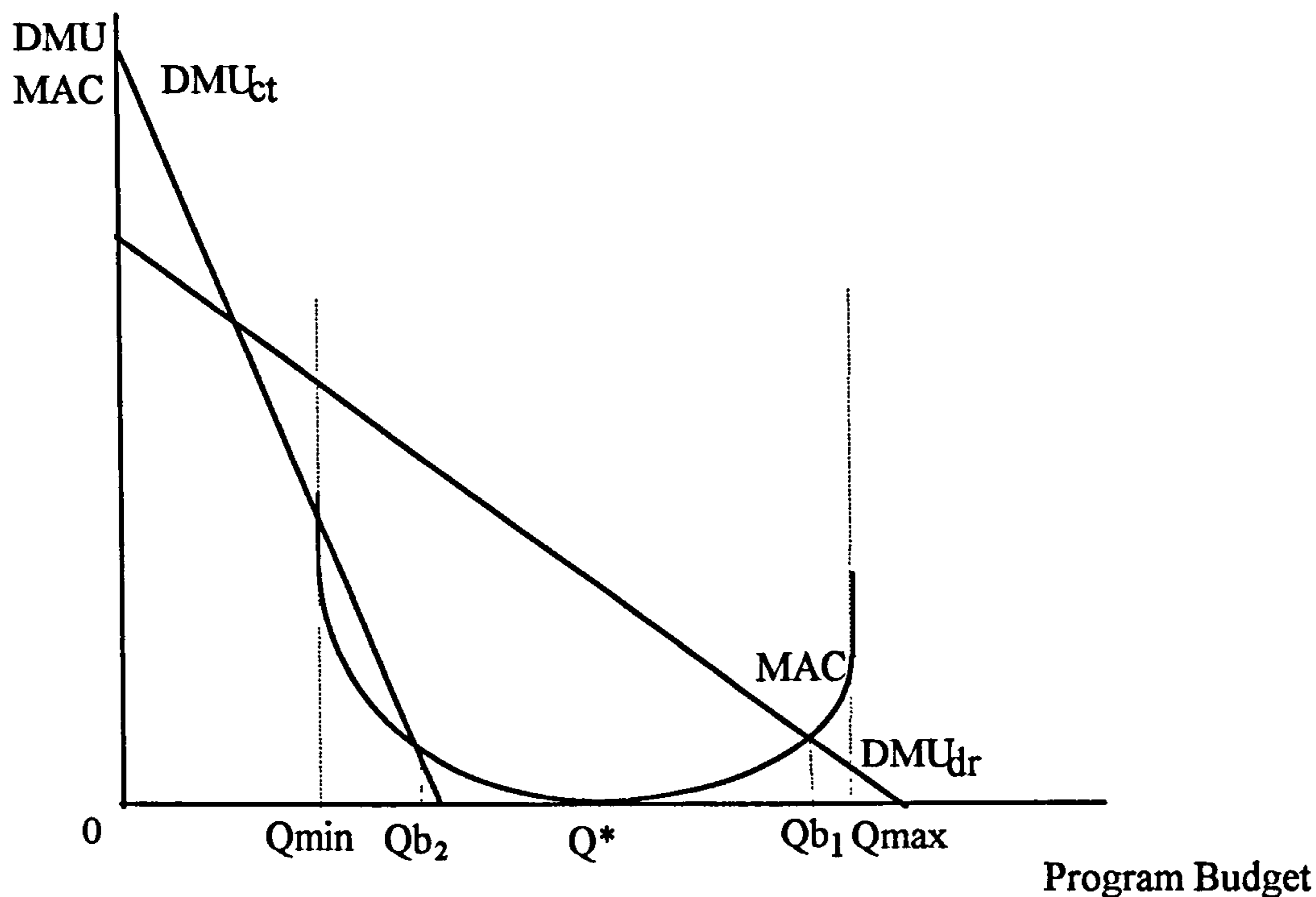
[g]reater scrutiny by the legislature (or by political department heads in parliamentary systems) enters into the model simply by cutting the likelihood that any bureau can be decisive in securing budget increases and by raising its officials marginal advocacy costs. In turn, these shifts *alter the position of the DMU and MAC curves*, so the bureaucrats' optimal program budget levels adjust downwards. (Dunleavy 1991, 212 emphasis added)

If greater scrutiny and the desire to cut budget has had the effect of shifting the two curves the obvious question is: where were the curves before 'greater scrutiny' and what impact on the curves' positions would other government objectives have? In the early 1970s energy self-sufficiency became *the* objective, presumably raising the marginal advocacy costs of arguing for the continued decline of the coal industry, lowering the costs of increasing the program budget and increasing the probability that a bureaucrat's advocacy would lead to an increase in the program budget. Both the DMU and MAC curves would shift from their position in the 1960s as would the bureaucrats optimal program budget level. The complete reversal of the sponsoring departments attitudes towards the long-term future of the industry (see chapter five) can be explained in terms of rational self-interested bureaucrats responding to changed economic and political circumstances. Importantly, and a point which will be developed later in this chapter, the sponsoring department's rational choice, expansion of the program budget, would be the same as that of the NCB, enhancing the possibility of a consensus.

More generally, it seems that governments may, in many areas, require a minimum level of service in addition to an upper limit, suggesting a U shaped MAC curve as illustrated in Figure 3.3.



Figure 3-3 A model of bureaucratic behaviour



In Figure 3.3 the DMU curves follow the same arguments as the DMU curves in Figure 3.2; here two are illustrated.  $DMU_{dr}$  shows the curve for a policy-making official in a delivery or regulatory agency. The curve cuts the vertical axis close to the origin and is flatter illustrating the lower levels of marginal utility available, and the close relationship of the CB and PB.  $DMU_{ct}$  relates to the preferred control and transfer agencies. MAC corresponds to Dunleavy's definition, except, that in this case it illustrates the possibility that officials face escalating costs in attempting to reduce the budget as well as when attempting to increase it. To illustrate this argument further, assume that  $Q^*$  (at the bottom of the MAC curve) is the present budget level, further assume that there is no exogenous pressure to move away from this position. In this case the marginal cost of advocating the status quo will be zero and the officials face increasing marginal costs in pursuing either a PB increase or decrease. The MAC as drawn, suggests a range of possible values for the PB, dependent on the bureau type. Setting  $DMU = MAC$  would lead the delivery or regulatory agency, in the absence of reshaping possibilities, arguing for a budget increase to  $Q_{b1}$  and the control, or transfer agency arguing for a budget decrease,  $Q_{b2}$ . The key point being made here

is that the shape and position of the MAC is, partly, politically determined and that Dunleavy's model can be made more general than is implied in his work.<sup>18</sup>

A second problem associated with the bureau-shaping model is the implied focus on levels of output. Rational bureaucrats will not maximise the program budget because more outputs will require more management. The Vickers and Yarrow formulation, the provision of public sector goods and services at twice the efficient cost is not, explicitly, accounted for. Indeed if managing is disutility why should the civil service be concerned about the size of the budget provided there is no commensurate increase in output? Focusing on this question may help provide some answers to other criticisms made of the model. Smith (1996, 12) questions the assumption that senior officials' interest lies in policy rather than managing and argues that in any case the recent reforms have resulted in more rather than time spent performing management functions. This would appear to be contra Dunleavy *unless* (another of Smith's points) politics is brought back in. Here the above arguments are relevant. The MAC curve does account for Ministerial preferences, though only the 'cutting' ministerial preferences are emphasised by Dunleavy. As those preferences change then so does the shape and position of the MAC and DMU curves. It is also arguably that over time the shape of the bureaucrats utility function may change to reflect the prevailing political circumstances, leading to further shifts in the DMU curve. The emphasis on efficiency during the 1980s and 1990s may have both reduced the advocacy costs of restructuring the civil service along lines which, apparently, promote efficiency and increased the advocacy costs of alternative courses of action, explaining why the reforms are a feature of the 1980-90s rather than sooner. Also, if skill in management is promoted as a civil service attribute, and rewarded, then over time it is likely that civil service

---

<sup>18</sup> Dunleavy appears to use the horizontal axis to define two variables. On page 198 he suggests a model to represent the bureaucrats decisions when considering further budget increments. In this case 0 represents no increase in the present budget and moving rightwards along the horizontal axis represents *increases in the PB*. However when referring to the MAC and the equilibrium position the horizontal axis refers to the *level of PB*. On page 207 he uses the same model to discuss equilibrium *levels* of the program budget in which case 0 represents a zero budget and moving rightwards illustrates higher absolute values of the PB. If the axis represents increases in the PB then his construction of the MAC is correct. The marginal cost of advocating no budget change would, assuming no one else was advocating a budget change, be zero. If, on the other hand, the horizontal axis represents levels of PB then as Dunleavy draws the model it suggests that the marginal cost of advocating a zero budget is zero irrespective of the current level of expenditure, something which would appear unlikely.

attitudes will change, managerial work will begin to feature higher in the bureaucrats utility function.

The key point in this discussion has been that the arguments and reasoning lying behind the bureau-shaping model can be used to explain apparent anomalies - such as why bureau-shaping did not feature before 1979 - but only if the role of politics is emphasised and if account is taken of the dynamics of political life. If the arguments and logic behind the model are generalised and the role of politics emphasised in the MAC curve, then the model can, theoretically, illustrate programme budget increases/decreases, the emergence of managerialism and the relationship between government objectives, the bureaucracy and policy outcomes. In this sense, 'bureau-shaping' is an unfortunate term, since it concentrates on a specific era. More usefully the model might be referred as 'Dunleavy's model of bureaucratic behaviour'. As such the model may offer a useful tool for analysing the rational choices of individuals and institutions but it cannot explain outcomes. What changes the shape of the MAC and DMU curves, government preferences, remains exogenous to the model as does the structural environment in which those choices are mediated.

To summarise, rational choice theory would appear to generate two testable hypotheses in relation to policy-making in, and the decline of, the coal industry.

1) The industry and its sponsoring department have conspired to maximise the size of the industry by maximising supply. Failure to maximise demand has led to successive crises of overproduction which government has, eventually and at considerable cost, sought to correct, leading to inevitable decline as supply was brought into line with demand.

2) The management of the industry has been ineffectual at two levels; a) the relationship between the industry and the sponsoring department; b) the relationships within the NCB. Asymmetric information and the disutility associated with effective management has led to higher prices than should have pertained leading to an industry uncompetitive on the domestic and world energy markets.

It has been argued that both Niskanen and Vickers & Yarrow, from which these hypotheses are drawn, down play the role of politics. To some extent this problem is overcome by Dunleavy's more sophisticated model. By deriving a more complex utility

function and characterising bureaucracies he offers some important insights into the behaviour of bureaucrats and bureaucracies. Politics also feature in the model, though they are time bound; however, it has been suggested that the model could be generalised to cope with a variety of situations. As such, the model would be one of bureaucratic behaviour rather than of bureau-shaping; it would be framework for analysis rather than an explanatory theory. Cast in this way the model points to the possibility that the self interests of the sponsoring department and the NCB may have diverged at specific times in the history of the nationalised coal industry while converging at others; possibly explaining the emergence, and absence, of consensus amongst key players in the policy process in different phases of the coal industry's history. Beyond this and irrespective of its intuitive appeal Dunleavy's model has little to offer the analyst as all the key variables lie outside it.

Most importantly, the politics that might account for the changes would remain largely exogenous. The model can only illustrate the impact that changing political objectives may have on the behaviour of bureaucrats but it cannot tell us why those objectives change. In order to do that, and to explore the mediation of rational choices through the political structures of policy-making, other theories/models will need to be drawn on. One possibility is policy network analysis.

### **3.4.2 Policy Networks.**

The most influential recent development within organisation theory has, of course, been application of network imagery. It has, however, become common-place to assert that there is no agreed definition on the correct use of terms, the correct level of analysis or the impact of networks on policy outcomes (see Owen 1995 and Wilks 1995 for examples). Here rather than attempt to resolve these controversies, an outline of the main features of the Marsh and Rhodes model will be given, and only the latter debate, where network analysis should be applied, will be explored in any detail. This issue, it will be argued, is significantly important to a study of the coal industry. (For full accounts of the development of network analysis see Rhodes 1991; Marsh and Rhodes 1992a; Smith 1993 Marsh and Smith 1995; Dowding 1995).

Network 'theory', as opposed to the network metaphor, evolved, in British political science, from the ESRC's intergovernmental relations and government - industry

relations initiatives.<sup>19</sup> Both initiatives utilised the Rhodes (1981) power dependence model which contained five propositions:

- a) Any organisation is *dependent* upon other organizations for *resources*.
- b) In order to achieve their goals, the *organizations* have to exchange resources.
- c) Although decision-making within organization is constrained by other organizations, the *dominant coalition* retains some discretion. The *appreciative system* of the dominant coalition influences which relationships are seen as a problem and which resources will be sought.
- d) The dominant coalition employs *strategies* within known *rules of the game* to regulate the *process of exchange*.
- e) Variations in the degree of *discretion* are a product of the goals and the relative power potential of the interacting organizations. This relative power potential is a product of the resources of each organisation, of the rules of the game and of the process of exchange between organisations. (Rhodes 1981, 98-99)

Resources are defined as legal, financial, political legitimacy, informational and organisational. The latter made up of people, skills, land, buildings, material and equipment which allow actors 'to act directly rather than through intermediaries' (Rhodes 1986, 17).

However, from this common starting position the two initiatives took separate routes, leading to a debate over the correct appellation of the terms 'networks' and 'communities'. As Dowding (1995, 140 see also Dowding 1994) suggests the ontology of the world does not hang on the terminology of classifications. Here it is enough to follow Dowding and state that the Marsh and Rhodes terminology is preferred over that of Wilks and Wright (1987). Networks will be used as a generic term encompassing all types of interest group intermediation along the policy community-issue network spectrum where policy communities and issue networks exhibit the characteristics illustrated in Table 3.3. This approach would appear to be developing the status of an 'industry standard' employed by the majority of case studies utilising the language of networks, whether supportive or critical of the Marsh and Rhodes 'network theory' (see Dowding 1995 and Dudley and Richardson 1996 for example).

#### **3.4.2.1 The Marsh and Rhodes Model**

Essentially, the Marsh and Rhodes approach posits that policy-making occurs at a disaggregated level by, more frequently, small groups interacting with one another,

---

<sup>19</sup> The term networks was originally used by Jordan and Richardson in its metaphorical sense.

primarily through the exchange of information and resources. They suggest that such policy-making groups can be classified by the characteristics they exhibit along a continuum between policy communities and issue networks. Policy communities will have few members, economic or professional interests, members will share common values, and interact frequently exchanging resources and information. Policy communities will persist over time and attempt to limit external pressure in order to further the interests of the community. Issue networks, on the other hand, are characterised by a larger number of actors with differing interests, conflict and instability.

Marsh and Rhodes go 'beyond typology' and argue that the characteristics of the network can, to some extent, explain policy outcomes. Networks at, or near, the 'community' end of the continuum will be a source of policy stability, or inertia, as members serve their own interests and control the agenda. Change is more likely to occur at the 'issue network' end of the spectrum.

The emphasis is on the institutional and structural relationships within and between the network membership; agency plays a relatively minor role in determining policy outcomes. Thus, Martin Smith (1993) has argued that British agriculture policy has been made in 'the paradigm policy community' which explains why the interests of the farmers have dominated policy throughout the post-war period. The National Farmers Union enjoyed a close and institutionalised relationship with the Ministry of Agriculture, both sharing a common view that the 'state should intervene in agriculture; provide price support and increase production' (Smith 1993, 102). The fact that this policy persisted despite changing domestic and international circumstances can be attributed to structures in which policy has been made. However, the agricultural policy community is viewed as special case, 'distinctive because of its degree of internal integration and isolation from other networks' (Smith 1993, 132). Most case studies have identified networks that exhibit lower levels of integration (see Marsh and Rhodes 1992a, 252 for a summary of their edited case studies; Smith 1993 on business and industrial networks).

Table 3.3 Types of policy networks: characteristics of policy communities and issue networks

Dimension	Policy Community	Issue Network
<b>Membership</b>		
Number of participants	Very limited number, some groups consciously excluded	Large
Type of interest	Economic and/or professional interests dominate	Encompasses range of affected interests
<b>Integration</b>		
Frequency of interaction	Frequent, high-quality, interaction of all groups on all matters related to policy issue	Contacts fluctuate in frequency and intensity
Continuity	Membership values and outcomes persistent over time	Access fluctuates significantly
Consensus	All participants share basic values and accept the legitimacy of the outcome	A measure of agreement exists, but conflict is ever present
<b>Resources</b>		
Distribution of resources (within network)	All participants have resources; basic relationship is an exchange relationship	Some participants may have resources, but they are limited, and basic relationship is consultative
Distribution of resources (within participating organisations)	Hierarchical; leaders can deliver members	Varied and variable distribution and capacity to regulate members
<b>Power</b>	There is a balance of power among members. Although one group may dominate, it must be a positive-sum game if the community is to persist	Unequal powers, reflecting unequal resources and unequal access. It is a zero sum game

Marsh and Rhodes 1992a, 251

Critically, Marsh and Rhodes see policy networks as only a partial explanation for political phenomena. Whilst network analysis aims to answer the, 'who made policy?', 'how did they make policy?' questions, it cannot explain preference formulation nor why policies and policy processes change over time. On its own the model is static. As already noted, Marsh has argued that network analysis should be integrated with other models/theories in order to develop full explanations (Marsh 1995a, Marsh and Stoker 1995). A point which will be taken up later in this chapter.

A number of writers have already applied a policy network approach to the energy sector and coal industries. Saward's contribution, on nuclear energy, to the Marsh and Rhodes edited book uses a network approach to explore the process that led to choice

of nuclear reactor. He argues that the structures in which those decisions occurred can account for the continued selection of British designs despite growing pressure from some quarters that the industry should turn to the, American, Westinghouse PWR system. In chapter four Saward's analysis of the nuclear sector will be used and an attempt made to place this sub-sector in the context of wider energy policy-making.

In terms of the coal industry Taylor, A. J. (1992) argues that during the 1980s the structures of British coal policy-making shifted away from the community end and towards the issue network end of the Marsh and Rhodes continuum. He contrasts the British record with that of West Germany, where the policy community remained more stable. He then suggests that structures of the networks help explain the two countries different approaches to the restructuring of their coal industries, rapid and conflictual in Britain, slower and consensual in West Germany. However, whilst Taylor suggests that structures affected how policy was implemented most of the explanation for the emergence of the policy is seen as exogenous to the model. Restructuring is seen as a reaction to the international energy situation and, more critically, a reaction determined by governments rather than the networks.

Saward and Taylor have focused on energy sub-sectors. McInnes (1991), on the other hand, argues that more can be gained by focusing on the sectoral energy policy level. His analysis suggests that energy policy was formulated in structures which centred on the DEn and gave a privileged position to the larger energy producers - gas, coal, electricity and most significantly nuclear power. The absence of a specific Departmental Branch dealing with alternative energy sources, along with the privileged position afforded to the large producers helps explain what he sees as the underdevelopment of renewable energy resources.

Similarly, Owen (1995, 721), adopting the Wilks and Wright terminology, suggests an energy policy network (community in Marsh and Rhodes terminology) consisting of the DEn relating to the state owned fuel producers and the private oil companies. The supply industry, she argues, 'had considerable power in relation to government' and used this and their close relationship with government to further their interests and lock out other interests.



Bromley (1996, 96) whilst not explicitly employing network analysis adopts a similar position when he argues that the public sector energy producers were incorporated, prior to 1979:

within a process of both policy-making and policy implementation. This created a series of insider groups with privileged access to decision-makers in the state..... One important consequence of this was the concerns of consumers were neither determined nor able to make their voice heard. Another was the creation of outsider groups which had little weight in the policy-making process, such as the lobbies for energy efficiency and for renewable sources of energy. (Bromley 1996 96)

McInnes, Owen and Bromley are no doubt correct to identify the privileged position of the large energy producers and that in some way this may account for slow development of alternative energy strategies. However, viewing the energy sector from the perspective of the excluded actors tends to underplay the differences and conflict between the large producers: something which will be highlighted in this thesis.

These five examples of the application of network analysis to the energy sector are limited. In common with the majority of British case studies they 'approach the given network from the perspective of one or more of the interest groups involved' (Marsh and Smith 1995, 3). They do not address how competition between the community members was mediated. Whilst there may, for example, have been common cause amongst the large energy suppliers to lock out consumer and environmental groups there was little consensus on how the energy supply 'cake' should be divided amongst them. In short, we cannot explore many of the major questions surrounding energy policy by viewing an energy policy community from the perspective of excluded interest groups. As Marsh and Smith emphasise:

Networks do not just involve relations with [interest] groups..... At the same time, a number of different networks may exist in any given [Whitehall] department, linking together section[s] of the department and outside interests. (Marsh and Smith 1995, 3)

This is a good description of the post-war energy sector; each supply industry (Gas, Coal, Electricity and Oil) had its own functional branch within the sponsoring ministry. In order to understand energy policy we need to understand how these networks related to each other and to overall energy policy. Again as Marsh and Smith argue:

Both the existence of such potentially competing networks and the relationships between them are likely to effect policy outcomes. (Marsh and Smith 1995, 4)

Exploring these relations implies shifting the focus of network analysis away from interest groups and towards Whitehall and the policy process and seems to suggest, as Marsh and Smith do, that some adaptations will be necessary. It also raises the long running debate about where network analysis might usefully be employed.

### 3.4.2.2 Where can network analysis be employed?

Wilks and Wright have argued that the concept should be used at a highly disaggregated level. Policy arenas like 'industry' or 'education', they argue are 'only a general phenomena' (Wright 1988, 597) and that:

Clearly it would be more accurate to speak of an *industry policies* sector, and *education policies* sector because it is rare for a policy issue or problem to arise which embraces the whole of a sector. (Wright 1988, 557 original emphasis)

In short, Wilks and Wright suggest that a network approach will be applicable at a sub-sectoral level and implied that it would be of limited use at the sector level. This view was again expressed by Jordan *et al.* (1994, 508) though the observation refers to the policy community end of the typology which they suggest 'will be more prevalent at the sub-sectoral level' (see also Jordan and Maloney 1995).

Marsh and Rhodes (1992) have criticised this approach because, they argue, it focuses on the individuals rather than the institutions and because it leads to case specific, non-generalisable, explanations. They have always maintained that whether networks exist, and at what level of policy-making, will be empirical questions. Thus, in their 1992 work they argue that:

[t]he policy network concept can be used at *both* the sectoral and sub-sectoral level. .... Wistow's analysis of health policy and Smith's study of agriculture both demonstrate that the [network] concepts are useful at the sectoral level. (Marsh and Rhodes 1992a, 254)

At one level this debate has become rather pedantic. It is at least arguable that policy communities or highly integrated networks will be less frequent at the sectoral level, not least because of the increased number of members, interests and issues. It is also true, in the case of coal, that different issues in the sub-sector have given rise to different policy-making structures, often involving different actors. In the early years, for example, coal shortages and the increased power of the NUM resulted in production and wages policies being mediated at the highest political levels, involving the Prime Minister, the Minister of Fuel and Power, Cabinet, Cabinet Committees as well as the NUM and NCB (Ashworth 1986). Similarly, pricing policy was made at the

political level, but without the NUM. Investment policy, on the other hand was largely conducted at official level, primarily involving the Ministry of Fuel and Power and the NCB. Different policy issues resulted in different policy-making structures and only in the abstract sense can *a coal policy network* be identified. If we focus simply on the 'consensus' characteristic then it would be true that all actors agreed that coal production should be maximised and this consensus set the framework for specific policy issues. On the other hand, whilst the evidence from the coal industry might support the Wilks/Wright-Jordan arguments, Marsh and Rhodes are surely correct to argue that where networks exist cannot be theoretically determined.

At another level, and as Dowding has noted, behind the debate are fundamental differences about the nature of the state:

The Wilks - Wright, team attacked the notion of grand theories of the state arguing that in the sectors they analysed across Europe there was little correlation between the degree of government intervention in different nations and categorization of the state in those nations. (Dowding 1995, 140)

For them it was presumably less important to generalise about networks. If the highly disaggregated approach led to case studies that are unique, then what does it matter providing we achieve a better understanding of the policy process? For Marsh and Rhodes the aim has been to generalise about networks and integrate network theories with macro-level state theories. An aim that will, necessarily, involve a higher degree of abstraction. In other words, how one defines and applies concepts of policy networks, and the degree of disaggregation or abstraction used, very much depends upon the purpose of the research. The purpose here is to answer the 'who made policy, how was policy made' questions in relation to investment in the coal industry, suggesting a high level of disaggregation and a low level of abstraction.

What really matters here, as Marsh and Rhodes (1992, 255) recognise, is the relationship or articulation between the sectors and the sub-sectors. Whilst this feature of network analysis appears to have been relatively neglected to date some points have been made. In his work Smith has argued that, in agriculture, policy-making at sub-sectoral levels has been dominated by the sectoral level. Cavanagh *et al.* argue that:

sectoral networks set the agenda for the policy area, providing answers to the broader questions such as: To what extent should the health service be free? Should roads be privileged over rail? Is nuclear power preferable to coal? In our view, the power relationships within, and decisions made by sub-sectoral networks often occur within frameworks and agenda laid down at the sectoral level. (Cavanagh, Marsh and Smith 1995, 627)

Whilst this proposition can be empirically tested it does leave open the question of how sectoral networks set the framework and lay down the agenda. It is also possible that the agricultural case, where most work has been done, is exceptional. It has already been seen that the agricultural network exhibits a high level of integration. This raises the possibility that where the networks, and the relationships between the sector and sub-sector are less integrated, sub-sectors may enjoy more autonomy than the research into agriculture might imply. This also suggests that in order to understand policy outcomes research needs to account for both levels of policy-making and the relationship between them.

Table 3.4 suggests a framework for such an analysis. It employs Daugbjerg's (1995) concept of cohesion to differentiate networks. Daugbjerg suggests that the degree of cohesion is related to the degree of consensus over the 'contents of public policy, what problems the network should deal with and how they should be solved'. Cohesion will develop 'if the membership of the network is very restricted and if the degree of integration is high' (Daugbjerg 1995, 11). In other words the concept uses the characteristics of the Marsh and Rhodes model and allows us to differentiate between different policy communities. So for example, the agricultural community might be described as highly cohesive and the industrial policy community as having a low level of cohesion. Differentiating by sectoral/sub-sectoral policy domains then allows a number of propositions to be generated. 'Cohesiveness' can also be used to analyse the relationships between the sectoral/sub-sectoral levels. So, as has been suggested, where both the sectoral and sub-sectoral networks exhibit high levels of cohesion and the relationship between them is also cohesive, the sectoral network will set the framework and agenda for the sub-sectors. As noted, the 'ideal type' might be the agricultural network, where actors at both levels shared common values and accepted the established rules. Conversely, where a cohesive sub-sectoral network, the nuclear power network for example, is associated with a sector exhibiting less cohesion, energy, it is possible that the sub-sectoral network may be the dominant actor, setting

the framework and agenda at sectoral level and, therefore, other associated sub-sectors (see Saward 1992 and McInnes 1991 and chapter five of this thesis). Other possibilities also emerge, as Marsh and Rhodes (1992, 255) argue: cohesive sectoral networks in one sector, agriculture, can dominate sub-sectors in another, dietary policy in the health sector. To explain why we need to focus on the relationships between and within the dietary network and health and agricultural networks. Policy areas where there is low cohesion at the sectoral and sub-sectoral levels and low cohesion between the levels are, perhaps, likely to be characterised by a policy mess. The energy sector, at certain times, may provide illustrative examples.

Table 3.4 Autonomy in Policy Networks: by level of Cohesiveness and Policy Domain

Domain Cohesiveness	Sectoral	Sub-sectoral
High	(a) Dominates sub-sectoral communities though might face challenges from sub-sectors exhibiting high cohesiveness. The outcome will be dependent on the level of cohesiveness between the sector/sub-sector	(b) May be dominated by associated sectoral network with high levels of cohesion but can dominate associated sectoral and other sub-sectoral networks with low cohesion.
Low	(c) May be dominated by associated sub-sectoral networks or other sectoral networks that exhibit high levels of cohesiveness.	(d) May be dominated by sectoral and other sub-sectoral networks with high levels of cohesion.

The main purpose here is to draw attention to the importance of sectoral/sub-sectoral relationships and to argue that where the overall framework for sub-sectoral policy is set is a question for empirical investigation. It cannot be structurally determined by asserting that the sector will always, or even 'often', influence the sub-sectors. This latter point will be a key feature of this thesis. It will be argued that sectoral policy-making in the energy sector has, typically, been weak, a function of low cohesion which in turn has been a function of, inter alia, competing interests. It would be too

simplistic to reduce coal policy to being made within a framework set by *an energy policy network*. Indeed, it will be argued that the overall policy framework, whether to expand or contract the industry, emerged from complex interactions between the sub-sectors against a background of political, technological and economic changes.

Further, it will be suggested that the structures in which those policies were made were politically determined and ad-hoc, set up to react to crises of over-or-under supply in the sector. No stable, sectoral network comparable to an 'agricultural community' can realistically be identified.

Ad-hoc policy-making raises another issue with respect to where the concepts of policy networks can be utilised. To date most of the research has taken place in areas that have exhibited, or where one might reasonably expect to find, continuity either in terms of policy outcomes or in terms of the structural relationships. Where continuity has been absent the main purpose has been to explain why (see Marsh 1992 on youth employment policy, Smith 1993 on business and industrial policy, Wilks 1995 on urban policy for example). Network concepts have not, generally, been applied, or found to be useful, in cases of one-off policy decisions or where policy-making has been discontinuous. The problem that faces this work is that one-off and discontinuous policy-making have been persistent features of the energy sector and the coal sub-sector. Plan for Coal 1950, Fuel Policy 1965, Fuel Policy 1967 and Plan for Coal 1974 were policies that differed in government objectives for the long-term future of the coal industry. They also differed in the manner in which they were made (see chapters three and four). To be sure, continuous networks of relationships did exist between the industry and government - primarily through the sponsoring department - and these relationships will be explored in chapter six. However, as this thesis will demonstrate when governments wanted to state or re-state their overall objectives for the industry they did so using policy processes that were outside the normal day-to-day government/industry relationships. Nevertheless, these were policies whose making involved the interaction of numerous actors operating within organisational structures. There would appear to be no reason why an analysis that focuses on the inter- and intra-institutional relationships should not be appropriate. Jordan *et al.* have argued that during the agricultural landlord/tenant reforms of 1992:

there was an attempt to resolve policy in a *policy community manner* - bargaining and negotiation, depoliticization, restrictions on the number of participants etc. Thus it is worth noting that one off decision-making process can *borrow* the sectoral community practices. (Jordan, Maloney and McLaughlin 1994, 508 original emphasis)

The point being made here is that power dependency and the exchange of resources are features of cases where the interaction between government and interest groups is continuous and of cases of discontinuous policy-making. The main elements of the network model should be applicable in both instances. The alternative would be to suggest the network analysis cannot make a contribution to the understanding of a key policy area in post-war British politics, severely limiting its general applicability. However, it should be noted that some of the explanatory power and predictive qualities of network theory, as defined by Marsh and Rhodes, will be lost. Network analysis is reduced to a research 'tool' as opposed to a 'theory'. As John and Cole have argued:

Network analysis is not a theory, but a research tool..... By illuminating the way individuals and organisations interact to produce policy, the technique is uniquely placed to offer some concrete answers to some of the classic questions in political science. (John and Cole 1996, 2)

To summarise, this review of the policy network approach has attempted to demonstrate that, whilst the approach remains problematical and some key debates unresolved, it nevertheless offers a partial framework for the analysis of the energy policy processes. Fundamentally, the approach seeks to establish who makes policy and how do they do it by exploring the inter- and intra-institutional relationships.

Underlying the approach is the presupposition that the structures of policy-making will affect the policy outcome. It has been suggested that the peculiarities of the energy and coal sectors will require modifications to the Marsh and Rhodes model. Specifically, it has been argued that a framework for analysing the relationship between the sector and sub-sectors needs to be developed, and that the power dependency model can be applied to one-off policy events as well as continuous interaction.

It has also been seen that network analysis will only ever give a partial explanation of a political phenomenon. In common with Niskanen, Vickers & Yarrow and Dunleavy's bureau shaping model, or the adaptation of it suggested above, network analysis has difficulty coping with change. All the models discussed so far have been static. Full explanations will require the utilisation of dynamic models/theories.

### 3.5 Dealing with chaos and complexity.

Change in the post-war energy sector has been an ongoing feature, therefore any framework for analysing it, or one of its parts, must be able to incorporate change. Marsh and Rhodes (1992, 257-258) identified four exogenous (to the model) sources of change: Economic; ideological; technical and institutional. They also argue:

that the analysis of change cannot be reduced to a simple environmental stimulus - policy network response model. Actors in the network shape and construct their world, choosing whether or not and how to respond. (Marsh and Rhodes 1992a, 259)

This point is critical to understanding of the decline of the coal industry. It is not enough to observe that the response to the arrival of alternative fuels to coal, a technical change, was to close a substantial number of mines. Or that the OPEC price hikes, an economic/political change, led to the reversal of previous policy. Or that the conjunction of economic liberalism and benign energy markets, an ideological/economic change, resulted in the resumption of decline. In each case we need to know why these policies emerged *in the way that they did*. Why, for example, did the 1967 White Paper imply that there was no long-term future for the coal industry when those directly concerned with it both recognised the dangers of over reliance on imported oil and argued that the industry was on the threshold of a technological revolution. One that could have, in time, reduced the relative costs of coal production. Or again, why did policy makers in 1974 lay ambitious plans for the industry's future when, as chapter five will show, others warned that the future markets might be limited. Policy is not inevitable.

One possibility, following Marsh and Rhodes, would be to integrate policy network analysis, defined as a micro-political tool, with a model of bureaucratic behaviour and, at the macro-level, a categorisation of the underlying state rationale along a continuum of 'liberal' to 'command', as developed by Coates (1996). The model of bureaucratic behaviour would focus on the rational choices of individuals and organisations, network analysis would explore how those interests have been constrained facilitated or modified by the institutions and structures of the policy processes, and the typologies of state systems could be used to place actors and structures in the broader context.



In terms of the coal industry, public choice provides a tool for exploring the rational interests of the sponsoring department and the NCB. It has already been hypothesised that, for the NCB, output maximisation was the dominant rational interest, both in terms of the institution as a whole and in terms of the individuals and groupings within it. The rational interests of the sponsoring department and government, on the other hand, are less determinate as both react to external shocks and, dynamically, to each other. It can also be hypothesised that only when the rational interests of the two actors converged on government interests did cohesive policy-making structures develop, in the sub-sector, and policies favour the coal industry. In other words, a rational choice model may tell us why the energy sector and coal sub-sector exhibited their particular levels of cohesiveness, help explain policy outcomes and, at a micro-level, identify whose interests they served.

Rational choice helps answer the question: why does a consensus emerge in a policy area? However, it ignores the impact structures have on policy-making and policy implementation. If we are to pursue an integrated multi theoretic approach we need to go beyond the characteristics of the actors or organisations. We need to determine the extent to which policy was consistent with interests, where it diverged and why. We need to know if Robens' exclusion from the process was conscious or unconscious and why the NUM only had a marginal influence on policy (see chapter five). We need to know the impact of the process on intentions. Network analysis, because it focuses on resources and the exchange of resources, offers a useful tool for such an analysis.

Neither Public Choice nor network analysis tells us much about why changes occurred in policy and the policy process. Both are static equilibrium models. As argued, any integrated framework for the analysis of the coal industry must be able to account for dramatic and sometimes sudden changes in both. The question for the Marsh and Rhodes approach is: can macro theories account for such changes?

Appeals to macro state theories or categorisations of the state may offer some insights. Bromley (1996) uses the corporatist/liberal imagery in an analysis of the post-war energy sector that identifies many of the elements that will feature in this analysis. However, categorising the state as liberal, corporatist or developmental (or pluralist, Marxist or elitist) can only take us so far. As Mills and Seward (1994, 88) have pointed out 'no one macrotheory can provide encompassing explanations of the

phenomenon in question' and in a detailed account of the post-war energy sector there is a danger of drawing on several macro type theories to explain each change. An approach that would be too eclectic.

In addition macro theories are essentially political. Pluralism and elitism are theories concerned with state/society relations and as such focus on the relationship between groups; economic and technological changes remain exogenous shocks. Both, in the case of the energy sector of the 1980s and 1990s, leave a large 'unexplained residual' of the market, economic and technological changes. Marxism, whilst defining relationships along economic cleavages and claiming to practise 'political economy' fails to explore the relationships at a micro level and, as we have seen, has difficulty escaping economic determinism.

An alternative approach would be to focus on a trilogy of ideas, events and circumstance to explain change. 'Ideas', as Gamble (1996, 23) notes, is an 'old theme in social science'. He argues that there are two ways of looking at the role of ideas. Firstly, the heroic position which argues that ideas gather momentum until they become the dominant ideology. Secondly, because there is always a mis-match between ideas and policies an 'unheroic' stance is taken. A 'climate of ideas' may be accepted as a notion but:

the main role of general doctrines like Thatcherism is to offer retrospective accounts which seek to knit the often chaotic, unplanned, and accidental character of policy-making. (Gamble 1996, 25)

It is this kind of approach that has been adopted by Marsh and Rhodes (1992b) who emphasise the continuity of past policies during the Thatcher Governments. Where change did occur they suggest that it was not always as a direct result of Thatcherite ideas. Continuity, they argue, was a function of the difficulties encountered in implementation.

Gamble, on the other hand, cautions that such an approach 'can be taken too far in denying the role for ideas and political will in shaping events' (1996, 25). Dowding (1995) also recognises that the role of ideas needs to be brought into explanations of policy change. In his multi-theoretic framework he suggests that the notion of an 'advocacy coalition' might be used because it 'reintroduces the concept of ideas and

their origins in the study of policy change' (Dowding 1995, 147-150). Elsewhere Marsh and Rhodes have suggested that:

If economic factors constitute the catalyst for change, the form of the response is greatly influenced by the ideology of the governing party. Party is the blade for prizing apart the mollusc's shell of Whitehall and the policy networks. (Marsh and Rhodes 1992a, 257)

It is, of course a central theme of this thesis that policy implementation does have an impact on policy outcomes. Chapter seven will show that the coal industry enjoyed a great deal of autonomy over its investment programme. Nevertheless the role of ideas should not be underestimated. In chapters five and six it will be argued that they have played a key role in the formulation of overall framework for the coal industry. This was, perhaps, most obvious in the post-1979 era, but was also true in 1967 and the early 1970s.

It is also well recognised that events, shocks such as the OPEC price hikes, were critical to energy policy. The oil shocks and energy crises of the early 1970s, for example, shaped the immediate response and policy-making structures in which that response was made and set the scene for the adoption of 'New Right' solutions for energy problems. As in this example ideas and events can often be dynamically related.

Circumstances or historical development play a role in explaining policy change. A key feature of the energy sector is that changes in policy take time to implement. The long gestation periods of capital projects makes quick adjustment to new circumstances difficult and mean that the state of the energy industries, and therefore future possibilities, is a function of past decisions. This latter point is critical in the understanding of the failure of the industry to meet the opportunities that followed the oil price shocks and the re-emergence of over-supply in the 1980s.

Circumstances might also be defined in terms of the technological and employment conditions of the industry. Changes in the methods of coal production and use, or wage levels and manpower needs/availability were amongst the many factors that policy processes had to take into account. Such changes affected demand or future demand through the impact they had on production costs.

To explain change we, therefore, need to explore the interaction of ideas, events and circumstances and their interaction with the policy processes.

Drawing this discussion together, it can be suggested that in order to explain the phenomenon, the decline of the coal industry, an integration of rational choice theory; network analysis; macro classifications; and the trilogy of ideas, events and circumstances is required. Each model focuses on different aspects of the policy processes so different models can be used to explore the different questions and traditional Public Administration would integrate the theoretical approaches with the empirical evidence.

The problem for the analyst is how to reduce all this complexity into a manageable framework. There is as Marsh and Stoker 1995 point out, a potential danger of adopting:

a cafeteria approach in which particular concepts, operating within specific theoretical frameworks, are drawn on to attempt to explain aspects of a phenomenon with little concern about they relate to other concepts located in different aspects of the same phenomenon. (Marsh and Stoker 1995, 291)

What this seems to imply is that a multi-theoretic (or perhaps more accurately, multi-model) approach needs a unifying framework, one which draws the models together in order to develop a better understanding of a phenomenon.

Unifying frameworks in British political science are rare. Generally, the approach has been to separate the 'political' from its 'environment' and treat changes in the environment as exogenous shocks. Almost by definition it is an approach that will result in 'unexplained residuals'. There are however exceptions to this including Gill Owen's application of complexity theory to the energy sector (Owen 1995).

Chaos, or complexity, theory in its detail is notoriously difficult and involves the use of higher mathematics, a factor that no doubt contributes to its limited use in the social sciences outside a few applications in economics (see Owen 1995, 716). Fortunately it is the concept of the theory that is important here (see Ormerod 1994 171-178 for an accessible explanation and from which this account is drawn). Briefly, chaos theory attempts to escape the linearity that has characterised most theorising in both natural and social sciences. It is suggested that world is far too complex and dynamic to be explained by linear models and that non-linear models offer a better chance of explaining outcomes. A common example is that of the beating wings of a butterfly leading *in principle* to major changes in the world's climate. In this example it is not that the butterfly *causes* climatic change, B does not cause C in any direct way, but the

beating of the wings could lead to climatic change *if* the disturbance in air thus created sets up a dynamic reaction amongst countless variables. Other outcomes, the butterfly moves or simply hovers, are also possible and the actual outcome will depend, critically, on the value of the other variables in the system. It is an important feature of chaos theory that change is continuous, the system is never static. Of course the changes may be small and undetected: nevertheless they are ever present and each change effects the 'value' of variables in the system. However an aspect of non-linear mathematics is that small changes can result in large, observable and cataclysmic changes:

once the values of certain variables in the system move past critical threshold values, the behaviour of the system alters rapidly and fundamentally. (Ormerod 1994, 178)

This implies that the dichotomy between evolutionary and revolutionary change might be misleading.

It is also important to distinguish between chaos and randomness. Truly random events cannot, by definition, be predicted. Chaotic events, on the other hand, are a mixture of order and disorder and can *in principle* be predicted though in practice it is extremely difficult (Owen 1995, 716; Ormerod 1994, 174).

Owen clearly recognises the impact such a theory might have on the study of change in policy communities. She argues that properly conceived:

[f]ar from being a static concept, policy networks involve dynamic relationships, operating within highly complex economic and political systems. (Owen 1995,719)

She also suggests that complexity theory may have a broader applicability than explaining changes within policy communities. Her own analysis explores the emergence of privatisation in the energy sector as well as the changes in the energy policy network, issues that are, of course, dynamically related.

Unfortunately, Owen, appears not have appreciated the full implications of complexity theory on the study of phenomena. Somewhat surprisingly she fails to apply the two key features which complexity theory can bring to bear on an analysis, the 'systems' approach and dynamism.

Owen begins with an 'attempt' to construct a typology of 'the relevant theories and other variables whose interactions need to be studied' (Owen 1995, 719-20). The

typology lists: state type; government/political factors; structure; policy agenda; special; fortuitous; and exogenous variables and is fairly inclusive. However, the categorisation of some variables as ‘exogenous’ (environmental change, outside actors, policies in other areas) illustrates a misconception. Exogenous variables might be permissible if one is only analysing a policy community but Owen goes on to use the typology to examine the *policies* of gas and electricity privatisation. Yet it should have been clear from her own description of complexity theory that it is a theory of ‘systems’ and as such the distinction between exogenous and endogenous variables begins to break down (see below). Nor is this point merely one of semantics. When relating the typology to changes in energy policy under the exogenous heading she notes a number of factors - the absence of major shocks such as a fuel crisis that prompted the change; the emergence of right wing think tanks; the weakness of opponents; and the support of the City - these were all key variables in the equation leading to the policy of privatisation: but in what sense are they exogenous? The oil shocks of 1974 and 1979 were still, dynamically, reverberating through the economic and energy sectors; the emergence of right wing think tanks and their policy prescriptions can be linked to the past ‘failures’ of nationalisation, including the failure to recognise the impact the energy crisis would have on future energy markets; and weak trade unions were, partly, a function of weak energy markets. These are in fact variables that are endogenous to the energy ‘system’, are dynamically related to one another and dynamically related to the political processes. The commercialisation and privatisation of the energy industries cannot be explained by reference to the political features alone and the economic features are too important to be dealt with, as Owen (722) does, in terms of a ‘change of climate’. Owen, in her case study, appears to have missed the opportunity that complexity theory offers of endogenising all the relevant variables.

### **3.6 Conclusion**

In this chapter it has been argued that a single theory or model is unlikely to provide a full explanation for such a complex phenomenon and that a multi-theoretic approach would be more applicable. Three such approaches have been outlined and it has been

suggested that two, integrating models from different theories and synthesising political science with historical analysis are intuitively appealing.

It has been noted that to provide a full explanation of a political phenomenon Marsh and Stoker have suggested the integration of policy network analysis with micro and macro theories. One possibility would be to integrate policy network analysis, defined as a micro-political tool, with a model of bureaucratic behaviour and, at the macro-level, a categorisation of the underlying state rationale along a continuum of 'liberal' to 'command', as developed by Coates (1996). The model of bureaucratic behaviour would focus on the rational choices of individuals and organisations, network analysis would explore how those interests have been constrained facilitated or modified by the institutions and structures of the policy processes, and the typologies of state systems could be used to place actors and structures in the broader context. It may be possible to integrate the two micro models through the cohesive characteristic of the network model. Following Daugbjerg (1995), the degree of cohesion is related to the degree of consensus. Consensus will be more likely where there are few members and few interests. Consensus will also be aided where *rational* interests converge.<sup>20</sup> If the rational interests of a few powerful actors converge then it is more likely that they will have influence over policy and how policy is formed. Policy will emerge from cohesive networks and be in the interests of the network members. In other words, highly cohesive networks are, inter alia, coalitions of rational interests. Conversely where rational interests diverge policy networks will be less cohesive and outcomes less stable.

In terms of the coal industry, Dunleavy's model of bureaucratic behaviour, as generalised, provides a tool for exploring the rational interests of the sponsoring department and the NCB. It has been hypothesised that, for the NCB, output maximisation was the dominant rational interest, both in terms of the institution as a whole and in terms of the individuals and groupings within it. The rational interests of the sponsoring department and government, on the other hand, are indeterminate as both reacted to shocks in the energy system and, dynamically, to each other. It can also be hypothesised that only when the rational interests of the coal industry and the

---

<sup>20</sup> Whilst not wishing to define interests solely in terms of 'rational interests' nevertheless it is arguable that 'rational interests' are a dominant motivating force.

sponsoring Department converged on government interests did cohesive policy-making structures develop, in the sub-sector, and policies favour the coal industry. In other words, rational choice models may tell us why the energy sector and coal sub-sector exhibited their particular levels of cohesiveness, help explain policy outcomes and, at a micro-level, identify whose interests they served.

Rational choice helps answer the question: why does a consensus emerge in a policy area? But it ignores the impact structures have on policy-making and policy implementation. If we are to pursue an integrated multi-theoretic approach we need to go beyond the characteristics of the actors or organisations and explore the relationships between. Here network analysis appears to offer a suitable tool.

Neither the model of bureaucratic behaviour or network analysis tells us much about why changes occurred in policy and the policy process. Any integrated framework for the analysis of the coal industry must be able to account for dramatic, and sometimes sudden, changes in both. Appeals to macro state theories or categorisations of the state may offer some insights but as Coates has argued (see above) categorising the state as liberal, corporatist or developmental (or pluralist, Marxist or elitist) can only take us so far. Governments have also acted out of character in terms of individual sectors. We therefore need to go beyond the general and explore the interaction of ideas, events and circumstances that inform specific policy decisions. In the energy sector, 'events', like the OPEC price hikes or the discovery of North Sea gas, and circumstances, the historical development of the industries, have interacted with different 'big ideas', 1980s liberalisation, 1970s corporatism and 1960s scientific government.

From this an integration of rational choice theory, network analysis, macro classifications, traditional Public Administration and the trilogy of ideas, events and circumstances seems possible. Each model focuses on different aspects of the policy processes so different models can be used to explore the different questions.

Traditional, descriptive, Public Administration is needed to integrate theoretical approaches with the empirical evidence.

However, there is a real danger of such an integration becoming too eclectic and disparate, a unifying framework is needed. It has been suggested that chaos or complexity theory could provide such a framework. The primary insights offered by



complexity theory stems from the emphasis it places on 'systems' and the dynamics between the variables within the system. At the extreme, everything is related to everything in a single system. More realistically, an energy system and a coal subsystem could be identified which recognise that they are related to other systems, most notable movements in the level of economic activity.

In this thesis the coal policy processes will provide the primary focus using the insights of policy networks to inform the analysis. The inter- and intra-relationships of actors involved in investment policy will be explored in detail and rational choice theory will be used to explore the characteristics of those actors. However, the networks will be viewed in the context of the wider economic and political environments. Importantly, the environments will be viewed as endogenous, part of a system that is dynamically related to the coal industry.

## 4. The Historical Context

### 4.1 Introduction

Two physical features of coal mining differentiate it from almost any other industry. First, in common with the energy sector generally, is the long gestation periods between the decision to make an investment and the production of coal. Even where a colliery reconstruction is planned which does not necessitate shaft sinking it is not uncommon for projects to take five years to complete. Where a green field site is to be developed then the period will usually be in excess of ten years, as has been the case at Selby and Asfordby. Second, how coal has been mined in the past will constrain how it can be mined in the present and the future. Removing coal changes the naturally occurring geological forces and mining coal above or below a worked out seam will have to take account of old patterns of extraction. To give an illustration, if coal was worked in one seam using one hundred and fifty yard longwall faces and twenty yard pillars between the faces, then the same pattern may have to be adopted in a seam above. Improved technology may mean that longer faces would be more cost effective but the interaction between the two seams may prevent that advantage being exploited.

If we add to these physical features the regional variations in social relationships, which often have their origins in the historical development of the industry, then we have an industry that is strongly influenced by its past. What coal is produced, where, and how it is produced is a result of investment decisions taken perhaps a decade before. Industrial relations have been shaped by patterns of ownership that have varied over time and location. Clearly, any understanding of a particular phase of the industry must have some regard to its past.

The aim of this chapter is to establish the state of the industry, its markets, its investment programme and the policy processes as it approached the massive closure programme of the 1960s. The analysis will begin with a brief survey of the major problems that faced the industry during the inter-war period, the impact of the World War II and the forces leading to the nationalisation of the coal industry. It will be argued that the primary motivation behind the nationalisation of the coal industry was its restructuring.

Section three traces the investment policies from the formulation of the Board's long-term strategic plan, Plan for Coal 1950, through to the early 1960s. It will be seen that the main elements of Plan for Coal were implemented despite the changing coal markets, a feature that led to an industry with a supply profile that differed from its market profile. The section introduces some themes that will be developed in later chapters as the mistakes of the 1950s and 1960s were, to some extent, replicated in the 1970s and 1980s.

Sections four and five will offer some possible explanations for the inertia in the investment programme and, again, introduces themes that will be developed in later chapters. In section four the structure of the NCB is discussed and it will be suggested that the self-interest of local NCB managers along with the National Board's dependence on those local managers may have been a factor in the inability to adjust the investment programme. Section five will trace the relationship between the industry and government, who approved and financed the Board's annual investment expenditures. It will be suggested that the Ministry of Fuel and Power and the Treasury were ideally situated to oversee the coal industry's investments and to check that they were compatible with the plans of major coal users. Some reasons for their failure will be explored.

The analysis of the early years of the nationalised coal industry offered here differs from recent contributions to the history of the industry, particularly those of O'Donnell and Taylor, G. In their work the problems of the coal industry are attributed to industry/government relationships but the emphasis is at the macroeconomic level. According to their accounts the industry has consistently suffered as governments interfered in the industry in an effort to pursue macroeconomic objectives without developing a supply-side policy (see chapter two). They pay very little attention to the impact of market forces which are relegated to an insignificant factor. Here it will be argued that industry/government relations have helped to shape the decline of the coal. However, O'Donnell and Taylor misinterpret this process in two ways. Firstly, by denying the importance of the supply-side they ignore key elements of the policy processes. Processes which this thesis argues contributed to the mistakes. Secondly, they do not take sufficient account of the changes in the size and structure of the industry's markets and the way these affected industry/government relations. In other

words, the issues are far more complex and dynamic than is suggested by O'Donnell and Taylor; the market shaped the industry/government relations and government policy, which in turn shaped the market.

#### **4.2 From Fragmentation to Nationalisation**

Any analysis of the nationalised coal industry must take into account the state of the industry prior to 1947 and the forces that led to the industry's nationalisation.

Table 4.1 shows the supply and demand for coal from its all-time peak in 1913 to 1946. Total demand for coal fell from 281.5 million tons to 192 million tons. Similarly output fell from 287 million tons to 190 million tons. It can be seen that inland consumption remained relatively stable, though there were some changes in the structure of the market, most noticeably the rise of coal sold to power stations from 4.2 million tons in 1913 to 14.9 million tons in 1938 and 26.3 million tons in 1946.

In 1913 exports, including coal for foreign bunkers amounted to 97.7 million tons, representing one-third of total output. Britain was the second largest (to the United States) producer of coal and its output was equivalent to 23% of world supply (Supple 1987, 7). By 1938 exports had declined to 48.7 million tons and, not surprisingly, collapsed during the war. The reasons for this decline are numerous and a full explanation goes beyond the scope of this thesis (see Supple 1987 esp. chapter 5).

Decline in the export market and stagnation in the domestic market left the industry with excess capacity. Adjustment to this explains much of the conflict that characterised the industry during the 1920s and 1930s (Supple 1987, 396). The turbulent industrial relations prompted a number of Government Reports into the industry, beginning during the First World War (Coal Mining Organisation Committee 1915, Sankey Commission 1919, The Samuel Report 1926). A common theme of these Reports was the need for the industry to concentrate to stimulate investment and increase efficiency. The Samuel Commission, for example, correlated size of undertaking with productivity and argued for re-organisation and mergers.

Table 4.1 Output and Consumption, selected years 1913-1946. Million tons

Year end	1913	1924	1938	1946
December				
<b>Output</b>				
Deep mined	287.4	267.1	227.0	181.2
Opencast				9.0
Licensed & other				
<b>Total</b>	<b>287.4</b>	<b>267.1</b>	<b>227.0</b>	<b>190.2</b>
<b>Consumption</b>				
Iron Works (Blast furnaces)	21.2	14.2	11.6	20.1
Other iron and steel	10.2	10.3	7.2	9.6
Collieries	18.0	16.6	11.9	10.3
Gas works	16.7	16.7	18.2	22.7
Power stations	4.9	7.7	14.9	26.2
Railways	13.2	13.5	12.5	15.1
Bunkers	1.9	1.3	1.2	1.0
Domestic	40.0	40.6		36.1
Other Inland	57.7	60.1	97.7	47.2
<b>Total Inland</b>	<b>183.8</b>	<b>180.4</b>	<b>175.1</b>	<b>183.5</b>
<b>Exports</b>				
<b>Total</b>	<b>97.7</b>	<b>83.3</b>	<b>48.7</b>	<b>9.2</b>
<b>Total Disposals</b>	<b>281.5</b>	<b>263.7</b>	<b>223.8</b>	<b>192.7</b>

Supple 1987, 15.

The Reports recognised that the fragmented ownership of the mines and the minerals did not provide an environment under which restructuring would occur. In response to this the government introduced a number of measures designed to impose some reorganisation of the industry. The Mining Industry Act of 1926 and the Coal Mines Act 1930 were early failures and in 1938 the government nationalised the coal royalties, abolished the Reorganisation Commission, set up in 1926, and instituted a stronger Coal Commission, to administer the reserves and force amalgamations (Chester 1975, 10). Measures which were subsequently overtaken by the outbreak of World War II.

Supple (1986, 397-401) notes that the failure to achieve the reorganisation of the industry into fewer, larger, units was attributed to the resistance of the coal owners. He goes on to suggest that the evidence that size and productivity were correlated is not

conclusive. He argues that the failure to invest, irrespective of size, was more critical. This failure he attributes to low profit levels, the patterns of ownership (even of large undertakings), the fragmented ownership of minerals and the pattern of industrial relations. He argues that the solution to these problems lay in the reduction of capacity rather than amalgamation of existing capacity. He also points out that the structure of the industry prevented such a reduction in capacity and that the alternative, state coercion, was politically impossible (Supple 1987, 410). Whether the industry's inter-war problems required the concentration of existing capacity or its reduction is, to some extent, irrelevant. The solution to the problem, a change in the patterns of ownership, remained the same.

The outbreak of war and the need for maximum production highlighted both the weaknesses of the industry and changed the political climate. As the Second World War progressed the demand for coal grew ever more pressing and its production ever more problematic. The government took a number of measures to increase output and control distribution (see Supple 1987 chapter 11). Despite these, coal shortages developed in the winter of 1941-42 and the Government imposed a system of 'dual control' on the industry (Cmd 6364). Under this arrangement government took over full control of mining and distribution activities whilst the owners carried out the day-to-day operations. Critically, the question of the industry's status in the future was left open.

The 1942 White Paper was followed by The Report of the Technical Advisory Committee, the Reid Report (Cmd 6610). This committee had been set up 'to examine the present technique of coal production from coal-face to wagon, and to advise what technical changes are necessary in order to bring the Industry to a state of full technical efficiency' (Cmd 6610). The committee consisted entirely of mining engineers and concentrated on technical matters. Nevertheless their conclusions had, as they recognised, implications for the organisation of the industry. In a key passage they argued that the present structure of the industry was inefficient and that some mines should be closed, others amalgamated and new shafts sunk where the current leaseholds might be unable to finance them. They went on to suggest that:

In these circumstances, it is evident to us that it is not possible to provide for the soundest and most effective development and working of an area unless the conflicting interests of the individual colliery companies working the area are merged together into one compact and unified command of a manageable size. (Cmd 6610, 137-8)

The report proved influential. For Ashworth it:

was the strongest influence in persuading public and governmental opinion, irrespective of political views about the ownership, that the revived coal industry that was so urgently needed could not be achieved without drastic change in the existing organisation. (Ashworth 1986, 13)

and for Arnot they had:

convinced the general public that private enterprise in coal must be swept out of existence. They had done no more as technological experts than complete what Sir Reginald Redmayne, HM Chief Inspector of Mines, had done in 1919 in his evidence to the Sankey Commission. He had shown that the coal trade then was ripe, rotten ripe, for unification. Twenty five years afterwards the Reid Report disclosed to the public a coal trade in an advanced state of putrefaction. (Arnot 1979, 94)

The coal industry was not, of course, operating in a vacuum. Tivey (1973, 18-26) identified five factors that both prepared the way for nationalisation in the mid-twentieth century and helped shape its form. These were: 1) A recognition that the co-operative model of social ownership was unsuitable for application to twentieth century industry. 2) The formation of the Labour Party and its adoption of socialist principles. 3) The rise and decline of the concept of guild socialism. 4) The need for national economic planning. 5) The recognition that nationalisation might be more efficient than private competition and might offer a solution to the problem of monopolies. He goes on to suggest that these later factors, together with examples such as the BBC, London Transport and the Electricity grid led many observers to the belief that increasing government control and ownership was inevitable. Whilst this view may have exaggerated the actual position it is clear that by the end of the war nationalisation had achieved a dynamic that, given the election of a Labour Government, made the nationalisation of some industries certain.

Two key points should be noted from this brief review of the circumstances leading up to the nationalisation of the coal industry. First, in the general sense the impetus behind the nationalisations of 1945-51 was pragmatic rather than ideological. State ownership became an acceptable alternative either because it would be more efficient than private ownership and/or because it would prevent the exploitation of monopoly market positions. Second, in the specific case of the coal industry the need to rationalise,

invest in and reorganise the industry provided the central argument for nationalisation.

As the Labour Party's Manifesto *Let us face the future* put it:

For a quarter of a century the coal industry, producing Britain's most precious national material, has been floundering chaotically under the ownership of many hundreds of independent companies. Amalgamation under public ownership will bring great economies in operation and make it possible to modernise production methods and to raise safety standards in the country. (Labour Party 1945)

Nationalisation therefore, was not perceived in terms of expropriation or of redistributing large profits to exploited workers (Tivey 1973, 43), As far as the employees and customers of the nationalised industries were concerned benefits would accrue from greater efficiency. Nationalisation would solve the collective action problems associated with the fragmented coal industry, paving the way for planned investment and restructuring which had long been seen as the route to efficiency.<sup>21</sup>

It is against this context that the record of the nationalised coal industry will be judged in this thesis. It will be argued that efficiency, through investment and restructuring was the primary objective of all post-war governments, including those of Thatcher and Major. As argued in chapter two, the analysis will be on two levels. At the strategic level government's overall objectives for the industry will be explored, through the long-term plans. At the implementation level the coal industry's investment record will be assessed. This chapter now explores these issues for the period from nationalisation to the early 1960s.

### **4.3 The Reconstruction of the Coal Industry 1950-1965**

The turbulent events in the coal industry from the optimistic days of nationalisation to the re-emergence of decline in the late 1950s are retold in countless histories. In chapter two it was noted that there are two main themes in the literature. On one account the Board made plans to supply markets which it believed would expand,

---

<sup>21</sup> McCormick (1979, 47) argues that: 'the coal mines were nationalised because the miners were no longer prepared to work for private coal-owners.' He discounts the view that the mines were nationalised because they were 'technologically backward and that only state ownership would guarantee the right amount of investment' because it assumes that the capital markets had been wrong in the past. However, whilst McCormick is right to point to the miners desire for nationalisation he is surely wrong to discount restructuring and investment as primary factors. The war had demonstrated that Britain's coal supply was precarious and that investment was needed in the post-war period. The experience and the Reports of the inter-war period had demonstrated that the industry would not invest under its current structure. Whether or not it had been correct not to invest during the inter-war years is a separate issue. The key point is that the perception amongst the political elite was that, if left in the private sector, the industry would not make the, perceived, necessary investment.



those plans were then undermined by technological change, new alternative fuel supplies and the failure of the economy to expand as much as had been hoped (Bercovitch and Ashworth for example). On the other account, government intervention in the industry, for macroeconomic purposes, delayed and constrained the investment strategy of the Board which led to the industry being unable to compete with the emerging alternative fuels (G. Taylor, O'Donnell). Both accounts offer some explanation of the circumstances surrounding the reversal of the industry's fortunes: the markets did change and the governments did intervene in the Board's pricing policies. However, it will be argued here that such explanations are, by themselves, inadequate and given that history was to substantially repeat itself in the 1970s and 1980s, when a new Plan for Coal was undermined by changing markets, we need to go beyond the market and the macroeconomy. Here a third possibility will be hypothesised: that the investment policy processes, how policy was formulated and implemented, contributed to the industry's problems. We therefore need to explore the detail of the policy process and ask why policies were adopted and how investment decisions were made. The analysis begins with the 1950 Plan for Coal.

#### **4.3.1 Strategic Policy**

The Coal Industry Nationalisation Act laid out the formal framework for planning and investment decisions for the industry. The Act charged the NCB with the duties of:

- a) working and getting the coal in Great Britain, to the exclusion (save as provided in the Act) of any other person
- b) securing the efficient development of the coal mining industry; and
- c) making supplies of coal available, of such qualities and sizes, in such quantities and at such a price, as may seem to it best calculated to further the public interest in all respects, including the avoidance of any undue or unreasonable preference of advantage. (CINA 1946)

Section three of the Act required the Board to submit plans for re-organisation or development involving substantial capital expenditure to the Minister for approval, thus institutionalising the process. The statutory provisions were intended to create a structure under which the nationalised Boards were to be responsible for day-to-day operations, with government, through the Minister, intervening only when the 'national interest' was involved. Many observers have noted that, in practice there was a high level of government intervention in the Board's affairs and intervention in pricing policy, production policy and industrial relations were undoubtedly key features

throughout the nationalised industry's history (For some examples see Chester 1975, Ashworth 1986; Williams 1983; Allen 1981; Powell 1993; Ezra 1993; O'Donnell 1986, 1988, 1991; Taylor 1991; Thornhill 1968). However, as this thesis will show, interventions in the Board's long-term strategic policies have been less consistent. At times it has been the NCB that has 'led' in the formation of such policy, at other times it has been almost excluded. In terms of the 1950 Plan for Coal it would appear that the formal provisions of the Coal Industry Nationalisation Act were executed as had been intended and the Board was its chief author. Plan for Coal was essentially a child of the NCB that was adopted by the Government.

Possible reasons for this are not hard to locate. Firstly, as Posner (1962, 352) notes any account of post-war fuel policy 'must refer to one event of almost traumatic importance - the fuel crisis of 1947'. Within weeks of vesting day severe weather conditions and the lack of adequate coal stocks plunged the country into a crisis which underlined the nation's dependence on coal. The post-war reconstruction programme and full employment appeared to depend on the coal industry's capacity to supply the required amounts of fuel. It was a crisis that left all policy makers convinced of the need to maximise current production and invest in the industry to avoid fuel shortages in the future. Secondly, only the NCB had the capacity and the expertise to survey the fragmented industry it had inherited. Only they could determine the possibilities for increasing coal production, both in the short and long-term, and only they had detailed information about the markets. The key to understanding the first attempt at long-term strategic policy making therefore lies in the Board's formulation of Plan for Coal.

If nationalisation had removed one impediment to rational planning, that of fragmented ownership, other problems, particularly those associated with risk and uncertainty, remained.<sup>22</sup> As noted, investment decisions in the energy sector, typically, have long gestation periods. Balancing supply and demand requires accurate estimates of both for a number of years ahead. Inaccurate assessments would inevitably lead to over or under supply unless a dynamic can be introduced into the policy process and flexibility

---

<sup>22</sup> 'Risk' can be defined in terms of uncertain outcomes to which probabilities can be attached to the different possible outcomes. In mining risk is endemic as geological conditions make uncertain the financial viability of a project, however experience enables such risks to be quantified. 'Uncertainty', on the other hand, is concerned with situations where uncertain outcomes cannot be quantified and therefore probabilities cannot be attached. So, for example, alternatives to coal as a primary energy source were, until their discovery, uncertainties (see Hargreaves Heap *et al.* 1992, 349).

in the productive process. Unfortunately the energy sector, nationally, internationally and irrespective of ownership has found accurate forecasting highly elusive.

Throughout the post-war period energy policy makers have received conflicting signals from the political and economic environments upon which they have had to act. The British coal industry has been no exception and the problems of risk and uncertainty bedevilled the NCB from its earliest days.

In the late 1940s all the signals pointed to an optimistic future for the industry. Britain was over ninety per cent dependent on coal for its non-transport fuel requirements; fuel use was expected to rise along with 'managed' growth in the economy and the NCB had a virtual monopoly of coal supply. Neither they nor the Government questioned the logic of increasing coal production by as much as was physically possible.

In addition to increasing output Plan for Coal also had as a primary objective the restructuring of the industry. The aim was not coal at any price but rather to initiate:

a balanced program of capital development designed to increase output, improve productivity and reduce costs, by employing men and money where they can produce the best results. (Plan for Coal 1950, 1)

To achieve this the Board embarked on two major exercises. Firstly, they attempted to ascertain how much of each classification of coal they could produce and at what cost. Secondly, an assessment of likely demand for each class of coal made. The aim was to produce a plan that:

discover[ed] the most efficient size and shape of the industry - to find out how much coal of each kind should be produced and where it should be produced to meet consumers' demands and make the best contribution to the nations welfare. The Plan seeks to provide answers to a number of questions- how much capital should be spent and where it should be spent to yield the best return; how many men will be required and where; what should be the future relationships between wages, prices and demand for coal. (Plan for Coal 1950, 33)

It is a matter of record that Plan for Coal failed to 'discover' the value of these variables with any degree of accuracy. As already noted, changes in technology and the availability of alternative energy sources undermined the basic assumptions of the Plan. The questions that this chapter now poses are, firstly, were the errors of Plan for Coal inevitable? Secondly, if not, can the policy-process explain the policy errors? In order to attempt to answer these questions a disaggregated analysis is required rather than the global treatment given in many accounts.

In order to understand the Board's rationale behind Plan for Coal it is first necessary to recognise that coal was not, in the 1940s and 1950s, homogeneous as a product. Appendix 1 shows the major classification of coals, their main use, the proportion of each of total production and where they are produced. Whilst generalisations are difficult, some would be helpful in terms of this chapter. Very broadly four main types of coal can be identified from these classifications. The first is high quality coal used for domestic heating, steam raising and special industrial uses; in 1950 production, almost exclusively from South Wales, accounted for 4% of the total (types 1, 2, and 4). The second group comprises of coal used for carbonisation (coke and gas making). They were produced over a wide geographical area though, as will be seen, were more significant in some areas than others; in 1950 these coals accounted for 45.5% of total production (types 5, 6, 7, 8). The third group of low quality steam coal, produced, again from a number of coal fields accounted for 45.5% of production (types 9 and 10). Finally, the fourth group consists of high and low quality coal that was used for steam raising including locomotives and for carbonisation. High quality coal in this group being almost exclusive to South Wales while the low quality coal was geographically dispersed (type 3)

The second point to note is that the geology and historical developments of the coal fields differed widely. In some areas, Northumberland and parts of the Scottish coal field for example, extensive working had nearly exhausted recoverable reserves. In other areas, perhaps most significantly in South Wales, geological faulting increased the difficulties, and therefore the costs of mining. In yet other areas, most notably the Yorkshire - Nottinghamshire - North Derbyshire coalfield, conditions were much more favourable as was the climate of industrial relations (Plan for Coal 1950).

Initially the NCB Areas were instructed to survey their mines to establish how much coal of each classification they could produce and how much it would cost. Each Area worked on the basis of nationally laid down criteria and on the assumption that capital and manpower were freely available. The Areas submitted their conclusions in the form of 'cost ladders' which showed how much additional coal could be produced at different cost levels. From this a process of adjustment took place which, inter alia, involved assessing where the coal was needed and the availability, and cost of, transportation. In the final stages of the process the Area cost ladders were compared:

with the estimates of demand in the markets at home and overseas, and so deducing how and where the needs of consumers could most cheaply be met in the future.  
(Plan for Coal 1950, 35)

Turning to the demand side, the Plan recognised the difficulties in forecasting demand over a fifteen year period, suggesting that estimates were ‘little better than informed guesses.’ (Plan for Coal 1950, 20). Nevertheless the Board had little option but to make those guesses. They looked at each of its major markets and using the pre-war position, and any other information that was available, arrived at a figure for future demand. An underlying assumption was that economic activity would be substantially above pre-war levels and that, therefore, the demand for fuel would also increase.

In the inland markets the Board expected, with some confidence, increased demand for coal in the gas and coke making sectors, i.e. the market for carbonisation coal. From 47.9 million tons in 1949 this market was expected to be between 56 and 58 million tons in the 1960s (21) They were less confident about projections in the inland demand for steam raising coal. They were particularly uncertain about the future demand from ‘general industry’ as they expected factories to switch over from coal to electricity. Stability was expected in the railway sector and growth in the electricity generating sector, from 30 million tons in 1949 to 40-45 million tons in 1960, with further possible increases in the following fifteen years. (22) Overall the steam market and house coal, was expected to increase from 132.1 million tons to 138-145 million tons in the 1960s (21).

Plan for Coal (1950) made cautious statements about likely demand in the export markets. Competition from other coal producers and from alternative fuels as well as improved combustion techniques and the desire to insulate national economies from international shocks would depress demand. It was recognised that price would be the determining factor and that the relative price of British coal when internationally traded was only partly endogenous. The rate of capital development in competitors' mines, the future of the oil industry and the uncertainty of exchange rates made projections of relative prices difficult. However, whilst recognising these features of the market the Plan goes on to suggest that:

there is still a large unsatisfied demand in Europe and elsewhere for British coals which could be met if supplies were available. There are many 'bullish' elements in the markets for British coal exports in the future. (Plan for Coal 1950, 23)

The assessment concluded with the estimate that the market in the period 1961/65 would be between 25-35 million tons, mainly for special quality coal.

The information supplied by the NCB's review of sources and their projections of the likely markets informed the Board's investment decisions. Table 4.2 shows the planned output for the 1960s, the actual output in 1949 and the investment programme by the Divisions. It can be seen that the Plan intended to raise output from 202.7 million tons to 240 million tons through the investment of £486.6m

The aim of the Plan was to stabilise and increase output which in the preceding years had declined. Whilst this is, of course, a significant feature more insight can be gained by exploring the Divisional pattern of the proposals. It can be seen that the division with the largest planned investment was the South Western with £102m. Of this, £97m would be spent in South Wales, £27m on four new collieries and 29 minor re-constructions to produce anthracite and £70m on three new collieries, three major reconstruction's and 22 minor re-constructions for steam and bituminous coal. The size of this reconstruction plan reflected the division's market importance. As a producer of high quality coals, with access to coastal ports it was assumed that between half and one third of output would be sold abroad. The shape of the reconstruction plan reflected the historical problems caused by the collapse of the export trade in the aftermath of World War I. With little investment during the inter-war period 'most of the pits [were] old and dilapidated' (Plan for Coal 1950, 8). In addition the age of the coal field meant that:

the areas of coal accessible to [the existing pits were] riddled with old workings, and many pits had been worked to past their economic limit. In these circumstances reconstruction is impossible. The Board feel that their only course is to start again in a new part of the field. (Plan for Coal 1950, 8)

Table 4.2 Planned Output, Output and Capital Projects, By Region. Plan for Coal (1950) pp 10-11

Division	Million Tons		Capital Expenditure 1950-1965. £million	Probable Schemes				
	Planned Output 1961-65. tons	Output 1949. tons		New Collieries (deep mines). No.	New Surface Mines. No.	Major Reconstruction s No.	Minor Reconstruction No.	
Scottish	30.6	23.8	63.4	9	38	4	32	
Northern (N & C)	15.1	12.8	30.6	1	-	9	7	
Durham	27.0	26.4	54.0	-	4	8	19	
North Eastern	50.5	42.1	72.0	2	-	17	41	
North Western	14.2	14.4	33.3	-	5	4	14	
East Midlands	47.5	39.1	79.0	2	6	12	34	
West Midlands	19.9	18.3	41.7	1	-	7	16	
South Western	32.7	24.2	102.7	7	-	3	29	
South Eastern	2.5	1.6	9.0	-	-	3	-	
<b>Great Britain</b>	<b>240.0</b>	<b>202.7</b>	<b>486.6</b>	<b>22</b>	<b>53</b>	<b>67</b>	<b>192</b>	

South Wales and its investment programme can be contrasted with the central coal fields of Yorkshire (North Eastern Division) and Nottingham, Derbyshire and Leicestershire (East Midlands Division). In these areas, historically younger and less turbulent than South Wales, the existing pits were in better condition. The planned output increases could therefore be achieved by sinking, proportionately, fewer new mines and reconstructing current capacity. In both the East Midlands and North Eastern divisions output was planned to increase by about 20%, less than the 35% increase for South Wales. This again reflected the expected market conditions. As has been seen above, greater increases were expected in export and carbonisation markets. Transportation costs to ports increased the costs of coal from the central fields to level above the likely proceeds, making exports unattractive. In the East Midlands 'most of the reserves consist of general coals' unsuitable for either export or carbonisation. In Yorkshire more coal can be used for carbonisation: in 1948, 86% of output was of a suitable quality, although only 46% was actually sold for carbonisation (Plan for Coal 1950, 55). The Plan envisaged the carbonisation market in Yorkshire increasing in importance as the West Durham coal field declined. (Plan for Coal 1950, 7-8)

This short review of the rationale behind the NCB's investment plans in 1950 illustrates two key features. The Plan was informed by market conditions and investment decisions were shaped by historical and geological factors. It would also appear to illustrate a rational piece of policy-making. A problem, how to increase supplies of coal to keep pace with increasing demand, was identified and an exhaustive approach was used to determine the most cost-efficient way of solving the problem. A key point to note is that Plan for Coal was an NCB plan. In contrast to later strategic plans it was not formulated by the inter-action of the Board and government or the unions. In the late 1940s the Labour Government was either content to leave the long-term planning of the industry to the 'experts' or were too pre-occupied with other, more immediate, crises such as the external balance of payments. The unions, especially the NUM, were more concerned with industrial relations issues and in any case had no reason to question a Plan for Coal that appeared to offer long-term employment stability albeit at the cost of some mine closures.



All histories of the fortunes of the British coal industry note the re-emergence of decline in the late 1950s. Typically, they argue that the availability of cheap oil began to displace coal's market. To an extent this is, of course, undeniable. However, the position of NCB in relation to its markets in the late 1950s and early 1960s was far more complex than discussions of the global figures imply a brief, disaggregated exposition might be useful here.

### 4.3.2 The Market Outcome

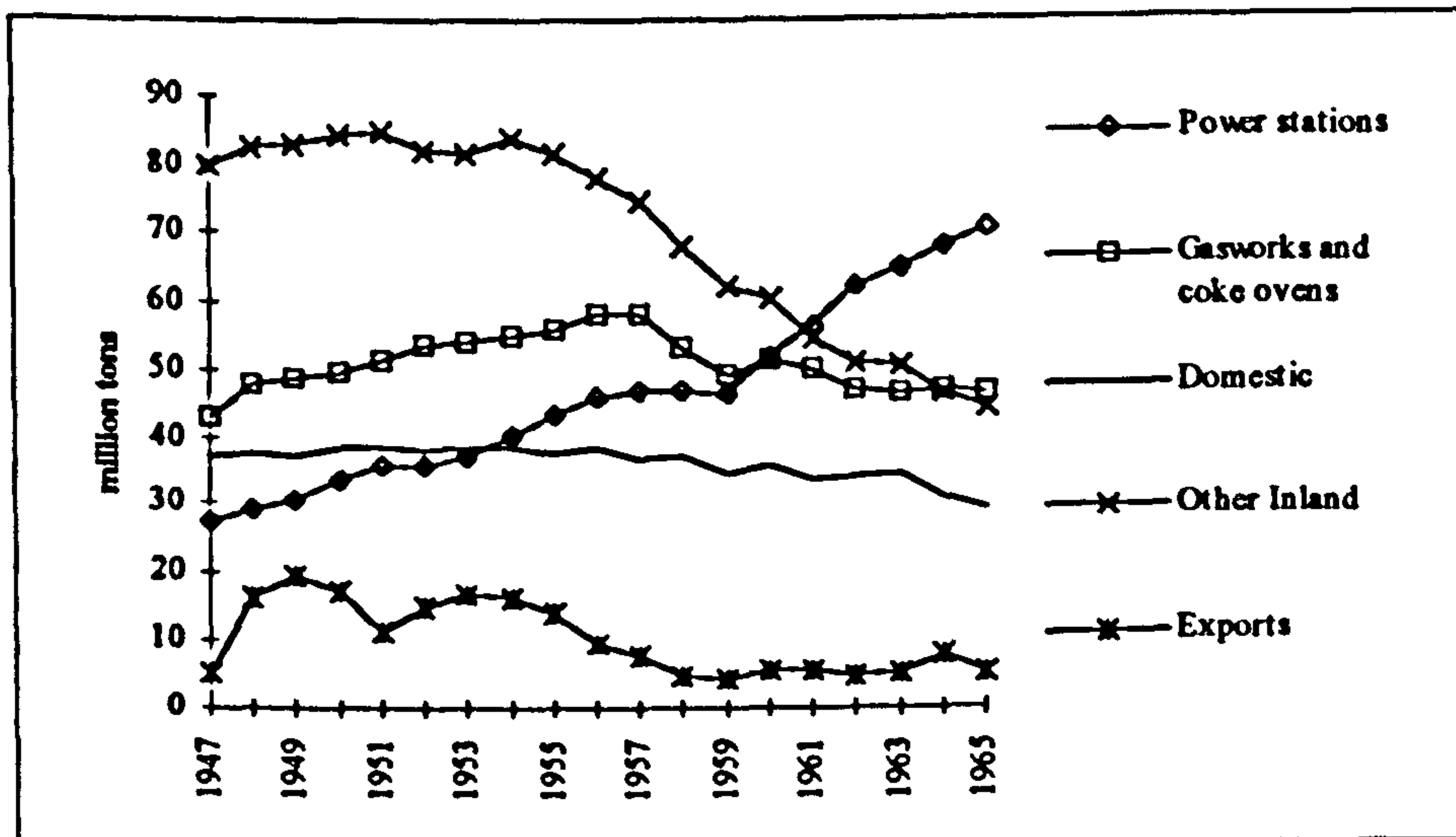
Total Consumption, including exports, rose from 196 million tons in 1947 to a post-war peak of 237 million tons in 1954 and then fell, in the late 1950s and early 1960s, to just over 200 million tons (NCB Annual Report And Accounts). Within these overall figures there were a number of dramatic changes in the structure of the market. Of particular interest is the decline of the export, gas and coking coal markets and the rise of coal's use in the generation of electricity.

First the export market: following the end of hostilities exports rose to 20 million tons in 1949 then fell to 14 million tons in 1955: thereafter never rising above single figures. A number of economic and political factors can be identified to explain why the outcome differed from the projections in the Plan. Firstly, during the late 1940s Britain had been unable to satisfy the European market which, as the Revised Plan for Coal (1959, 9) noted, turned to the USA for supplies.<sup>23</sup> The capture of the European market by the USA received further impetus when, under Marshall Aid, the Americans made shipments of coal to France and Italy compulsory and later 'gave away' small coal in direct competition with British unwashed smalls (Williams 1983, 55, 58, 63, 159-60). In addition, large quantities of coal were available from the USSR and Poland (Revised Plan for Coal 1959, 9). Secondly, the movement away from coal and towards alternative fuels, particularly oil, was a European-wide phenomenon (Bailey 1968). This together with the disappearance of the bunker market resulted in coal losing market share within the context of an increasing energy sector. During the 1960s the export market shrunk to below 5 million tons As will be seen, below, the loss of this market would have far reaching implications for the investment programme.

<sup>23</sup> Government policy at the time was to satisfy internal demand and export any surplus.

Turning to inland demand the changes in overall inland demand during the period were less dramatic. Total inland demand rose more or less consistently between 1947 and 1956, thereafter declining. Behind these totals there are a number of critical changes which must be highlighted.

Figure 4-1 Coal Consumption by Sector 1947-1965



Source: NCB Annual Report and Accounts

Figure 4.1 illustrates the changing market faced by the coal industry. Domestic demand showed a marginal decline over the period. The five-year moving average rose from 38.4 million tons in 1951 to 39 million tons in 1954, thereafter falling steadily to 35.8 million tons in 1962.<sup>24</sup> However, the smog over London in the early 1950s led to The Clean Air Act of 1956 and this early example of environmental pressure on the industry together with the convenience of alternative fuels indicated a difficult domestic coal market.

Other Inland, which includes railways, industrial users and before 1960 sales to Northern Ireland reached its peak in 1951 of 86 million tons and then levelled before going into decline after 1955. By 1965 they had fallen to 45 million tons. A number of reasons can be identified here. The switch to diesel powered trains reduced this market from 14.8 million tons: in 1947 to 10 million in 1959 and as the pace of technological change gathered, 2.4 million tons in 1965/6. More efficient combustion techniques and conversion from coal to oil in the industrial sector, a feature actively encouraged by

<sup>24</sup> The five year moving average is used to even out fluctuations in demand caused by exogenous factors such as mean temperature fluctuations and changes in the composition of the figures in 1960.

government in the wake of fuel shortages in the late 1940s, reduced demand from 41 million tons in the mid 1950s to 32 million tons in 1959 and 24 million tons by 1965/6. Consumption by gasworks and coke ovens first rose until 1957 and then fell by 11 million tons to 47 million tons in 1962.

The former was a consequence of a switch to oil whilst the latter was a result of increased efficiency steel making. The market for electricity generation, on the other hand, increased to 53 million tons in 1960 and by a further 18 million tons in the next 5 years. Clearly there had been a dramatic change in the structure of coal's market.

So far in this chapter it has been seen that the NCB produced a long-term plan, which was accepted by Government, based on its assessment of market supply and demand conditions. It has also been seen that the outcome was significantly different to that expected. Table 4.3 uses the four broad classifications of coal, developed earlier, to summarise the main points.

The most obvious feature to note from Table 4.3 is the disparity between the expectations of Plan for Coal and the outcome, particularly as it effected South Wales. It has been seen that Plan for Coal envisaged that £97m, or 20 per cent of total investment, would be invested in South Wales to supply the expected markets. In addition, though generalisations are difficult, it was also the case that geological conditions and past mining activities resulted in higher than average costs. Against this planned investment in the central coalfield to produce general, and especially, generating coals had been proportionately less. Clearly, if Plan for Coal were to be implemented as it had been drafted and against a background of changing demand conditions then there was a potential for a misapplication of resources when judged against the objectives of the Plan. It was probable that too much would be invested in areas where costs were high and the markets declining and too little investment where costs were low and the markets more stable. The next section goes on to explore the investment record of the industry.

Table 4.3 Plan for Coal Expectations and Market Outcomes by coal type.

Coal Type/Principle Use	% of Total 1950	Principle Locations	<u>Plan for Coal Expectations</u>	Outcome
High Quality: domestic heating, steam raising, special industrial use, export markets	4	South Wales	Increasing export markets 25-35 million tons	Exports declined to around 5.5 million tons
Carbonisation Coal: coke, gas making, some steam raising	45.5	Dispersed	Increasing demand for carbonisation coal from 47.9 million ton in 1950 to 56-58 million tons in the 1960s	Demand for carbonisation coal rose to 58 million ton in 1957 then fell to around 45 million ton in the mid 1960s
High Quality Steam Coal: steam raising, carbonisation, railway locomotives, export markets	5	South Wales	Increasing export markets. stability in the railway market,	Exports declined as did the railway market
Low Quality Steam Coal: steam raising, Railway Locomotives, Electricity generation	45.5	Dispersed	Uncertainty in steam market as a decline in 'general industry' would be offset by growth for the electricity market	A number of off-setting errors resulted in demand being closely related to the expectation

### 4.3.3 Investment Policy

As has been noted above, the Plan was a product of optimism about future demand in most of coals' markets. It has also been noted that the outcome in the early 1960s was significantly different to the forecasts made when the Plan was formulated. Posner (1962) has convincingly argued that the combination of a changing market structure and an inflexible investment programme had far reaching implications for the industry.

Posner demonstrates that the NCB's investment programme exhibited a high degree of consistency both throughout the 1950s and with Plan for Coal.

From Table 4.4 Actual and Plan Investment by Region, it can be seen that some redistribution of planned investment did occur in the period between 1947 and 1961. The peripheral, exporting and special coal producing areas received a smaller share of investment whilst the central coal fields increased their share. This might lead to the conclusion that the Board showed some responsiveness to the changing market situation and Posner (1962, 362) suggests that the 'changes in the pattern of sales must have had some influence on the energy with which they pursued cost reduction and output expansion in declining specialist coalfields'. However, as Posner also notes, the NCB's own account suggests that these shifts in the share of capital expenditure were unplanned. The reduction in the South Wales expenditure, for example, was attributed to poor industrial relations. Additionally, the form of reconstruction may have impacted on the amount each area was able to spend. As seen above, the central coalfields planned reconstruction focused on existing collieries: they were schemes that could be executed relatively quickly. In South Wales the emphasis was on new collieries, most of which in 1961 had still to be completed. In the period between 1961 and 1965 as these projects were completed then it was still expected that the pattern of investment expenditure would not be radically different to that which had been planned in 1950. (See Posner 1962, table XI).

Posner (372) goes on to argue that even as late as 1961:

the Divisional distribution of new investment is highly correlated with the size of depreciation charges provided for in each in each Divisions accounts. The Divisional pattern of surpluses and deficits is slightly correlated with investment. (Posner 1962, 372)

In other words, at least up to the early 1960s, historical precedent rather than current market forces drove the Board's investment programme. In the Plan only minor changes in the regional distribution of output were expected and in the event, despite changing markets, little occurred. It would appear that Plan for Coal once conceived became 'set in stone' despite its own recognition that the forecasts were tentative and of the need for flexibility.

Table 4.4 Actual and Planned Investment, by Region

Division	Actual 1947- 61 £m	% share of Total	<u>Plan for Coal</u> £m	% share of Total	Difference Actual - Planned
Scottish	113.9	14.3	64.3	12.4	1.9
Northern	37.8	4.7	30.6	5.9	-1.2
Durham	82.4	10.3	54.0	10.4	-0.1
North Eastern	139.6	17.5	72.0	13.8	3.7
North Western	76.0	9.5	33.3	6.4	3.1
East Midlands	140.1	17.6	79.0	15.2	2.4
West Midlands	77.7	9.8	41.7	8.0	1.8
South Western	117.1	14.71	102.7	19.8	-5.1
South Eastern	10.1	1.27	9.0	1.7	-0.4
Other	1.6	0.2	33.4	6.4	-6.2
Total	796.3	100.0	520.0	100.0	

Source: Posner 1962, 371

This conclusion is in direct conflict with the recent contributions of O'Donnell and Taylor who suggest that the implementation of the programme was constrained by lack of finance. Table 4.5 shows the investment expenditure in nominal and real terms, from 1947 to 1965, the upper limit of Plan for Coal. In nominal terms total investment, excluding housing rose from £29m in 1950 to a peak of £112m in 1959. Between 1960 and 1965 investment fluctuated; in real terms the pattern is similar. As Table 4.5 shows real expenditure during the period was £751m at 1950 prices.

Disaggregation of the figures, into expenditure on major schemes (costing over £2.5m) and other expenditure provides more insights: Plan for Coal 1950 (5) suggested that £520m would need to be spent on collieries, of this £350m would be used simply to maintain the current output. This stems partly from the peculiarity of mining, which necessarily consumes some of

its capital in the process, and partly from the usual depreciation of plant and machinery (Ashworth 1986,199). The Balance, £170m, was to be spent on increasing production to the 240m tons anticipated demand. However, the experience of the 1950s demonstrated that a great deal more investment was needed simply to maintain existing output. Stabilising and increasing output was to prove more expensive and time consuming than had been anticipated. By 1957 the Board regarded all capital expenditure other than that on new collieries or major reconstructions as relating to current output (Report and Accounts 1957, 25). To put this in physical terms, half of the investment that occurred between 1950 and 1965 went towards replacing coal faces, plant and machinery within the existing structure of the mines. Whilst some improvement in productivity, and therefore output, could be expected from such investment it was not expected that major improvements would flow from this type of investment. In real terms the amount spent, £370m, at 1950 prices, was close to that envisaged by the Plan. Something which is perhaps unsurprising since this type of investment had continued throughout the inter-war and war periods and therefore its costs were more predictable.

The other half, £545m in nominal terms or £382m at 1950 prices, was spent adding to productive capacity, though 4m tons a year of this was to replace the closures due to exhaustion (Report and Accounts 1957, 25). Real investment on new and reconstructed capacity was therefore considerably in excess of the £170m planned. As Ashworth (1986, 202) has noted some of this increase can be attributed to an underestimation of the cost of projects. Nevertheless, it would appear to be difficult to argue that investment had fallen substantially below that planned in 1950.

Table 4.5 Investment: Nominal and Real 1947 to 1965

	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963 /4	1964 /5	Totals
<b>Investment £million</b>																			
Major Schemes	2	3	4	7	9	15	21	32	39	42	44	51	63	48	47	39	42	37	545
Other	13	18	23	18	18	23	31	36	35	34	40	39	37	27	36	39	56	40	563
<b>Total Colliery</b>	<b>15</b>	<b>21</b>	<b>27</b>	<b>25</b>	<b>27</b>	<b>38</b>	<b>52</b>	<b>68</b>	<b>74</b>	<b>76</b>	<b>84</b>	<b>90</b>	<b>100</b>	<b>75</b>	<b>83</b>	<b>78</b>	<b>98</b>	<b>77</b>	<b>1108</b>
Ancillary Housing	4	4	4	4	5	10	13	16	19	19	19	14	12	11	10	8	13	13	198
<b>Total Investment</b>	<b>19</b>	<b>25</b>	<b>31</b>	<b>29</b>	<b>32</b>	<b>50</b>	<b>82</b>	<b>99</b>	<b>95</b>	<b>96</b>	<b>103</b>	<b>104</b>	<b>112</b>	<b>86</b>	<b>93</b>	<b>86</b>	<b>111</b>	<b>90</b>	<b>1343</b>
<b>Investment at 1950 prices</b>																			
Major Schemes				7	8	12	17	26	30	31	31	35	44	33	32	26	27	23	382
Other				18	16	19	25	29	27	25	28	27	26	19	24	26	36	25	370
<b>Total Colliery</b>				<b>25</b>	<b>24</b>	<b>31</b>	<b>42</b>	<b>55</b>	<b>57</b>	<b>56</b>	<b>60</b>	<b>62</b>	<b>70</b>	<b>52</b>	<b>56</b>	<b>51</b>	<b>63</b>	<b>49</b>	<b>751</b>
<b>Investment at 1955 prices</b>																			
Major Schemes										40	41	46	57	43	41	33	35	31	368
Other										33	37	35	34	24	32	33	47	33	308
<b>Total Colliery</b>										<b>73</b>	<b>78</b>	<b>81</b>	<b>91</b>	<b>68</b>	<b>73</b>	<b>67</b>	<b>82</b>	<b>64</b>	<b>676</b>

Source: NCB Report and Accounts; National Income and Expenditure (Blue Book) 1967.<sup>25</sup>

<sup>25</sup> There is a disparity between that 'total colliery' investment for the period 1947-1961 in table 4.5 and the 'actual expenditure' in table 4.4. The difference may be a result of Posner's use of internal NCB data - his table XI does not give a source for the data and his footnote 3 acknowledges his internal sources.



O'Donnell offers no evidence of investments that failed to materialise through lack of funds. Taylor, G. (1991, 97) uses the example of Horden Colliery in 1962, cited by the NCB in its evidence to 1968 Select Committee on Nationalised Industries (SCNI). He goes on, using the evidence from the 1968 hearings, to outline the difficult relationships between the Board the Ministry of Power and the Treasury. The problem with this analysis is that it is anachronistic: it is implied that the relationships pertaining in the 1960s, when the market position had obviously changed, also applied to the 1950s. More contemporaneous evidence would appear to contradict this. In the earlier Select Committee Reports, 1957 and 1958, the NCB made no complaint about the availability of investment funds, indeed whilst giving oral evidence to the 1957 SCNI the Deputy Director, Latham, specifically ruled out this possibility in an exchange that is worth quoting in full:

*Chairman:.... You would not, in fact, would you, have been able to make greater capital investment even if it had been authorised by the ministry? Latham: No, I do not think we would.*

*Chairman: You would say you are going as fast as you can with your capital development? Latham: Yes. We are seeking to speed it up, because we are not going as fast as we think we ought to but we have not been held by lack of finance.*

*Chairman: And if you have been held up it is due to lack of other factors? Latham: Yes. (HC 304, Qs 1080-1082)*

'Other factors' included the lack of qualified mining engineers and the pressure for current output (see Annual Report and Accounts 1947-1957, Investing in Coal 1956, SCNIs of 1957 and 1958)

The key argument made in this section has been that, once conceived, the essential elements of Plan for Coal were implemented. Clearly, why the Board's investment programme exhibited this degree of rigidity in the face of changing markets needs to be explored. Two features might be used to exonerate the Board.

Firstly, there is an in-built, physical, inertia in mining investments. As already noted investments have long gestation periods during which the assumptions that prompted the investment might change. However, once a scheme has been started it becomes difficult to stop. Many of the projects initiated under the 1950 Plan for Coal had been started before the changes in the market became apparent. The problem focuses on the issue of sunk costs which in the mining industry take on a literal, as well as an

economic meaning.<sup>26</sup> In general, the Board has taken an economic view of sunk costs and have assessed whether or not to continue with projects that have become marginal on the basis of incremental costs. By ignoring expenditure already undertaken a project might still show a financial return on the basis of what it would cost to complete. The trouble with this approach is that the projects, typically, had long life spans once completed. A project which became marginal during its construction may remain marginal, and a problem, for many years. Alternatively, in the context of a constrained market, a project may turn other collieries marginal that had previously been thought safe. This issue will be explored in greater detail in chapter six, but for the moment it is enough to recognise the potential for some stability arising out of the physical features of coal investment programmes.

Secondly, Posner, conscious that his analysis is open to charges of hindsight, suggests that the circumstances which led to the crises in the mid 1960s were unforeseeable:

few economists could blame the NCB for failing to read the auguries [of the markets] more swiftly or more correctly than the economists themselves. (Posner 1962, 375)

Even when the problems began to emerge Posner suggests that the NCB took the optimistic view that:

‘all will come right in the end’ - that £1000 million of capital investment must pay off sometime. (Posner 1962, 370)

There are at least two problems with this. Firstly, Posner was writing before the full scale of the implications became known. He was able to conclude that the pattern of the reconstruction programme was ‘in some respects strikingly correct’. The subsequent rapid closures of the late 1960s and the sterilisation of substantial amounts of the investment must make such a conclusion questionable.<sup>27</sup> Secondly, albeit in different circumstances, many of the features of the investment programme under Plan for Coal 1950 were to be repeated under Plan for Coal 1974. Then some economists were arguing against the expansion of coal industry because the future market was not certain. The failure to foresee changes in the structure of the energy market may be excusable once, but when the same errors are repeated explanations which rest on misfortune appear inadequate, even if they cannot be totally rejected. We need,

---

<sup>26</sup> Sunk costs are costs which cannot be recovered.

<sup>27</sup> Interestingly, Posner was to play a crucial role in that closure programme, see chapter five.

therefore, to go beyond 'economic' explanations and explore the politics of investment decisions. We need to determine what, or who, drove investment policy. In this chapter two issues will be explored. First, in the next section we focus on the NCB's own structure and investment processes and argue that these may partially account for the inertia. The final section will examine the relationship between the industry and its banker, the government, who approved and financed much of the investment programme.

#### **4.4 Investment decisions in the NCB**

In this section the concepts of rational self-interest and power dependencies are applied to relationships between the National Board and the NCB's local management. Here the discussion is brief and the main purpose is to introduce a theme which will be developed in chapter six.

The debate over the correct structure of the NCB began almost immediately after vesting day. The CINA (1946) had not laid down any formal organisation, though it was expected that the National Board would develop regional structures. This it did through the creation of Divisions, Areas and Groups. Regions were also created but these were essentially concerned with distribution. (Tivey 1973, 109). The new structure was criticised as being over-centralised and in the late 1940s and early 1950s several decentralisation measures were taken culminating in a 1953 Board directive which stated that:

Divisional Boards are bound to consider but not necessarily to accept the advice or suggestions of Headquarters Departments. (Cited in Tivey 1973, 111)

The move toward greater decentralisation ended with the publication of the Fleck Report; the directive of 1953 was withdrawn and a hierarchical structure reintroduced. According to Tivey (1973, 114), after Fleck the organisational problems of the industry were 'not what they were'.

However, whilst the formal relationships between central and regional structures within the NCB may have been settled, major problems appear to have remained. The difficulty facing the early nationalised industry, as Tivey notes, was that the NCB:

as a large unified organisation was a complete transformation for the coal industry, which had previously consisted, in the main, of relatively small firms. (Tivey 1973, 110)

Apart from mobilisation for war, no one had experience of organisations on the scale of the NCB. A feature that led to the employment of redundant service personnel in key posts, partly because it was assumed their logistical expertise would be useful. Nor was it the case that it was simply a matter of the 'transformation' that made centre/regional relationships difficult. The coal industry has a long history of regionalism; 'nationalisation' (as a process) had been resisted by both the employers and the miner's unions.<sup>28</sup>

From Robens' account (1972, 109-127) it is clear that organisational problems were still a feature of the industry. By 1960 the NCB operated with a five-tier, hierarchical structure.<sup>29</sup> Three tiers were directly concerned with investment policy: the National Board headed by the Chairman; the Divisional Board headed by the Divisional Chairman and the Areas, each headed by the Area General Manager.<sup>30</sup> The structure was dominated by the Area General Managers 'who were in charge of anything between ten and fifty pits'. It was they 'who in the final analysis controlled, and knew the potential of, the collieries.' The Area managers initiated investment plans that would then proceed through the system, first to the Division, where, for Robens, the legacy of employing high ranking officers to head the divisions remained. He suggests that:

[s]ome Divisional Chairmen had a grip on their Areas and exercised real control over capital expenditure policy and return on investment. But others contented themselves with a Post Office role, exercising judgement only to the extent that they occasionally decided not to press their Areas to get on with any aspect of the National Board's policies with which they disagreed. (Robens 1972, 110)

Some schemes would then be sent to the National Headquarters for further vetting. Here, again, Robens describes a confused structure. The schemes were vetted by the Finance Committee from which the Chairman, the Marketing member and the Scientific Member were excluded and which:

---

<sup>28</sup> For example, the owners reluctance to concede national wage negotiations following the 1926 strike, and the adoption of a federated structure rather than a National structure, by the NUM (see Supple 1987 and Arnot 1979).

<sup>29</sup> See Ashworth (1982, 266-274) for a more, if somewhat friendly, detailed account of the NCB structures and the changes in it during the 1960s.

<sup>30</sup> Called Directors after 1965.

spent its time as if it were playing a parlour game like 'spot the deliberate mistake'. When it triumphantly found one the matter was taken up with the Area (through the Division) and the General Purposes Committee was invited to approve the scheme. (Robens 1972, 115)

He likened the situation to that of 'a state within a state' and suggested:

[a]ll this performance succeeded in missing the fundamental question: in the light of the industries future objectives, should £X million be spent on this scheme rather than on another similar scheme, or, indeed, should any money be spent on that type of scheme at all? (Robens 1972,115)

Clearly, it is possible to hypothesise that the NCB structure with its strong Area organisations had some impact on the shape of the investment programme. It can be suggested that Area managers had a rational interest in attracting investments funds to their individual collieries irrespective of overall industry interests. Both status and careers in the coal industry depended on association with success and being at the leading edge of new developments. With the centre weak and dependent on the Areas for information it would appear plausible to suggest a Niskanen type investment maximisation. In other words, Area managers had an incentive to maximise their share of the investment budget, subject to the constraints of the national budget. The investment programme went beyond what was optimal as the Areas, collectively, bid up the national budget and/or investment was misdirected as the National Board attempted to satisfy the competing Area demands by sharing out what was available. However, we cannot leave the analysis there. As others have correctly pointed out, government intervention over the Board's pricing policy left the industry dependent on Treasury funds for investment finance. If the investment strategy was wrong, why did government fund it?

#### **4.5 The Government and Coal Investment**

Year-on-year investment policy involved the interaction of three institutions, the NCB, the Ministry of Fuel and Power and the Treasury. The relationship between them was summarised by the SCNI of 1958:

The National Coal Board's forward plans over a period of years are agreed with the Minister from time to time. Working within this overall plan, the Board pass on to the Minister of Power each year their proposals for investment for the next year (Q.558). These are examined by both the Ministry and the Treasury, and there follows a series of meetings between them and the Board at which a figure for the investment for the following year is agreed to; these discussions are not concerned with the individual schemes, but with the overall investment plan for the succeeding year (Q. 558-9). In general, the Departments have agreed to the Board's suggested figure for their main investments, but may have been able to cut down on the expenditure required for ancillary projects. (HC 187, 1958 - I, par. 22)

It is clear from the evidence given to the SCNIs that neither the Ministry nor the Treasury was involved in the supply-side of the industry. When asked about the extent to which the Ministry subjected the Board's plans to scrutiny Sir John Maud, Permanent Secretary, replied that they:

rely on the sort of cross examination that an intelligent layman could submit the Coal Board to rather than any attempt to duplicate the technical staff of the Board. (HC 187 1958 - I, Q.6)

Later in the questioning he described the relationship between the Board and the Ministry as one in which 'mutual confidence has developed' over the ten years since nationalisation (HC 187, 1958 - I; Q.50)

Similarly the Treasury had no means of checking the technicalities of the Board's proposed investment programme and relied on the NCB's expertise. Indeed the Treasury held the view that their interest in the Coal Board only arose from its position as financier to the industry and it would have had little involvement had the industry been able to use internal funds for the investment programme (HC 304 1957, Q.50). It might also be noted that the Treasury never met the Board on any important issue unless it was in the presence of the Accountant General of the Ministry Of Power (HC 304, 1957, Q. 86)

Both the Treasury and the Ministry, in conjunction with the NCB, were involved in the demand side of the industry. The SCNI of 1958 gives some indication of how the underlying assumptions about demand conditions were arrived at. According to a Deputy Secretary at the Ministry of Power (Mr J. R. Ayres) the long-term programmes and the annual programmes are:

built up after a constant interchange of views on an informal basis between the Ministry and the Board's officials; not, ..., on technical issues, but on the broader issues of the types of coal required, and the whole background of supply, demand and economics of the thing. Those are quite freely discussed between the Coal Board and ourselves and by the time the programme is presented it is broadly on an agreed basis. (HC 187, 1958 Q. 12)

Further detail was given by Sir John Maud, Permanent Secretary to the Ministry of Power, when he was asked who was responsible for making the estimates on which the investment plans were based. He replied that the crucial assumption was that of projected growth in the economy. Here he suggests that the Ministry would always hope to agree with the Treasury. The second key variable was the expected percentage increase in fuel use that would result from each percentage point growth in the economy. Again Maud expected that there would be agreement between the Ministry and Treasury but in the event of a dispute he suggested that the Ministry would provide the expertise. Having derived estimates for overall fuel demand the Ministry would then assess the likely production of coal and the size of the gap. When turning to the questions of how that total demand broke down into classifications and sizes of the coal the Ministry worked closely with the Coal Board: 'because obviously this is done with them.' He suggested that it was unlikely that there would be any major disagreement with them on these matters since the NCB would know the likely demand from major customers. If there were disagreements then it was the Ministry, with the Treasury to make the relevant assumptions (HC 187, 1958 - I, Q.33-34).

For the Treasury, Grant outlined a similar process when discussing the department's relationship with nationalised industries in general. Of the annual reviews he said the investment programmes:

which are confidential guesses of the industry concerned are put in by Ministries on behalf of the industries who prepare them, and it is quite usual for the Ministry and the industry to come and talk to us at the Treasury; there might be a meeting, and various parts of the Treasury concerned would come in. Those parts of the Treasury would, of course, be the Planning Staff and the Economic Section and parts of the Treasury like that who would look at it from the point of view of how far this fitted into the general economic picture and far it was in line with trends in the future.  
(HC 304, 1957, Q.9)

Both the Ministry and the Treasury are claiming to have a co-ordinating role. A role they were ideally situated to perform since the Ministry had direct contact with two major consumers, the gas and electricity industries and the Treasury contact with two more, rail and steel. That they failed and that Whitehall generally failed is, perhaps, a matter of record and these issues, along with the civil service reforms will be explored in chapter four. For the moment, some indication of the quality of the Ministry was given by Fergusson, the Permanent Secretary, in his first letter to Gaitskell when he

succeeded Shinwell as Minister of Fuel and power in 1947. After writing that he had been brought to the department against his wishes he went on:

When I arrived I found all the troubles that usually occur in a new Department. The old Mines Department (which was not a good Department) felt it was the Ministry. People drawn from other Departments were often those people whom those Departments could best spare or were people who had not wanted to be transferred. There was an enormous proportion of temporary staff; and there had been a great deal of favouritism. The result was widespread disgruntlement, friction and inefficiency. It takes years of work to remedy such a state of affairs and endless patience. (Cited in Williams 1983, 43)<sup>31</sup>

He concluded by asking for 'tolerance of certain present weaknesses'. It seems reasonable to speculate that the level of co-ordination from such a Department might not have been ideal. A key feature which despite reforms in Whitehall was to be replicated in future policy-making.

It is possible to characterise these relationships between the industry and government in terms of 'networks' as defined in chapter three. During the period of expansion between 1947 and 1957 the industry enjoyed a policy community type relationship; comparable to that described by Smith (1992) in the case of agriculture. Indeed many of the circumstances and the reasons for the consensus identified by Smith in the case of agriculture: crisis in the inter-war years; the desire for self sufficiency and security of supply; and balance of payments considerations, applied to the coal industry. The consensus, which included the Treasury, centred on the need to invest in the industry to increase coal output; an objective that was pursued throughout the period to 1957. There is no evidence to suggest that delays in planned expenditure resulted from a lack of funds. As we have seen the investment policy process was typified by low levels of horizontal integration between the coal industry and other energy producers; asymmetric information between the industry and government; and power dependencies with the industry reliant on government for finance and government reliant on the industry for expertise. In addition, the NCB's rational interests at both local and national levels were to continue the investment programme even after the down-turn in demand. The coal community can be characterised as an economic policy

---

<sup>31</sup> The Mines Department was superseded by the Ministry in 1942.



community dominated by the industry experts and may account for some of the continuity in the implementation of Plan for Coal.

However, it is also clear, that by the early 1960s the coal community was under a great deal of stress. By 1967 Robens was complaining of delays in the approval of individual investment projects, of delays in approving the overall investment plans and of the failure of officials at the Ministry and the Treasury to understand the coal industry (Robens 1972, HC 371, 1968, HC 381, 1967). The culmination of all this was the 1967 White Paper that all but ended investment in new capacity in the industry, without which it would spiral into decline. Unlike the agricultural community, the coal community appeared unable to withstand the first major challenge it faced. Much of the detail of the pressures and forces faced by the industry in the 1960s will be covered in chapter four. However, some exploration of the differences between the agriculture and coal industries might be useful here.

The different outcomes, continuity in the agricultural industry and change in the coal industry, indicate that the existence of an institutionalised network of relationships is not enough to explain policy outcomes. Faced with this feature one approach might be to focus on the economic and political environments and draw on Dowding's (1991) concept of 'luck'. Another approach would be to focus on the differences between the industries.

There were two major differences between the industries, economic structure and ownership. Of course, in the case of coal, the creation of nationalised monopoly producer meant that ownership and economic structure were interrelated. Coal, theoretically, had a unified structure that could be used by government to implement policies. The coal industry's units were not in direct competition with each other and the industry accepted, and practised, a degree of cross subsidisation. Agriculture, on the other hand, was owned by a multitude of competing farmers. These characteristics of ownership and economic structure may account for the different choice of instruments in the two industries, direct finance of investment in the coal industry, price support in agriculture. The unified structure of the coal industry made direct control of investment possible in a way that would have been impossible, or at least very costly, in agriculture. With direct control it was, perhaps, easier to make adjustments to policy. Somewhat paradoxically for the network approach, the case of

coal suggests that the closer the relationship between the industry and government the easier it becomes to effect changes.

The selection of instruments may be significant but it cannot fully explain why coal lost out where farmers did not. It should have been possible to reduce price support just as it proved possible to reduce the NCB's investment programme. Other factors such as the speed of change in the environment and the time horizon of the NCB's investment programmes were also crucial. Environmental changes in the energy sector were relatively rapid as well as significant; the emergence of nuclear power and natural gas could be equated to the discovery of a substitute for food. The completion of Plan for Coal 1950 represented a natural break which could be used to change direction.

Neither features applied to agriculture where the rise in alternative supplies was more gradual, allowing more time for adjustment, and specific programmes were absent.

Farmers were indeed 'luckier' than miners in the stability they enjoyed in the economic and political environments.

In terms of complexity theory, the energy 'system' witnessed a number of changes that altered the supply and demand conditions. Each change alone would have been insufficient to lead to the crisis of oversupply in the late 1950s and 1960s but the cumulative affect was to undermine the Plan for Coal. Nor should the changes be seen as exogenous. The inability of the industry to produce sufficient coal in the early 1950s led to the substitution of coal with oil, encourage greater energy efficiency and gave impetus to the nuclear programme - measures that then further impacted on coal's markets. In short all the key variables in the energy 'system' were working against the coal industry. In the agricultural 'system' on the other hand there were fewer pressures for change. Gareth Morgan (1986, 247-255) usefully uses the concept of positive and negative feedback loops to conceptualise changes in systems. He suggests change will occur when the loops are predominantly positive or negative. In terms of the market for coal almost all the variables in the energy system were exerting a negative pressure. In terms of agricultural policy there were fewer negative forces and sufficient positive forces to maintain the status quo.

This is not to imply that institutionalised procedures are unimportant in explaining outcomes. Without such procedures the NFU would have been no better placed than other interested parties such as consumer and environmental groups and could

presumably have been ignored had government wished to change direction. Networks can also resist change by promoting counter forces.

In the case of the coal industry it can also be argued that the procedural arrangements did influence investment outcomes. The process was ‘bottom up’ despite attempts to impose guiding principles from the centre. The fact that investment opportunities were identified at local level introduced elements of self interest into the process that the NCB was unwilling or unable to contain and only after the Plan had run its course was a significant shift in investment policy possible.

#### 4.6 Conclusion

In this chapter the historical background of the industry as it approached the closure programme of the 1960s has been explored. The main purpose in this chapter has been to introduce themes that will be developed in the next three chapters.

First, it has been argued that the rationale behind the industry’s nationalisation was its restructuring following the traumatic events of the inter-war years and its run down condition at the end of the second world war. A primary objective of the restructuring was the efficient production of coal, efficient in terms of production of the right quantities of coal at the right price and efficient in terms of a self -sustaining industry. A theme that was to inform investment policy throughout the life of the nationalised industry.

Second, the formulation of the industry’s first strategic plan, Plan for Coal, has been outlined as have the changes in the structure of the market that undermined the Plan’s basic assumptions. It has also been argued that Plan for Coal was, essentially, implemented as it had been conceived despite those market changes. This in turn led to an industry that had invested in the wrong pits to produce the wrong type of coal. Leaving it very much weakened to face the competition from new energy sources that were to emerge in the 1960s. In later chapters it will be seen that these features were not isolated to the 1950s and 1960s. Here the themes of policy formulation under conditions of risk and uncertainty, changing energy markets, inertia in the implementation of ‘Plans’, and aborted investment have been introduced. Again themes that play a significant part throughout the rest of this thesis.

A number of possible factors have been suggested which may account for the apparent lack of flexibility in the investment programme. It must be recognised that the nature of the industry results in an in-built tendency towards inertia as investment schemes take time to come into production. Also, it is difficult not to have some sympathy with the view that the market changes were unforeseeable until too late. However, it has been suggested that the structure of the NCB gave more power to those with a 'rational' interest in securing investment, particularly those at a local level. It would appear that the overall investment programme was implemented in a way which ensured each Area got its share rather than on commercial criteria. The Board at the centre appeared unable to control the Areas as it relied on local managers for information. Similarly, the government were dependent on the NCB for information and mining expertise introducing the theme of asymmetric information and leading to difficulties of 'control' over the industry that were to persist right up to privatisation. Coal policy networks whilst not conforming to the ideal type nevertheless have had a significant impact on outcomes.

The impact of these failures was an industry once again in crisis. It was a crisis that would have a significant impact on the future of the industry and a crisis which coloured the views of policy makers towards the industry for over a decade. The industry had failed to meet its primary objective of supplying the quantities of coal the country needed, first by under-supplying in the late 1940s and early 1950s and second by oversupplying in the late 1950s and into the 1960s. Whilst the industry could point to a number of features which explained these failures it could not escape criticism of its own performance. Nor could Government excuse its own role in the management of the industry and the 1960s was to witness a great deal of critical questioning concerning the nationalised industries generally, the coal industry specifically, and the relationships between the industries and government. As will be seen in the next chapter the perception of the coal industry's failure dominated that questioning and permeated the policy processes. By the early 1960s few outside the industry believed it had much of a long-term future in Britain's energy markets.

A key point to be made is that, as in later years, the difficulties that the industry experienced were not mono-casual. Rather the industry was buffeted by the dynamic

interaction of a number of contributing forces. Coal is but one variable in an energy 'system' which itself is a part of the wider economic and political 'system'.

In chapter five the difficulties of long-term strategic policy will be explored through the 1967 Fuel Policy White Paper and the emergence of Plan for Coal 1974. Two strategic policy statements within seven years which had completely opposite, long-term, objectives for the industry. Why they came to be adopted and, more importantly, how they came to be adopted will constitute the key questions. In both cases it will be argued that the policy-making processes, which were shaped by the political and economic environments, impacted on the policy outputs to produce long-term objectives for the industry that were neither rational nor consistent with the overall objective of an efficient coal industry. Chapter six continues the theme of strategic policy-making into the 1980s and 1990s. The key aim here, in the absence of a single definitive policy statement, is to attempt to establish what strategic policy was. The themes of policy-making against an uncertain background will be further developed as will problems of sectoral and sub-sectoral policy conflicts. In chapter seven policy inertia will be explored in relation to the implementation of Plan for Coal 1974. Rational interests, structures, and competence will be used to explain the latent stability of some elements of the new Plan despite the obvious traumas in the political and economic environments.

## 5. Strategic Policy to 1979

### 5.1 Introduction

The result of the failures noted in the last chapter was a coal industry which had invested to produce classifications of coal for which there was a low demand. Conversely it had failed to invest as much as it might in classifications of coal for which there was an expanding market, primarily coal for the ESI. These features, together with the obvious market difficulties, resulted in an industry in crisis by the early 1960s. By the mid-1960s it had become clear that the changes in the market were ongoing rather than, as had been hoped, a temporary set back. The discovery of North Sea gas brought a new player onto the energy markets, one that would further weaken coal's future.

In addition to the market changes there were changes in the policy-making environment. The most obvious was the election of a Labour Government in 1964. Labour had long historical ties with the mining unions and, as will be seen, maintained close links with the industry during its years in opposition. It might have been expected, therefore, that the new Government would attempt to resolve some of the problems without inflicting too much collateral damage either on the industry or its workforce.

Beneath the change in Government there was also a change in the policy-making processes. The angst that resulted from relative economic decline and the Suez debacle brought sweeping changes in the methodologies employed in Whitehall. In the ethos of the age, scientific policy-making became the objective and energy policy became an early example of a new approach to policy formulation. This culminated in the 1967 Fuel Policy White Paper which implied that the industry had entered a period which would eventually see its terminal decline.

Section two of this chapter will be devoted to the policy-making of the Labour Governments in the 1960s. Sub-section 2.1 will explore the changes in the policy-making environment and seek to determine why 'economic' or 'scientific' methodologies were adopted. Sub-section 2.2 briefly discusses Labour's early attempts at energy policy-making in 1965 whilst sub-section 2.3 deals in detail with the 1967

review of energy policy and the subsequent White Paper. Section three then utilises the policy network approach to account for the effective exclusion of the coal industry from the policy process and the consequent devaluation of coal's role in future energy supplies.

It is, of course, a matter of record that the 1967 White Paper made numerous errors. Those errors centred on the relative price differentials between coal and its two main rivals: oil and nuclear power. In both cases the NCB had made more accurate assessments of future trends and by the early 1970s their appeals to halt the run down of the industry appear to have been vindicated. By 1974 the atmosphere had become increasingly chaotic as economic, political and energy crises interrelated with each other. The outcome was the return of a Labour Government and its subsequent adoption of a new Plan for Coal in 1974, the main objective of which was to stabilise and possibly increase coal output, thus reversing the 1967 White Paper.

The formulation of Plan for Coal, 1974, used very different methodologies either to its namesake of 1950 or the 1967 Fuel Policy. It could be typified as the 'ideal case' of corporatism as the government the NCB and the unions sought to chart the future course of the industry. In terms of style, policy formulation was more akin to an old-style 'political' process rather than a 'scientific' process. Section four of this chapter will explore the political and economic forces which led to the adoption of Plan for Coal. In contrast to much of the analysis from the political left it will be argued the outcome, the heavy investment programme initiated under the Plan, was not an inevitability determined by rational expectations of future markets, but a product of the political forces unleashed by the crises of the early 1970s. Section five of the chapter will again employ the network approach to model these features.

This chapter will, therefore, explore strategic policy-making as it related to the coal industry before the election of the Conservatives in 1979. It has two main aims. First, it will demonstrate the obvious inconsistency of government objectives that undoubtedly had a debilitating effect on the industry. When new projects take up to ten years to bring on stream and then have working lives measured in decades no industry can remain unscathed if the overlaying framework in which it has to operate changes on a

shorter cycle. Second, it aims to demonstrate that both in the 1960s and the 1970s the policies were neither inevitable nor rational and that the policies were shaped by the processes in which they were formed. They were policy errors that can be explained by the policy processes. Why those processes were used is a key question that will be explored. However, equally important for this thesis will be the impact of policy and process failure on the subsequent events of the 1980s and 1990s, events which will be taken up in chapter six.

## **5.2 Fuel Policy-making in the 1960s**

In the latter half of the 1960s the Labour Government attempted to produce an integrated fuel policy - integrated in the sense that in one exercise they tried to assess the future prospects of four primary fuels, coal, gas, oil and nuclear power and one secondary energy source, electricity. More ambitiously they also attempted, in 1967, to take into account non-market factors in the selection between alternative policies. The techniques of welfare economics and cost-benefit analysis were to be applied to determine the socially efficient mix of fuel inputs for future energy requirements.<sup>32</sup> Because of the rapidly developing situation in the energy sector three policy statements were made; two in 1965 followed by the 1967 White Paper. It is a matter of record that the attempts to produce an integrated fuel policy failed, and that despite persistent lobbying, has not been repeated.<sup>33</sup> It is, therefore, pertinent to ask why such a policy became a Government objective, why it employed a particular methodology and why it failed to produce a sustainable integrated energy policy. The analysis begins by examining three interrelated changes in the political, administrative and technological environments in an effort to resolve these issues.

### **5.2.1 The Fuel Policy Environment**

Turning to the 'integrated policy' objective first, the Minister of Fuel and Power was under a statutory obligation to develop fuel policies (Ministry of Fuel and Power Act

---

<sup>30</sup> Socially efficient defined in terms as the least resource cost of supplying energy requirements.

<sup>33</sup> Particularly by those involved in, or sympathetic to, the coal industry on the assumption that such an exercise would benefit the industry. Something which may have been true provided maximising UK self sufficiency formed the guiding principle for energy policy.



1945). Up to 1964 there had been little co-ordination between the nationalised fuel industries and no attempt to develop a fuel policy. Such policy as did exist was piecemeal; initially, under conditions of fuel shortages, it centred on the promotion of fuel efficiency, increasing production and seeking alternative supplies. Later, once fuel became more abundant, policies shifted to the protection of the coal industry. This was achieved by a succession of measures beginning with the refusal to grant import licences, pressure on the CEGB to favour coal, and the imposition of an excise duty on fuel oil (see Ashworth 1986).

Failure to develop an integrated fuel policy in the earlier period can be attributed to a number of factors. Firstly, coal's initial dominance in the non-transport energy market and fuel shortages pre-determined policy. There appeared little option but to attempt to increase coal's output, encourage fuel efficiency and seek alternative supplies. Fuel policy was essentially coal policy. Secondly, successive crises meant governments were preoccupied with reacting to conditions of under- or over-supply in the energy sector. Thirdly, the Conservative Governments of the 1950s rejected the concept of 'planning', turning to it in the 1960s 'almost shamefacedly' as a possible palliative for Britain's relative economic decline (Pimlott 1992, 360).

The election of Labour in 1964 brought a government committed to, and enthusiastic about, planning (Pimlott 1992, 276-278; Cairncross 1995, 171). The move from a two-fuel economy, oil and coal, to a four-fuel economy with the addition of nuclear fuel and later natural gas, undermined the basis of previous policy. It was also clear by the early 1960s that changes in the structure of coal's market were permanent and that the eventual size of the industry would be much smaller than the optimistic plans of the 1950s had assumed. In short, we had a government committed to planning and a sector desperately in need of a policy, though it is important to recognise that the attempt to formulate an *integrated* policy was political. Arguably, it would have been possible to continue with piecemeal policy adjustments in each fuel industry.

The 1964 general election also saw the coming to office of a party with a 'special relationship' with the coal industry. Labour, by nationalising the industry had achieved, in name if not substance, the ambitions of many of NUM's activists and the aims of many within the industry (see Allen 1981; Arnot 1979; Horner 1960 for the NUM's attitude to nationalisation). However, those on both sides of the industry who believed

the election of a Labour Government would bring stability were to be disappointed. Two features are important here. Firstly, as chapter three argued, the primary motivation behind nationalisation was the restructuring of the industry. Secondly, Wilson had been directly involved in the debates that preceded nationalisation. Whilst working as a statistician in the Ministry of Fuel and Power, during the war, he undertook a study of the future of the coal industry culminating in the publication of A New Deal for Coal (1945). Besides showing a predilection for statistical and economic analysis the work also clearly illustrates Wilson's pragmatic, rather than ideological, views on the purpose of state ownership. In two enlightening passages he recognised the difficulty of estimating future demand for coal and clearly placed efficiency above the maintenance of uneconomic capacity:

No one can say, except on the most astrological methods, whether the problem of the industry will be *excess capacity and redundant labour* as before the war, or an *acute shortage of production and manpower* as in wartime and the immediate post-war period.' (Wilson 1945, 137, original emphasis)

An essential part of the programme would be the closure of redundant and uneconomic pits. In the short period, as long as a shortage of coal and shortage of man power were dominant, it would probably be necessary to keep all existing pits in being and perhaps to reopen some which have been closed. But over the longer period, as soon as production began to rise with the opening of new pits, and the increased yield from existing ones, it would be desirable to close many of the least productive, thus greatly increasing the average efficiency and lowering the average cost of the industry. (Wilson 1945, 225)

Wilson wrote at a time when coal completely dominated Britain's fuel sector. However, the implication of his argument is that competition between pits, to remain open, would be a feature of a nationalised industry. In a multi-fuel economy, it would be entirely consistent with the above sentiments to view fuels as operating in a competitive environment. The size of the coal industry would be determined by its ability to compete with alternative fuels, and pre-election commitments to a target figure of 200 million tons faded into the background.<sup>34</sup> Professionalism, defined in terms of economic theory and 'science', was placed above fraternal relationships.

---

<sup>34</sup> In opposition the Labour Party had pressed the Government to give a target figure of 200 million tons. The NUM files contain a letter from George Brown dated 20 May 1964 which says: 'We [the Labour Party] estimate that the industry's output must be maintained at least in the short run, at around the 200 million ton per year mark, with the prospect of extension should this become necessary'. Others (Allen 1981, Taylor G 1991, O'Donnell 1991) have elevated this to argue that 200 million tons was Labour's coal policy or at least a pledge to the union. This would appear a 'strong' interpretation of the events, nevertheless, it is clear that there was an expectation that the industry would settle around that figure.

The choice of methodology used in the 1967 Fuel Policy White Paper was also a reflection of Britain's relative decline. As Hennessy notes:

Suez 'supreme crisis of the 1950s', did more than prick the private conscience of permanent government: it stimulated a protracted period of national re-examination, which grew steadily in the late 1950s and peaked in the 'what's wrong with Britain?' years of the early 1960s. Inevitably, the Civil Service was an early target of this prolonged institutional autopsy. (Hennessy 1990, 170)

That 'autopsy' included a Fabian inquiry into the Civil Service during 1963-4 culminating in the publication of The Administrators. The pamphlet was critical of the then existing Civil Service staffed with Oxbridge Arts degrees and bereft of professional economists:

the Government is using, to assist it in the whole country's economic policy, about the same number of senior economists and statisticians as are employed by a big progressive firm. (The Administrators. Cited in Hennessy 1990, 177)

It was argued that the Civil Service was proficient at judicial and negotiating functions and bad at 'creative financial management and any activities with direct involvement in new technological developments' and it was 'thoroughly at sea in such matters as energy policy' (The Administrators. Cited in Hennessy 1990, 173).

The criticisms in the late 1950s and 1960s went beyond the personnel of the Civil Service to include the structures of government. The Fabians proposed 'greater openness' of policy-making to allow for outside discussion. As we shall see this is a theme that permeates much of the debate on energy policy-making from the mid-1960s onwards.

Criticisms of the Civil Service led to the setting up of the 'Fulton' enquiry in 1966. Hennessy (1990, 190) argues that Fulton was diverted from 'machinery of government' questions by its terms of reference and that an opportunity was missed. However, whilst structural reform had to wait, the period of criticism did lead to an influx of economists into Civil Service departments and a growing interest in what were seen as professional methods. As one Civil Servant wrote:

In the 1960s, having had not a day's training in my first ten years, I (with many others) attended courses on cost benefit analysis, investment appraisal, discounted cash flow, PPBS, M by O, PERT, the use of computers, operational research and related techniques. (Delafons 1982, 262)<sup>35</sup>

---

<sup>35</sup> PPBS; Planning Programming Budgeting System. M by O Management by Objectives. PERT; Program Evaluation and Review Technique.

The trends towards the 'professionalisation' of the civil service may have preceded the Labour Government but there can be little doubt that process gained impetus following the 1964 election. Three factors may be particularly relevant here. Firstly, Wilson was a trained economist and, as noted above, exhibited an inclination for statistical and economic analysis. Secondly, science, technology and scientific government were dominant themes of the 1960s. The aim of Wilson in the 1960s was to manage the system more scientifically than the opposition. 'National regeneration' would be achieved through 'planning based on science, statistics, professionalism and - always a key word - purpose'; purpose defined as technical skill. (Pimlott 1992 307). Once in office these ideas translated into the DEA and the National Plan; the number of economists employed in the civil service rose to over two hundred by 1969 (Cairncross 1995, 304).

To some extent the political and administrative changes noted above may have been driven by the third feature of the 1960s - technological change. Wilson's 'white hot, scientific, revolution' captured the spirit of decade. Technology, particularly *big* technology appeared to offer a way forward, out of Britain's relative decline. Nuclear power, Concord, the Advanced Passenger Train and other *grand* projects were at the cutting edge and illustrated, or so theories of indicative planning might have suggested, the possibilities to other industries. Such projects, by their very size and impact, required new forms of planning and appraisal.

The British coal industry was no exception to the emerging conviction in technological solutions. Robens, speaking to the Seventeenth British Electrical Power Convention in 1965 argued that he:

firmly believe[d] that the technological revolution which has now begun in the coal industry offers a real prospect of a breakthrough to a new low level of production costs which will have a profound effect on the relativity between coal and oil prices in this country. (Robens 1965,232)

Robens' optimism was based on mechanisation coupled with changing working patterns (HC 77, 1966, Q209). Mechanised faces working seven days a week would concentrate the industry and lead to cost reductions. He also suggested, at every opportunity, that even greater productivity increases would flow from the wider application of remotely operated longwall faces (ROLF). Though in 1965 he admitted

that such an industry was a 'little in the future' and 'only a thought in one's mind' (HC 77, 1966, Q208). In the event, the aim of ROLF, the man-less coalface, has proved elusive even thirty years later. Technology appears insufficiently robust for the mining environment and is unable to cope with the vagaries of geological conditions. ROLF's inception was, perhaps, a product of its time and the NCB's attempt to compete with more glamorous, nuclear, technology.

Whilst the ROLF project failed a central argument in this thesis is that other, less 'glamorous', technological developments were available from the 1960s which could have, and eventually did, lead to a competitive and financially independent coal industry.<sup>36</sup> One aim of the thesis is to explain why competitiveness took so long to achieve since it is arguable that delay in achieving this goal led to the closure of capacity that was, or could have been, competitive.

Against the background of political, administrative and technological change no less than three Fuel Policy statements were made, the National Plan 1965 (Cmnd 2764), Fuel Policy 1965 (Cmnd 2798) and Fuel Policy 1967 (Cmnd 3438). In many respects the statements simply codified the existing ad-hoc policies. Coal was viewed as being in an inevitable decline and in the event policy centred on the correct level of protection for the industry in order to 'manage' the decline. Despite intensive lobbying by the NCB and the NUM no final figure was ever given for the eventual size of the industry. That would be determined by coal's competitive position vis-à-vis alternative fuels (Cmnd 3438, 45).

Critically, the fuel policy statements confirmed that there would be no investment in new capacity or major reconstruction's beyond those which had already been started. Such investment that was expected to be undertaken in the industry was designed to maintain and 'reduce the cost of the hard core of production that will be needed in the years ahead' (Cmnd 2764, II-41). However, the implication of such an investment policy was that the industry was in a decline that would be difficult to halt. Firstly, because once the benefits from mechanisation had been achieved, costs would again begin to rise, leading to a worsening competitive position and an even greater reluctance to invest. Secondly, an industry in decline is likely to find the recruitment

---

<sup>36</sup>For a useful discussion on the impact of the failure of ROLF see Taylor, G. 1991.

and retention of labour difficult. Thirdly, in the context of a competitive and declining market, the industry's competitive position suggested the need to increase productivity to reduce costs and maximise its market share. Such productivity gains would, however, increase the pressure for closures in circumstances in which it was already proving politically difficult to carry out closures due to falling demand. These features depressed the industry's potential. Without a commitment to a final level of coal production, without investment in replacement capacity, experiencing difficulties in labour retention and recruitment and in a paradoxical position over productivity increases the industry was entering a period of sustained decline. In addition, as Ashworth (1986, 661) notes, the 1967 White Paper, by signalling to potential future customers that the coal industry would be 'continuously run down', further exacerbated an already difficult market situation.

The central question that arises from this discussion is why, if Robens was right and the coal industry was at the beginning of a technological revolution, was it consigned to, apparent, terminal decline? In seeking answers to this question the emphasis will be placed on the structures and methodologies of policy-making.

### **5.2.2 The Making of Fuel Policy.**

The National Plan and the 1965 Fuel Policy were produced in tandem, working on the same data and using identical underlying assumptions. Methodologically, they relied on the crude extrapolation of existing trends in output, consumption, employment and productivity.

Both the National Plan and the 1965 Fuel Policy assumed a target growth in economic activity of 25% between 1964 and 1970 (3.8% per year) and both assumed an energy coefficient of 0.55.<sup>37</sup> Initially the various industries own assessment of likely demand was sought, given these assumptions, via questions in the Industrial Inquiry.<sup>38</sup> When the estimates came back they 'appeared too high', in the sense that the sum of the individual industries expected demand exceeded total expected demand. After consultation between the industries and the Ministry and discussion within the Energy

---

<sup>37</sup> The rise in energy needs for a given increase in economic activity.

<sup>38</sup> Undertaken in the formulation of the National Plan (Cmnd 2764).

Advisory Council these estimates were adjusted downwards.<sup>39</sup> The total of the fuel industries estimates for 1970 added up to 337 million tons coal equivalent. The Ministry of Power conducted its own assessment producing a, lower, final demand of 324 million tons coal equivalent. The difference between the two estimates was thought to be within the bounds of forecasting errors (Cmnd 2764, 120; Cmnd 2798, 10). Coal's share of total demand was forecasted to be 175 million tons in 1970 (Cmnd 2764, 120; Cmnd 2798, 11).

In retrospect the policy statements of 1965 can be viewed as 'holding' statements. The extent of the reserves of natural gas in the North Sea were still unknown and the second nuclear programme of 5000 megawatts, which was initiated in 1964, was 'adopted for planning purposes'. This latter element was already under review by the time the Fuel Policy statements were made; a review prompted by the 'encouraging tenders for the second Dungeness station' (Cmnd 2764, 123). Greater knowledge of the quantities of gas available, perceptions of cheap nuclear energy and the failure of total energy requirements to rise by the amount anticipated in 1965 led to the 1967 White Paper. In this statement total demand expectations were reduced, to 310 million tons coal equivalent in 1970, and coal's share was estimated at 155 million tons (Cmnd 3438). The 1967 statement also anticipated further decline in the demand for coal after 1970. It assumed that the trends in energy consumption patterns would continue and projected a demand of 120 million tons of coal (including 2 million tons of exports) in 1975 (Cmnd 3438, 36). More importantly, the decline of the industry was expected to continue beyond the time period covered by the policy statement. Earlier discussions had suggested that demand in 1980 might be as low as 80 million tons (The Times 29/6/67; 17/7/67). This figure was omitted from the White Paper at Robens' request (Robens 1972, 217). The exclusion of the figure, for industrial relations purposes, did nothing to arrest the decline that was implicit in the detail of the White Paper. It signalled the beginning of what may have been the terminal decline of the industry had not the events of the early 1970s intervened. Further, the forces of decline unleashed by the White Paper were such that reversing them in the mid-1970s was to prove

---

<sup>39</sup> The Energy Advisory Council was set up, along with re-activation of the Nationalised Industries Fuel Industries Chairman's Committee, by the incoming Labour Government to assist in the co-ordination of fuel policy. Neither Committee appears to have played a key role in the determination of policy in 1967 (see NCB Memorandum to SCNI 1968, 132).

extremely difficult. Any understanding of the decline of the industry must, therefore, include a detailed account of the 1967 Fuel Policy White Paper.

### 5.2.3 The 1967 Fuel Policy White Paper.

Policy-making in 1965, perhaps, reflected an 'old style' of policy-making whereby controversies were settled by the actors working in committee. In 1967, on the other hand, a different approach was taken, one that attempted to resolve controversies by 'scientific' examination of the 'facts'. In terms of post-war energy policy, the 1967 White Paper was a unique event. For the first, and only, time an attempt was made to analyse the problems of the energy sector as a whole and in the context of the wider economy. The Government's aim was:

to see that our growing energy requirements are supplied in the way which yields the greatest benefit to the country. Policy for the fuel sector must therefore have regard to economic and social policy in other fields. In particular, the Government must ensure, through fuel policy, that national considerations which individual consumers do not take into account in choosing between competing fuels are given their due weight among the factors determining the pattern of fuel supply and demand. Such national considerations include security of supply, the efficient use of resources, the balance of payments and the economic, social and human consequences of changes in the supply pattern. (Cmnd 3438, 2)

Behind this statement of objectives lies the framework of welfare economic theory and the use of cost-benefit analysis (CBA) which underpinned the formation of policy options. Briefly, the methodology begins with the assumption that under conditions of perfect competition the distribution of resources throughout the economy will be optimal. It then recognises that such conditions do not exist and attempts to calculate the effects of the imperfections. The optimal policy solution is then for government intervention to offset the market failures. To put it another way, welfare economics and CBA appeared to offer the prospect of quantification of the 'national interest'.

Pareto 'optimality' and Pareto 'gains', the usual objectives of welfare economics, are not, of course, politically neutral. This aspect is beyond the scope of the present thesis (see Self 1975). The aim here is to establish the impact on the 1967 White Paper of the methodology used in the formulation of policy options. However, it has been noted that the choice of methodology was, just as the decision to attempt an integrated fuel policy was, a political one. It was a function of the prevailing status of science (coupled with the scientific status of Economics) and the underlying, political, purpose of the Wilson Government.



Appendix 1 of the White Paper describes that methodology and the results of the main statistical exercise carried out in the review of fuel policy. The review used 'new methods of statistical and economic analysis' and the 'primary objective of the exercise was to provide a basis for deciding the best fuel policy at this particular time' (Cmnd 3438, 56). The Ministry attempted to produce a set of policy options for the future based on the various policy decisions and technical possibilities then under consideration. The main variables being, politically, the level of fuel tax on oil and technically (but partly political), the rate of absorption of natural gas.<sup>40</sup> The 'best fuel policy' was defined as the cheapest available after other policy objectives had been taken into account (Cmnd 3438, 56). It is necessary to recognise that the review made important assumptions about the purpose of policy. According to PEP (Political and Economic Planning):

Any positive national fuel policy involves government in taking action to alter the pattern of fuel consumption in its country to some degree away from what would arise from the uninfluenced play of market forces. (PEP 1966, 11)

This would appear to offer a rationale for policy that was broadly accepted by Ministry and Government actors. The economists:

led by Michael Posner attempted to arrive at the pattern that might develop in a free market, if oil, nuclear power, natural gas and coal were all allowed to fight for a larger share of the same cake. (The Times 17/7/67)

Having established that pattern the aim was to determine what action was required to fulfil non-market policy objectives.

At the heart of this methodology lies the conventional economic assumption that market forces would provide an optimal distribution of resources *if*, (a necessary but not sufficient condition) market prices reflected the true resource costs.<sup>41</sup> The 1967 review recognised the diversion between market and social costs, so having established what unfettered market forces might do other factors were introduced including the

---

<sup>40</sup> Politically, controversy surrounded the correct depletion rate policy. The NCB and others argued that gas should be treated as a premium fuel and depletion should occur over a long period. Others, the Government and the producers favoured high depletion rates. Producers because they wanted to repay their investment, Government because indigenous energy would save on the balance of payments and 'cheap' energy would fuel economic growth.

<sup>41</sup> Resource costs are defined as the overall costs to society of producing or using a particular fuel. Thus the resource cost of the use of oil differs from its money (nominal market price) cost by the extent to which oil importation (as a substitute for coal) adversely affects the balance of trade and generates unemployment in mining areas. In economic language the attempt being made in the 1967 fuel policy review was to internalise the externalities.

social costs of unemployment, the impact on the balance of payments due to oil imports and the additional capital costs of nuclear power stations. Altogether the process involved the writing of over one hundred major papers which according to Richard Marsh, Minister of Fuel and Power, were:

technical papers dealing with forecasts of increases in productivity in the coal mining industry, papers on manpower implications, papers on regional development, papers on nuclear costing, papers on the balance of payments- papers on a whole range of things. (HC 381, 1967, Q1482)

Throughout the process it was taken as axiomatic that the coal industry would experience rapid decline if left to market forces. From this the focus of policy-making shifted to the level of protection that should be given to the industry and the purpose of the 'technical papers' was to establish the economically efficient level of that protection. The conclusion of the analysis was that the:

appropriate level of protection for the coal industry in the long-term was judged unlikely to be higher than is represented by an oil tax at the present rate. Not only was the present level of protection as high as seemed likely to be justified in the longer term for general balance of payments reasons, but the difficulties of re-employing the displaced miners should be surmountable in the longer term and the economy should gain substantially by their moving to more productive employment; the avoidable costs of coal production would be very much less than total accounting costs in the longer term; and the costs to the economy of a high level of protection were substantial. (Cmnd 3438, 62)

In short, even after allowance had been made for factors which were not reflected in the market prices, coal's decline appeared inevitable.

It is important to recognise that the review of policy carried out in 1967 was, in cost-benefit analysis terms, incomplete. Quantitative analysis appears to have been used to assess the share of each fuel in the total demand for energy given likely nominal market prices. Quantification was not used to account for the divergence between nominal and resource costs. As the White Paper put it 'the principle [of adjusting money prices was] an important aid in reaching the decisions outlined' but it was 'thought possible to arrive at interim conclusions for the purpose of the White Paper without going through the whole range of detailed calculations' (Cmnd 3438, 62). Why those calculations were thought unnecessary is not clear. It is possible that the state of knowledge of the Ministry economists, or the lack of sufficient economists, made such calculations difficult. How to quantify shadow prices, and build in uncertainty or risk were ongoing developments in economic analysis and it has already been noted that Whitehall had only just developed an interest in such theoretical underpinnings. In

addition, Peter Self notes the 'ascendancy' of economic ideas in government but then suggests that the application:

represented much more the vulgarised beliefs of economic administrators than theories of professional economists. (Self 1975 188)

This failure to quantify the social costs resulted in Robens' repeated calls for a 'total sum' approach to be used - calls presumably made in the belief that such an approach would demonstrate the viability of the coal industry. His contention throughout was that if the 'total sum' was calculated then it would show coal had a future. What upset Robens was the fact that the figures were either not being calculated or more critically, that those that were being used were inaccurate. Nuclear costs were being understated, coal costs overstated, and as will be seen, Robens blamed the fragmented structure of policy-making for these inaccuracies. However it seems possible to suggest that even if the figures had been calculated the results would have been little different. When the Ministry's chief economist in the 1967 review, Michael Posner, returned to academia and attempted a quantitative cost-benefit analysis he concluded that:

the major impact of the experience since the 1967 White Paper is to emphasise the robustness of the direction of the change originally predicted and the fragility of its precise timing. Coal sales in 1980 may well be half of what they were in 1970 - 75 million tons instead of 150 million tons - but we cannot be certain that they will not be somewhat more (say 100 million tons) or somewhat less (say 50 million tons) than that extrapolation. (Posner 1973, 312)

In other words the academic application of the 'vulgarised' methodology used in 1967 essentially gave the same answer. The key question is, of course, why? Three answers suggest themselves. First, the outcome was determined by the methodology no matter what level of sophistication is employed. However, it is difficult to identify anything within CBA that would automatically disadvantage the coal industry over and above the other fuel industries if it were applied consistently and upon the right assumptions. As we have seen, Robens believed a 'total sum' would vindicate the NCB's position. Second, the methodology was captured by interests opposed to the coal industry; or third, the assumptions upon which both studies were made were incorrect.

Subsequent events clearly demonstrated that the assumptions about a number of variables including the relative price of fuels, fuel availability and energy demand were wrong. At one level this could be explained in terms of the difficulties involved in predicting variables in a 'chaotic system', a difficulty facing all energy decision-makers.

However, this does not explain why the forecasting errors worked against the interests of the coal industry rather than its competitors. The key contention, to which this chapter now turns, is that the policy processes have had a direct impact on the fortunes of the coal industry. In this case it will be argued that the methodology was captured by the interests of other energy producers. However, from the outset it should be made clear that the analysis presented here does not rest on conspiracy theories: coal did not lose out because the Government 'favoured', or were 'bought' by, its competitors. Nor did it lose out to 'lobbying': in the absence of contradictory evidence there is little reason to reject the NCB's answer to the 1973 SCNI. When asked directly if, in the past, it had detected any political lobbying, the Board's simple response was 'no' (HC 65, 1973 Q477).

### **5.3 Policy Processes and the Review of Fuel Policy.**

At one level the 1967 White Paper would appear to be a 'classic' piece of rational, pluralistic policy-making. The discovery of North Sea gas rendered previous policy decisions obsolete, prompting government to instigate a wide ranging review. The civil service applied the latest economic and statistical methods to determine the cheapest means of satisfying future energy demands, taking into account various factors not accounted for in the 'market' price of the competing fuels. They then explored the implications of a number of policy options, raising or removing the tax on fuel-oil, banning the construction of new oil-fired power stations or increasing the absorption rate of natural gas (see Cmnd 3438, 57). Finally, policy was made in a political environment of keen competition which was mediated through the Minister of Power. From this it could be concluded, using Dowding's (1991) terminology, that miners were 'unlucky'. Quite simply coal could not compete, nor could it be made to compete, with alternative fuels. However, there are a number of problems associated with such a conclusion. Firstly, at any given time the policy options for the future are constrained by past policy decisions. As Posner notes:

the pattern of fuel use at any future date is largely a function of investment (in power stations, oil refineries, gas wells, the mining labour force) at earlier dates. (1973, 334)

In the 1950s shortages of coal for power stations had led to the building of oil-fired, dual-fired and nuclear generating capacity. This feature was recognised by the Ministry in 1967 and given the long gestation periods, typical in the energy sector, there would appear to have been little option but to work within the historical context. Nevertheless it should also be recalled that the investment programme had been consistent with Plan for Coal 1950, despite a changing market situation. Had the investment programme been more adaptable, and in the latter years focused on the central coalfields, then it is quite likely that more 'competitive' coal could have been mined. Energy policy can never begin with a clean sheet and failures of the past were to haunt the coal industry throughout the review, both in the sense of an industry with higher costs than might have been the case and the perceptions held by policy-makers.

Secondly, rational decision-making assumes a clear distinction between the formulation of policy options and policy-making. Economists and technicians, primarily in Whitehall but also from academia and 'interested' parties, draw up a range of alternatives and explore the implications of various policy decisions. Politics then balances the interests. This theory of rational decision-making was emphatically endorsed as a reflection of reality, of the 1967 review of fuel policy, by Richard Marsh when he gave evidence to the SCST. The question that elicited this response concerned *when* fuel policy had been made. Asked by Tam Dalyell if, at the Selsdon Conference held in May 1967, the chairmen of the nationalised fuel industries had been presented with a *fait accompli*. Marsh replied that he could not accept that that was the case; and after outlining the work that had been undertaken for the review (cited above, p132) he went on:

This was not policy. It was so we could have a conference about policy. What emerges after you have done that is the inevitable pattern of undistorted market forces in the fuel economy. Once you have established what that is, then and only then can you sit round a table and see how far you can distort the pattern and how far you want to do so. (Cmnd 3438, Q1482)

In short, it was taken for granted that the formulation of policy options was apolitical. This fails to acknowledge the impact that institutions and the relationships between institutions will have on outcomes even when the methodology is seen as scientific. Because no 'review of policy' can ever explore all the options and permutations of options the selection of which to investigate becomes a political matter, as do the assumptions upon which policy advice is based.

The key argument being made here is that the review of policy undertaken for the 1967 White Paper constrained the options available to politicians. They were presented with an analysis which showed that, even after allowance for non-market factors, only some 80 million tons of coal would be competitive with oil by 1980. It followed, given the objectives of a 'cheap' fuel policy and the efficient use of resources, that coal should be run down as quickly as was politically feasible. However, not only was the 1967 White Paper based on assumptions that proved to be inaccurate but, it and the review of policy upon which it was based, failed to recognise the possibilities of the coal industry. The central question then is: why?

Cost-benefit analysis, even if as in this case it is only partially completed, requires detailed information on the future cost functions of individual fuel industries, information that only they could supply. Throughout the review process the Ministry of Power became the central player in a process of information gathering. However, despite the existence of co-ordinating bodies such as the Energy Council and the Ministerial Co-ordinating Committee it was a process that became fragmented and compartmentalised.<sup>42</sup> The Ministry of Power had separate interaction with the coal, gas, and oil industries. More critically, and as will be seen, the future balance of nuclear/conventional power stations was determined in a closed policy community involving the nuclear and electricity industries. A community which brought forward and amplified the misconceptions surrounding the relative cost of nuclear power. Misconceptions that had emerged from earlier disputes, played out in the nuclear network, over the choice of which reactor should be used in the next nuclear programme. Indeed it can be argued that the nuclear network dominated sectoral policy-making and through that, coal policy. This analysis, therefore, begins with the nuclear network.

### 5.3.1 The Nuclear Network

Others have discussed the politics of the nuclear power industry (Greenway, Smith & Street 1992; Saward 1992; Sweet, 1984). Williams (1980) devotes a whole chapter to 'the quarrel with coal'. Here the aim is not to replicate this work but rather to attempt

---

<sup>42</sup> The Ministerial Co-ordinating Committee comprised of the Nationalised Industries Chairmen.

to provide a theoretical framework for understanding the politics of nuclear industry in the wider context of fuel policy.

The first nuclear power programme, 1955, began in an environment of continued uncertainty over the ability of coal to satisfy the projected growth in energy requirements. Nuclear power would be a supplement rather than a substitute for coal. The initial programme was increased in 1957 as a result of the Suez crisis and concern over the security of oil supplies. In what was to become a feature of the industry, early estimates of the costs involved proved over optimistic. By 1960 the CEGB were 'having doubts about the cost and size of the first programme' and as the fuel shortages of the 1950s gave way to fuel surpluses the programme was reduced (Greenway *et al.* 1992, 124 Williams 1980, 154). Despite these concerns:

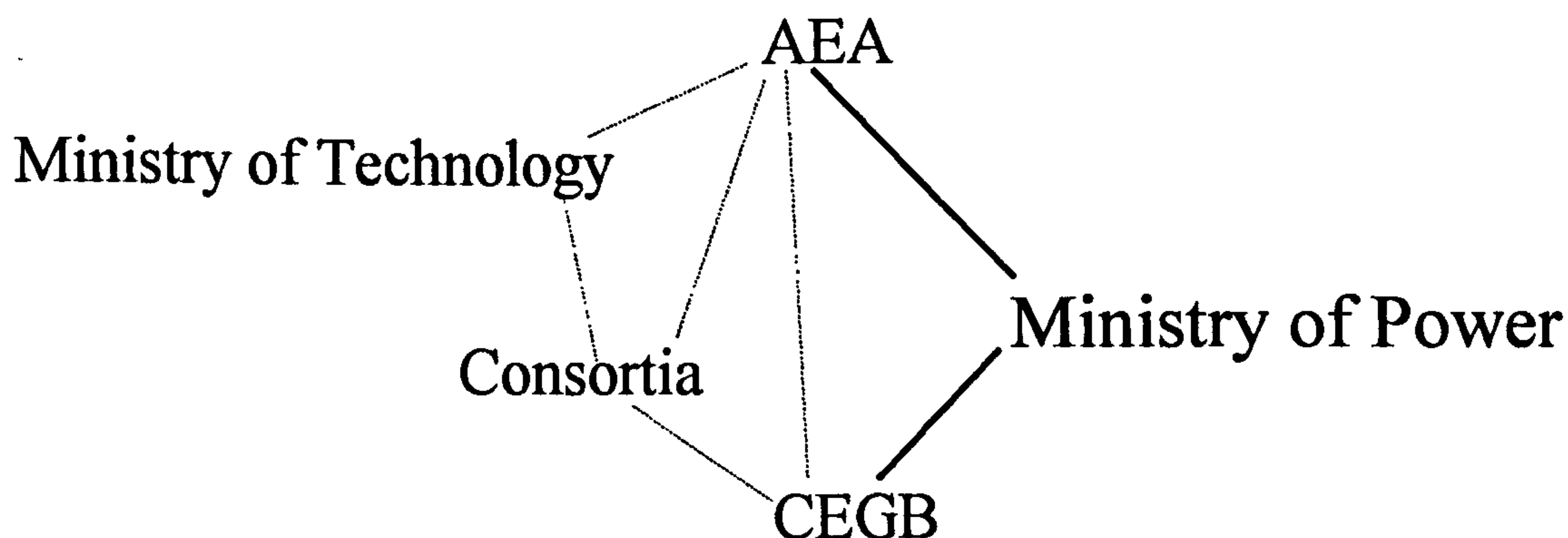
the electricity boards, the UKAEA, and the government, all persisted in their commitment to nuclear power, albeit with varying degrees of enthusiasm.  
(Greenway *et al.* 1992, 124)

During the early 1960s work began on preparing a second programme, which was announced in 1964. As Williams (1980; 153) notes, any lingering doubts about the economics of nuclear power and its desirability were swept away by the 'fact *and manner* of the CEGB's selection of the AGR in 1965' (my emphasis). Saward (1992) has placed the 'manner' of that selection in the context of a professional policy community. He suggests that policy-making in the nuclear sector, before the 1970s, was dominated by the AEA. But he also recognises that this community came under pressure in the early 1960s as the CEGB, unhappy with its Magnox stations and unsure about the AGR, looked towards the PWR. The fallout from this dispute was to have an impact on the 1967 policy review.

To simplify, competition between the American PWR technology favoured by the CEGB and the British AGR, supported by the AEA, led to increasingly optimistic claims being made about the economics of the rival systems. As the Sunday Times put it in 1979: 'both sides submitted "doctored" data. The AGR men were just better at fudging the figures' (16/12/1979, cited in Greenway *et al.* 1992, 126). 'Competition' between the two rival tenders had exerted an illusory downward pressure on prices before the building of any power stations commenced. As a result nearly all policy-making actors became convinced of the economic advantages of nuclear power generation over any conventional station. Figure 5.1 uses the evidence from the SCST

(1967) to map the nuclear network and Figure 5.2 puts this network into the wider, fuel policy, context.

Figure 5-1 The Nuclear Network



In Figure 5.1 the dotted links illustrate the 'choice of reactor' network. In the 1950s the network had been dominated by the AEA. As has been suggested, this dominance was challenged in the 1960s when the CEGB adopted a more commercial approach to nuclear generating costs. However, the selection of the AGR over the PWR implies that the AEA maintained a considerable influence over policy (Saward 1992). This was, perhaps, due to the status of the AEA which was close to that of a government department. Tony Benn likened the relationship between the Ministry of Technology and the AEA to that of the Treasury and the Bank of England (HC 381, 1967, Q972). The AEA clearly had the advantage of expertise in all matters dealing with nuclear technology and their advice was accepted by the Ministry of Technology. The Ministry itself was primarily interested in the technical aspects of nuclear reactors, commercial application being a function of the Ministry of Power and the CEGB (HC 381, 1967, Q992).

The Ministry of Power, on the other hand, appears to have had little input into debates over reactor choice. Nor did they have the expertise, or the desire, to check the advice coming out of the AEA. Instead they relied on competitive forces. As Richard Marsh put it:

the policies of the AEA, and their advice, get a powerful check from the CEGB. I have never quite understood why it should be assumed in some quarters that the CEGB and the AEA have a common interest. The CEGB have a very strong bias towards the cheapest possible form of power. (HC 381, 1967, Q1468)



It has already been argued that the 'competition' had led to illusory cost reductions. It might also be argued that the CEGB had a strong bias towards nuclear, and against conventional, forms of generation. An article in Nuclear Engineering in June 1966 suggested that CEGB managers were 'nearly all bright boys with a nuclear background and training, very close to the Authority [AEA] in their thinking' (cited in Williams 1980, 153).

### 5.3.2 The Fuel Policy Network

Whilst the Ministry of Power may have had little input into reactor choice it was, however, centrally involved in how much nuclear power would be generated. As Figure 4.2 illustrates, contact with the nuclear industry took place through the CEGB and the AEA. During the preparation of the White Paper there were two arenas, the Energy Advisory Council and, more importantly, a working party set up to explore nuclear costs. This working party consisted of the Ministry, the Electricity Council, the AEA and the CEGB. With at least three of the members pre-committed, and influenced by previous events surrounding the choice of reactor, it is not surprising that the working party concluded that nuclear generating costs would fall substantially below those of conventional stations. This was based on the projected costs of Dungeness B and the assumption that only marginal cost reductions could be achieved in conventional power stations (HC 381, 1967, appendix 43).

Not everybody, particularly the NCB, agreed with the conclusions of the working party and events since the 1960s have suggested that the costs of nuclear power were greatly understated.<sup>43</sup> In addition, issues of safety, waste disposal and de-commissioning have raised further doubts about both the relevant costs and the desirability of nuclear power. The NCB, led by Robens with the assistance of Shumacher and Grainger (respectively the NCB's Economic and scientific advisors), raised these issues during the 1960s.<sup>44</sup> The debate raged from 1965 through to 1970 in Select Committees, in the press, through the industries Reports & Accounts and in various ad-hoc arenas (see Williams 1980, 153-177). Robens' main complaints were

---

<sup>43</sup> See Sweet 1982. Perhaps the most conclusive evidence of the understating of nuclear power costs was the forced withdrawal of the nuclear stations from the ESI privatisation, see Parkinson 1992.

<sup>44</sup> With the notable exception of de-commissioning costs.

that the nuclear costs were shrouded in secrecy and understated, that the future price of coal was being overstated, that policy was uncoordinated and that the social costs of pit closures were not being considered (see Robens 1972, chapter 9; Memorandum by the NCB to HC 381, 1967). He laid the blame for these inadequacies on the policy-making process, and the structure of the fuel industries. To the SCST 1967 he argued that the present structures represented 'state capitalism' whereby:

each industry is put into a watertight compartment, given a financial objective and told to get on with it without regard to what is going to be the impact of what it is doing on other industries. (HC 381, 1967, Q1358)

He went on to argue that instead the Ministry of Power should act as a holding company, treating the nationalised fuel industries as one entity in which only the total 'bottom line' mattered. What was needed to achieve this was an 'energy board' which could offer a 'consistency of approach' by people who 'were engaged in this work professionally' over a period of years. He then asserted that:

at the moment at the Ministry the Civil Service is not equipped to do it in this way. They are never there long enough really to do more than get [on] top of everything,.... They have watertight compartments: an Oil Division, a Gas Division, a Coal Division, an Electricity Division, all fighting for the aims of their nationalised industries. I cannot believe that this is the right concept and an independent energy board which is designed to give objective advice to the Minister, to me, would make a better and sounder approach to a real energy policy based on true costs and with a total sum approach for which the Ministry is not equipped. (HC 381, 1967, Q1359)

His arguments appear to suggest that the making of fuel policy in 1967 correlates with the conceptions of policy communities, as discussed in chapter three. To use the Marsh and Rhodes (1992) characteristics, the level of nuclear capacity that should be built was determined by a small group of actors with economic interests. They experienced frequent, high quality interaction, shared a belief in cheap energy and the relationship was centred on an exchange of resources. There is also evidence to suggest the community was closed even to well organised and well-resourced opponents.

Robens had not been invited to take part in the working party. Indeed he had been unaware of its existence until faced with its conclusions at the Selsdon conference of nationalised fuel industry chairmen in May 1967. Then Robens felt he had been presented with a *fait accompli*, not having even been consulted on the document (HC 381, 1967, Qs1304-1305). His response was to 'kick up merry hell' until he and Grainger were allowed to join the group (Robens 1972, 215). Besides the exclusion

what angered Robens was that the working party had made, unchallenged, assumptions about future conventional generating costs, based on constant coal prices. He maintained that real coal costs would fall in the future as a result of mechanisation and reconstruction. In any case he suggested that the margin between the nuclear and conventional costs was small enough to come within the forecasting errors (HC 381, 1967, 491). In short the case for nuclear power was not proven. The NCB's inclusion in the working party made little difference to the outcome; their views were merely appended as a dissenting note to the final paper. (This paper is published as appendix 44 of HC 381, 1967). The NCB was viewed by the Minister and the Civil Servants as an interested party simply and rigorously defending its corner. Why other energy actors were assumed to be disinterested is far from clear. Charges of exclusion were strenuously denied by Richard Marsh. To him it was natural that the NCB would not be involved in the technical aspects of another industry. He suggested that:

[w]hen I am seeking advice on the purely technical aspect of nuclear power, to me it would seem logical to go to the CEGB and the AEA in order to produce a report. When we had produced that report it was presented to the NCB because obviously it has an impact on them. (HC 381, 1967, Q1479)

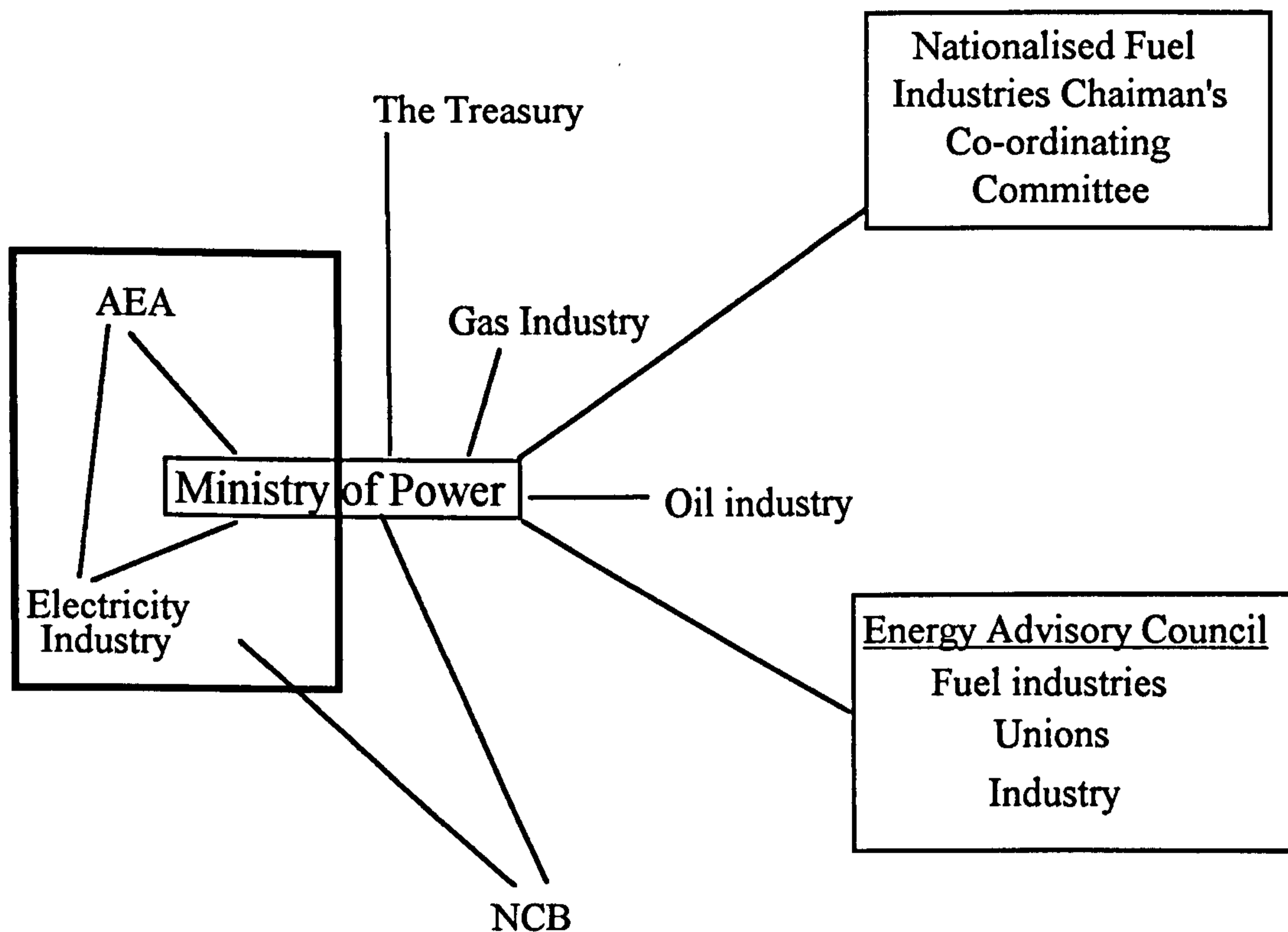
The Minister is again drawing a clear distinction between the technical, including relative prices, and policy aspects of policy-making; a distinction that this thesis argues is extremely difficult to draw. The working party made, and amplified, assumptions about future coal costs and depressed the true costs of nuclear power. All these assumptions could be challenged and the exclusion of the one actor that was making those challenges did have profound political consequences. Had Robens and the NCB been listened to in the 1960s then subsequent events may have been different. It is important to recognise that the exclusion of the NCB from the working party does not appear to have been 'conspiratorial'. Rather, it was a product of the methodology employed in the review of fuel policy. As Smith (1993, 73) notes, unconscious exclusion from a policy community can occur 'where power is exercised through the structures of policy-making'; here it is being suggested that in this case the structures were determined by the methodology. The derivation of future cost functions for each of the fuel industries clearly involved discussions between those industries and the Ministry of Power. As Marsh pointed out to the select committee, discussions were held between the Ministry and the other fuel industries. What is being argued here is that the working party was dominated by actors with preconceptions of the economic

efficiency of nuclear power. It also went beyond nuclear costs and made assumptions about and comparisons with conventional costs: comparisons that achieved the status of facts and influenced the final policy. An important part of the 1967 Fuel Policy was determined in a closed community of institutions with rational interests to maximise their own contribution to total energy needs. All, including the Ministry of Power, shared a belief in the inability of the coal industry to contribute significantly to that need. Coal was seen as an ailing industry. The AEA was keen to win a high market share for nuclear power; the electricity industry complained of having to artificially prop up the coal industry; the Ministry's aim was cheap power and it was unable or even unwilling to challenge the figures that the others produced. The methodology of the review gave the output the status of 'scientific' fact, untainted by 'politics'.

Although the quarrel between the coal industry and the nuclear industry dominated the discussions, other battles over oil and gas also erupted. The NCB argued, correctly, that stability of oil prices could not be assumed, that gas reserves were unknown and that gas should be treated as a premium fuel. Again the NCB were dismissed as self-interested, but more importantly, the discussions appear to have been 'ring fenced', with meetings and papers between the Minister and the separate industries, and nothing by the way of external scrutiny. For the coal industry itself the primary focus of the review was on the correct rate of decline, a function of the quantity of coal needed before nuclear power and natural gas became available and of what was politically feasible. The NCB were unable to convince anyone that the industry could develop in such a way that would significantly reduce overall costs. Figure 5.2 attempts to capture the main relationships of the review. Four actors are placed at the centre of the review process, the AEA, the Electricity industry (represented by the CEGB and the Electricity Council), and the Ministry. These are the actors which initially participated in the working party on nuclear/conventional power costs and, as has been argued, operated in a closed community, illustrated by the thick boundary in Figure 5.2. It is this community which did much to amplify and project the perceptions of a declining coal industry. The four agencies are linked to the Ministry but only the AEA and the CEGB are directly connected to each other. These latter two, as was seen in Figure 5.1, were part of the nuclear network and brought with them the preconceptions about

the relative nuclear/conventional power costs. Two other fuel industries, gas and oil, were key actors in the review process and they appear to have been influential. They were not however included in the working party community. This is illustrated by the short links between them and the Ministry, lying outside the boundaries. Coal is also shown outside the centre (inclusion in the working party on nuclear costs at a late stage has been discounted) and connected to the Ministry. However it has been argued that throughout the process the assumption made was that coal could not compete with alternative fuels and that policy centred on the correct rate of decline. The industry is therefore shown as being distanced from the policy review, illustrated by long links. Coal also had direct contact with the CEGB, both in terms of trading and of research and development. From the published material is difficult to ascertain the influence of the Nationalised Fuel Industries Chairman's Co-ordinating Committee and the Energy Advisory Council. It has been argued that the review of policy pre-empted the political response; that is the Nationalised Fuel Industries Chairman's Co-ordinating Committee meeting at Selsdon in May 1967 had been presented with a *fait accompli*. Here it is assumed that the lack of significant references by key actors indicates a peripheral role. They are therefore illustrated well away from the main policy-making actors.

Figure 5-2 The Fuel Policy Review



An interesting omission from the discussion so far is the Treasury, which, as has been seen, played a key role according to Taylor's (1991) analysis. It is of course true that decisions made on future investment programmes in the nationalised fuel industries would require Treasury approval. But, in terms of direct influence or involvement, the Treasury was not an important actor in the policy review. The statutory position that such programmes are agreed between the industries and the Ministry appears to have held. This is not to argue that indirectly the Treasury had no influence. It played a key role in setting the economic and financial objectives of the industries: objectives that were critical in investment appraisal (see chapter six). It might also be suggested that it exerted influence through the assumptions that others, probably correctly, made about its attitude. Robens recalls a conversation with Callaghan in which he attempted to persuade the Chancellor of the desirability of maintaining a 'healthy indigenous fuel policy'. Callaghan evidently replied that he had been unable to find one 'official in the whole of the Treasury who would accept your arguments' (Robens 1972, 172). The problem of locating the Treasury in its correct place within the policy-making process is, perhaps, one of timing and focus. In the late 1950s and early 1960s the relationship between the industry and the Treasury underwent a radical change. From the detached relationship of the early 1950s, noted

in chapter three, the Treasury became more involved in the detail of investment policy. This situation appears to have continued in the latter half of the 1960s as both the Ministry and the Treasury increased the level of scrutiny. However, the key argument here is that when the focus of policy-making shifted, from ad-hoc adjustments to the investment programme and crisis management of the coal industry, to an attempt at an integrated fuel policy, the Treasury's role diminished. In Figure 5.2 the Treasury is therefore shown outside the main community.

Further insights might be gained by employing the framework set in Table 3.4 on page 71. It has been seen that a highly cohesive community developed around the working party on nuclear costs. By contrast the coal community exhibited a low level of cohesion. The Board believed that the industry had some future but no one in the Government, the Ministry or the Treasury shared that view. The interaction between them was conflictual rather than consensual. The industry could be located in box d of Table 3.4. In terms of a sectoral community, the cohesion was again low as the supply industries competed for a large share of the energy cake. The compartmentalised structures merely emphasised the lack of cohesion. The sector, at a micro level of analysis, was dominated by a cohesive network focused on the nuclear sub-sector as suggested by boxes b and c of Table 3.4.

In this section it has been argued that the methodology used in the review of fuel policy was a function of the technological ethos of the decade, the planning objectives of the Labour Government and the status of economic theory. Once determined, that methodology shaped the review. The view taken at the time was that the Ministry could, through technical papers, discover the facts surrounding the competing claims of the individual industries. It could then mediate those competing claims, adjust for what was politically feasible and formulate a rational policy.

Here it has been shown that preconceptions, about nuclear and coal costs, together with compartmentalisation, led to the review process being weighted against the coal industry. The policy process failed to subject the competing industries to 'independent' scrutiny; it perpetuated and amplified the preconceptions. In addition the White Paper was based on assumptions about oil price stability, and availability, which in the event were shown to be inaccurate. Critically, the errors appear to have been institutionalised; the 'view' of all but the Board was that coal's day had passed and the

future would be oil, nuclear and gas. 'Scientific government' had proved incapable of breaking through the institutional networks and the consequence for the coal industry was an accelerated closure programme and a lack of investment. Both consequences were to have a significant impact on future events. First, questions soon emerged over the closure programme as the energy markets turned from oversupply to shortages. By 1970 the demand for coal was outstripping the supply and Robens was able to argue:

There is little doubt that if we had produced 200 m.tons of coal last year - my original 1960 target and the target of the Labour Party in opposition - it would all have been sold. Inland consumption would have been greater because, for a start, it would not have been necessary to convert power stations to burn imported oil at the very time when its price was soaring. If coal had been available, many industrialists would now, under the impact of fuel oil's increasing expense, be converting back to British coal. The steel industry would not have been forced to scour the world for scarce coking coal, paying famine prices far above ours. And, on top of all that, we would have been doing a very big export trade with the Continent, which has also shut too many pits and is hungry for coal, importing 25 m. tons a year. (Robens 1972, 224)

Second, the lack of investment throughout the 1960s was to have a significant impact on the industry's ability to reverse the decline in the 1970s.

It is, of course, a debatable question whether or not the application of different methodologies would have resulted in different outcomes for the coal industry. Coal, after all, was already in decline before Labour's fuel policy statements and had lost out in both 'old' and 'new' policy processes. Throughout the process Robens called for an 'independent' energy commission to advise government and for a 'total sum' approach to be taken. Such calls have been echoed throughout the rest of the history of the nationalised industry.

The main, normative, conclusion from this review of Labour's Fuel Policy statements is that a 'total sum' approach should be taken in the context of more 'open' policy-making processes. As Cairncross (1995, 332) cautions 'statistics are not, in principle, any more accurate and reliable than other "facts" about the past'. A truism that is even more applicable when 'facts and figures' are being projected into the future. In other words, policy-making remains as much an art as a science, albeit an art which can be assisted by science. However, 'facts and figures' can always be challenged and the failure to recognise this in 1967 resulted in a sub-optimal policy. This is not to argue that an 'open' policy process would have resulted in all pits being kept open or even that an output target of 200 million tons would have been set. This thesis does not



argue against pit closures. What is contended is that a different policy process might have recognised that parts of the coal industry did have potential and should have been invested in throughout the period of decline. As Ashworth argues:

[p]robably somewhere between a third and a half of coal output was fully competitive on costs with oil, and more could have been made so with suitable investment. What was needed in the mid-sixties was a continuous but more gradual closure of high cost collieries, so that the contraction of the labour force and other resources could be kept under control; investment in some replacement capacity on the most cost reducing lines (it would have been sensible to pursue the discoveries in the Selby coalfield straight away instead of waiting for a decade); and some assurance of a somewhat larger and continuing market. (Ashworth 1986, 662)

The problem in 1967 was that policy processes set up to review the future of the fuel industries could not discover this solution. It began with the assumption that coal was dead and then institutionalised that assumption.

1967 was a defining moment in the fortune of the coal industry. The failure to recognise the potential of the industry and make selective investments led to a collapsing morale, a suppression of technological development, and difficulties in labour recruitment and retention. The net result was an industry unable to respond to the changing energy situation that began to develop almost as soon as the ink was dry on the White Paper.

This chapter now turns to the energy and political crises of 1974 and the reversal of government's long-term strategy for the coal industry.

#### **5.4 Plan for Coal 1974: Reversing the 1967 White Paper.**

Plan for Coal 1974 emerged as the new Labour Government's response to the international energy crisis. The aim was to first stabilise production, and then, perhaps, expand it. New investment would be committed to the industry and, in recognition of the difficulties, the financial obligations applied sympathetically (see chapter six for a discussion on the Board's financial and economic obligations). Short run fluctuations in the market would not be allowed to deflect the industry from its new trajectory. However, as Ashworth (1986, 330) notes, whilst the industry could 'hardly fail to benefit from the new circumstances' there was no reason 'for expecting the benefit to accrue quickly, or to be very large, or necessarily to remain certain for an indefinite

period ahead'. The circumstances of the early 1970s offered an opportunity to reassess the coal industry and to correct the mistakes of the 1960s. As has been argued, new investment in an extractive industry is essential and the failure to invest in the 1960s had had a debilitating effect. However, the oil price shocks did not imply rapid or large-scale expansion of the industry.<sup>45</sup> That would only have been true if the future markets were there, which would be a function of relative fuel prices, economic growth, economic structure, conservation and the policies of major coal customers.

There are a number reasons why Plan for Coal was not an inevitability. Firstly, the industry in the early 1970s offered a poor base from which to launch a revival. Starved of investment in new capacity and with low morale, the productivity gains, which had been a feature since nationalisation, slowed. A reversal of this trend would require new investment which would not come on stream for a number of years. Secondly, there could be no guarantee that the price advantage over oil would be maintained. The settlements of the miners' strikes of 1972 and 1974 had significantly increased the NCB's costs, reducing coal's price advantage. Economic theory and empirical reality suggest that energy prices will converge on the price of the marginal supply, which in Britain's case in the 1970s was oil. Thirdly, Britain was well placed in terms of alternative, indigenous, energy sources. By the 1970s the conversion to natural gas had been completed, North Sea oil would soon be flowing ashore and nuclear power was yet to reach its nadir.<sup>46</sup> In addition increased energy prices would eventually lead to the development of other energy sources: demand for OPEC oil may have been inelastic in the short run but as the oil sheikhs themselves recognised, alternatives would eventually emerge to replace a finite resource. Fourthly, in a repetition of past errors, Plan for Coal assumed unrealistic growth rates in economic activity and energy consumption. The extrapolation of past trends ignored the enormity of the shock to the economy and the energy markets delivered by OPEC. 'Business as usual' appears to have been the reaction to the crisis: the economy would grow and the relationship between economic growth and energy consumption would hold. The possibilities of

---

<sup>45</sup>The stated aim was stabilisation and 'if possible', the expansion of deep-mined production. The constraints were thought to be physical rather than market determined. The view taken in 1974 was that the industry would be hard pressed to meet all future needs.

<sup>46</sup> Nuclear power may be regarded as partly indigenous because the imported fuel constitutes a very small fraction of the overall cost.

reduced economic activity and energy conservation had yet to be appreciated, and the shift away from energy intensive industries was not yet foreseen.

In the event, the emergence of alternative energy supplies, the failure of the coal industry to increase output in the immediate aftermath of the crisis, the eventual loss of coal's competitive advantage together with conservation and the economic slow down falsified the basic assumptions of Plan for Coal. These features were foreseeable, and were foreseen by some commentators, in 1974 (Robinson 1974, The Economist 3/8/74). Ironically, just as the failure to invest in *new capacity* during the 1960s had a significant impact on the future of the industry, the decision to invest *for increased capacity* in the 1970s was to have equally disastrous consequences. The contradictions inherent in Plan for Coal, coupled with its implementation, led to abortive investment and oversupply in the late 1970s and 1980s. The central question that now needs to be addressed is why Plan for Coal emerged from the political and energy crises of the early 1970s. Again this thesis will focus on the policy process, beginning with the changes in the policy-making environment.

#### **5.4.1 The Policy Environment.**

The most obvious political change in 1974 was the election of a Labour Government following the energy crisis and second national strike by the NUM. The circumstances surrounding these events have been well documented and there is little need to rehearse them here (see Ashworth 1986; Allen 1982; Bercovitch 1977). However, two points should be noted. Firstly, as the 1960s graphically illustrated, the election of a Labour government was not, of itself, sufficient to guarantee preferential treatment of the coal industry. Secondly, the Labour Government which took office in 1974 was substantially different from Wilson's first Government a decade earlier. As has been seen, the 1964 Administration came to power enthused by ideas of planning and scientific government. The belief that planning was inherently superior to the market 'free for all' provided a structure within which to govern. It was, according to Pimlott, a structure that was:

too clear, too intellectual, and too unrealistically theoretical, imposing a straight jacket from which ministers, including the essentially non-theoretical Mr Wilson, took years to extricate themselves. (Pimlott 1992, 565)

The failure of planning, particularly the failure to 'plan' the exchange rate, led to pragmatism and caution. There would be no attempt in Labour Governments of the 1970s to repeat the 1967 White Paper. Planning, to revitalise British industry, remained a Labour Government objective but 'now took on the form of urging planning agreements with leading firms' though success was restricted to the car and coal industries (Cairncross 1995, 201). More generally, the Labour Government of 1974 came into office knowing that the trade unions could not be taken for granted. The schisms surrounding *In Place of Strife* had been thinly papered over and a more inclusive role for the unions was envisaged under the *Social Contract*.

There had also been significant changes in Whitehall since 1967. Post Fulton there was a move towards concentration with fewer and larger Departments. The Ministry of Fuel was merged with the Ministry of Technology (MinTech) in 1969 which, under Heath's 1970 re-organisation, became part of the Department of Trade and Industry (DTI). The primary aim of these changes was to increase co-ordination and to centralise expertise (Delafons 1982, 266). However, the energy crises of 1974 saw the re-emergence of a dedicated energy department, the Department of Energy (DEn).

Opinion on the relative merits of a small department versus the mega department differ. Hennessy (1990, 448) argues that the importance of energy in modern economies, and the specific nature of energy planning is such that a separate department is desirable. Ashworth (1986) also suggests that the coal industry's influence lessened during the years when energy was subsumed into the larger departments. Peter Walker, Secretary of State for Trade and Industry during the energy crises, on the other hand, was opposed to splitting off energy. Denying any charges of 'empire building' he argues that 'small departments had small clout' He saw the move as pure 'gimmickry' and suggests that Heath was 'bowing to unthinking pressure from the media' (Walker 1991, 114).

Resolving the issue of the long-term merits of small verses mega departments is difficult because, as Hogwood (1992, 171) points out, the changes of the early 1970s were never given a chance to demonstrate the claimed advantages since even more changes were introduced. However, three points can be made.

Politically, the Energy Department has been something of a backwater, used as a repository for troublesome priests (Benn, and ironically, Walker), or those in need of rehabilitation (Parkinson). As a Department for 'rising stars' only Lawson stands out. None of them, because of political circumstances or in-experience, would have been given the larger DTI. On the other hand, the Department has on occasions achieved a high profile, especially during the energy crises and miners' strikes. In addition, it has been at the forefront of the Conservative Government's privatisation programme. As Hennessy (1990, 447) notes the DEN was probably the department which both public and Parliament most take for granted, until, that is, crisis hits.

Secondly, from an administrative perspective, Blackstone and Plowden (1988, 76) suggest that the substance of the issue may have been more important than the architecture of Whitehall. After 1967 energy had become a peripheral subject and 'high-flying DTI officials tended to prefer, and to be preferred for, posts elsewhere in the Department'. Following the splitting off of energy, Blackstone and Plowden (1988, 77) go on to argue that the DEN remained relatively weak because, although some civil servants had had previous experience in the energy division, many had been drawn from other parts of the DTI, the Treasury and the Foreign and Commonwealth Office. Further they suggest that the quality of civil servants was 'distinctly uneven' as other Departments had seconded people who they 'felt they could spare'.

Thirdly, it is arguable that, in the short-term, January 1974 was an inappropriate time for change. Walker had fought to prevent the change until after the worst of the oil crises, conceding defeat in January 1974. Bernard Ingham, press secretary to the new Department describes the chaos that followed and argues that:

[i]f there is one thing to be learned from January 1974 it is not to form a new Government Department to handle a national emergency while you are in the middle of it. (Ingham 1991,132)

The chaos was compounded by the state of emergency announced in February and the change of government in March 1974.

The Heath reforms also brought an additional actor onto the energy scene, the Central Policy Review Staff [CPRS]. As Hennessey (1990, 228) points out much of the detail of the role of the CPRS is locked away in the Cabinet register. Nevertheless by

drawing on other sources as well as Blackstone and Plowden's (1988) insider account it is possible to hypothesise about the role of the CPRS in the energy sector.

The interest of the CPRS in energy policy is attributed to Rothschild's personal interest in the sector.<sup>47</sup> Rothschild's experience in the oil industry had left him convinced, in 1971 and before the first oil price shock, that an oil price hike was a probability. Whilst he did not formally alert the cabinet to this he:

let it be known that this was my view and that we should therefore, be taking certain measures to counteract that possibility. (cited in Hennessey 1990, 231)

Conscious of weaknesses of the Energy Divisions in the DTI, the CPRS began its own work on energy policy in early 1972. They approached a number of outside agents for information and analysis, including Shell, the CEGB and economists such as Michael Posner. Interestingly, the CPRS 'set up a good working relationship with the National Coal Board' (Blackstone and Plowden 1988, 76). The report which was:

presented to incredulous ministers in the summer of 1973, suggested three possible oil-price scenarios for 1985: what it termed EASY (\$3.75 per barrel, at 1972 prices), SCARCE (\$6 per barrel), and CRISIS (\$9 per barrel). (Blackstone and Plowden 1988, 76)

In the event the oil prices in 1973 rose to \$9.90 per barrel, at 1972 prices.

The CPRS had not predicted the energy crisis of 1973 but had forecast a rising trend in energy prices. As a lone, and disbelieved voice it therefore was vindicated by the outcome and gained much 'kudos' from such prescience (Hennessey 1990, 231). The CPRS had established itself as an authority on energy policy and was to play an important role in the sector right up to its demise in 1983. The weakness of the DEN and 'kudos' gained meant that:

[t]he CPRS was thus able to play a uniquely direct part in the [energy] department's affairs, being regularly represented at meetings of its senior officials and actually briefing them on many issues. (Blackstone and Plowden 1988, 78)

The report's recommendations, based on the SCARCE scenario, included proposals that the policy of converting coal-fired power stations to oil should cease, that North Sea oil licensing should embody a more active approach, and that a speedy decision be made on the next generation of nuclear power stations. For the coal industry it recommended that new sources should be found and that future closures should be

---

<sup>47</sup> Prior to heading the CPRS he had worked as Research Co-ordinator for the Royal Dutch Shell Group

concentrated on pits where resource costs, rather than financial costs, were the most expensive. According to Blackstone and Plowden (1988, 77):

The basic theme of the report was simple enough in principle. A national energy policy was needed. Without this, ad hoc decisions would be taken, unrelated to decisions in other areas, leading to incoherence and inconsistency at considerable cost to the nation.

It has been argued that the political environment of 1974 mitigated against Labour attempting another 'Energy Policy' exercise. It will be seen below that the report's warnings about the failure to take a sector wide view of energy issues bore a striking resemblance to the outcome.

Finally, before moving on to the policy process that led to Plan for Coal, and in view of the importance this thesis has placed on the 'economic' methodological framework in the 1967 review of policy, something should be said about the methodological developments within the DEn. By the early 1970s the DEn had become more sophisticated, though more cautious. One consequence of the review process of 1967 had been the setting up the Energy Model Group within the Ministry of Power. The intention of the group was 'to produce a unified model which would illustrate the structure and development of the whole of the UK energy sector' (DEn 1978, 7). The model was to be a set of algebraic equations that express the relationships between the variables effecting the demand and supply for energy. However, the complexity of the sector frustrated a unified model and a number of sub-models were developed. The inter-relationships between the sub-models was then 'handled by less mathematically formal means'. It was also recognised that the sub-models were affected by limitations in the data and therefore 'pragmatic and judgmental methods had to be used' (DEn 1978, 7).

In contrast to the earlier period the methodology employed had little impact on the policy process, the relationships that developed were determined by power rather than the need to find and collate the 'facts'. But this is not to argue that there were no political facets to the Energy Model. Here three points can be made. Firstly, the failure of welfare economics and CBA in the 1960s may have dented the disciplines' credibility but it did not destroy it. Economic modelling, which was becoming increasingly sophisticated, was still regarded as a useful and, more importantly, an apolitical tool. This is well illustrated when in October 1977 Benn questioned the Departments

officials about a working paper that showed total expected energy demand for the 1990s would be some 90 million tons coal equivalent lower than previous papers had assumed. The figures had been released without Benn's knowledge 'because, as the civil servants saw it, [they] had no political import' (Sedgemore 1980, 130).<sup>48</sup> Secondly, and related to the above incident, it emerged from the enquiries that followed that:

there were some thirty-four different [energy] scenarios from which, depending on which scenario was used, almost any policy advice could be given and justified. (Sedgemore 1980, 129)

Clearly, how one scenario became more favoured than the other thirty-three is an interesting question which is likely to have political undertones. It would appear that prior to this incident Ministers had accepted, unquestioningly, the scenario offered by the Department.

Thirdly, by 1974 the DEN had done a somersault with respect to its perceptions of the future of the coal industry. In a memorandum submitted to the Pay Board for its 1974 report on mineworkers pay the DEN stated that:

[a]bout two years ago it became clear that the balance (between oil and coal) might be changing. The Government took steps, through the Coal Industry Act 1973 to stop the industry's decline and thereby hold open the possibility of retaining for the future a larger coal industry than had hitherto been viable.... As a result [of the oil price rises] indigenous coal (even if repriced at its true cost, with present subsidies eliminated) is now competitive overall with oil. (DEN; cited in Allen 1981, 255)

Allen goes on to say that the memorandum concluded the industry 'had the prospect of an assured market for many years to come'.<sup>49</sup> Again why this scenario became favoured by a Department which a few years earlier had seen only decline for the coal industry remains an unanswered question, though it is possible to hypothesise that the CPRS played an active role in the Department's U turn. Nevertheless the consequences of the somersault cannot be overstated: in 1974 both Westminster and Whitehall perceived a future for the coal industry.

## 5.5 The Making of Plan for Coal

As in 1950 the Plan for Coal 1974 was essentially the product of the NCB. However the circumstances and the policy-making structures were very different. In 1969 the

---

<sup>48</sup> B Sedgemore was Benn's Parliamentary Private Secretary 1977-8.

<sup>49</sup> The Pay Board Report is published as Cmnd 5567, it does not include submitted evidence.



accountants Cooper Brothers had, in response to concern over Board-Government relationships carried out an examination into the flow of information between the NCB and Government. The enquiry resulted in new procedures being developed which limited the amount of information required by government and gave it greater cohesion. An essential part of the new procedures was the Board's Medium Term Development Plans which reviewed the previous five years and outlined the strategy for the next five years. The new reporting procedures led to setting up of the Central Planning Unit (CPU) at NCB headquarters in 1973. This move gave the NCB a permanent capacity to examine medium and long-term strategy and they intended that the plans produced by the unit should assist the government in the formulation of energy policy (Ashworth 1986, 355; MMC 1983, 80). The CPU began work on Plan for Coal in early 1973, before the OPEC crises. The work was also given government approval when the DTI asked the Board for its views on energy policy. This and the rapidly changing oil situation led to revisions and the Plan was not ready for submission to the DEn until February 1974. Final submission then had to await the outcome of the election (Ashworth 1986, 357).

The energy crisis and the existence of the Plan do not by themselves explain why it became government policy, or why it formed the framework for the industry long after the original assumptions had proved to be inaccurate. Explanations also require the inclusion of the role of CPRS and the tripartite policy processes initiated by the incoming Labour Government.

Again, the closed files makes analysis of the role of the CPRS difficult, though some information can be gleaned from published material. Following their earlier report and the onset of the energy crisis the CPRS continued to work on energy policy and made a major presentation to the incoming Labour Ministers in March 1974.<sup>50</sup> In this review the CPRS 'noted how vulnerable to supply disruption was an energy intensive economy such as Britain's' and 'came down heavily in favour of nuclear power with coal as the next best alternative'. Oil prices were expected to remain uncompetitive and orders for oil-fired power stations should be cancelled (Blackstone and Plowden 1988,

---

<sup>50</sup> Following the CPRS's method of working which involved the preparation of reports and then presenting them to Ministers and Department Officials. Few reports were published, one exception in the energy sector being Energy Conservation in July 1974.

78). In addition to the advice to Ministers on the long-term possibilities, the CPRS also became involved in more immediate matters: the structure of the National Nuclear Corporation, North Sea Oil tax and licensing regimes and the choice of nuclear reactors. It also worked on the NCB's ten-year plan (Blackstone and Plowden 1988, 78). Given that the CPRS had already expressed criticism of governments investment policies in the coal industry when contrasted with the large investment of the nuclear industry and that Blackstone and Plowden (1988, 81) suggest that the CPRS supported Benn's line on the future of the coal industry, it seems reasonable to conclude that NCB had found a powerful and influential ally.

As has been noted, the activities and relationships surrounding the triumvirate of the NCB, CPRS and DEn remain, to large degree, cloaked in secrecy. By contrast, the Labour Government was keen to publicise the tripartite negotiations it undertook with the NCB and the mining unions.<sup>51</sup> However, whilst more information is available little use of it appears to have been made in the analyses of the industry which, on the whole, treat Plan for Coal as an inevitable reaction to circumstances.

In opposition and in its Election Manifesto Labour had called for a tripartite, government-NCB-mining unions, examination into the industry. Labour had become convinced that a new era awaited the coal industry. On taking office, Eric Varley, the new Secretary, set up the Coal Industry Examination, a tripartite body, under his chairmanship.<sup>52</sup>

It is important to recognise the distinctive features of the tripartite structures that emerged in coal policy-making; features which did not pertain in the wider shift towards what others have referred to as tripartism or Corporatism. Grant and Marsh (1977) differentiate tripartism from Corporatism and 'high-level discussions on economic policy between the government, the CBI and the TUC' and they define tripartism as:

---

<sup>51</sup> This is true when Eric Varley was at the DEn but became even more pronounced when Benn took over in 1975, reflecting his interest in open and democratic Government.

<sup>52</sup> The Coal Industry Examination was 'A Whitehall idea' according to Cairncross 1995, 201. Later called the Coal Industry Tripartite Group.

a belief that the peak organisations representing management and trade unions are of special importance among all producer groups, that negotiations should take place with these peak organisations on major issues of economic policy and that agreement with these groups will provide a basis for successful implementation of the government economic policy. Tripartism thus implies a hierarchy of interest groups. (Grant and Marsh 1977, 138)

They go on to suggest that the notion of tripartism, because of the degree of consensus needed to maintain the structure, may be more significant in executive operations of government than in dramatic high level negotiations. They then explore examples of tripartism in the areas of employment, health and safety and industrial relations; in each case institutions were set up to perform specific functional tasks. Policy-making, at least nominally, remained with Parliament. In each case the central actors were government, the CBI and the TUC.

What Grant and Marsh appear to be offering here is a model of executive or implementation networks that bear many of the same characteristics as the later (Marsh and Rhodes 1992) conceptions of policy networks. They argue that for a tripartite body (community) to be sustained there must be a high degree of consensus, compromise and trust between the parties and that those parties are able to deliver their members. Whilst it is not made explicit, tripartism also suggests a level of resource dependency.

The Coal Industry Examination exhibited many of the characteristics of the Grant and Marsh conception of tripartism. The organisations were of special importance and, to some degree, hierarchically structured. There was a strong consensus that the coal industry should, at the very least, be stabilised at its current output and that investment was needed to achieve this goal. There was a high degree of resource dependency: only Government could finance the investment, only the NCB could supply the necessary information and implement policy, and only the NUM could provide the stability required. However the Examination differed from the Grant and Marsh conception of tripartism in two key respects. Firstly, the Coal Industry Examination was concerned with policy rather than executive functions. In contrast to the 1960s both the NCB and the mining unions were given direct access to the policy process. Secondly, the NCB and the mining unions were directly represented rather than through the medium of the 'peak' organisations. Their interests were specific to the

policy under consideration rather than, as in other tripartite bodies, the generalised interests of industry or labour.

The differences and similarities noted above imply that conceptions of policy communities might be more applicable than models of tripartism for analysis of the policy process. It is also probably true that the process that led to the adoption of Plan for Coal by the Labour Government was unique in terms of British policy-making. In short, policy communities were not unique, nor were tripartite bodies, but a tripartite policy community was.

To explain this uniqueness it is necessary to return to the late 1950s and Labour's response to the onset of industry's decline. Following the fall in demand during 1957 and 1958 the Labour Party Conference of 1958 passed a NUM proposed resolution calling for:

the adoption of a national fuel policy designed to secure the maximum use of indigenous fuel and the limiting of unnecessary fuel imports. (Labour Party Conference Report 1958)

With coal the only, wholly, 'indigenous' fuel, the resolution was clearly designed to offer support for the mining industry. As a result of this motion the Joint Committee on Fuel and Power Policy was appointed, with membership drawn from the Labour Party National Executive Committee, the Parliamentary Labour Party and the TUC.<sup>53</sup> The NUM's interests were apparently represented by the TUC rather than directly, although at least one separate, informal, meeting was held between Wilson and the NUM officials (DACE, 34). In addition proposals were put forward to set up a tripartite body (Labour Party, TUC and NUM) but this proposal was shelved pending the outcome of the 1959 General Election.<sup>54</sup>

The committee was largely supportive of the case for the coal industry, suggesting that in 'any national fuel policy the coal industry should have priority' (DACE 34, Minutes (3) 11 March 1960) and that the industry must be given 'a long-term output figure around which to plan' (DACE 34, Labour Party RD. 63/June, 1960). No figure was placed on what the long-term output should be, though 200 million tons appears to

---

<sup>53</sup> Interestingly, in view of the events described above, the committee was chaired by Harold Wilson and included Alf Robens and Fred Lee, Minister of Fuel and Power in 1964.

<sup>54</sup> There are no records amongst the NUM files which suggest that idea was ever put into practice.

have been an accepted target. As has already been seen in this chapter, in office, actual policy was substantially different.

It has been argued above that policy outcome in the 1960s can, in part, be explained by the policy process. Scientific policy-making rested on the collation of 'facts' which involved interaction with the management of the industries concerned, not negotiations with the unions. The NUM, and other mining unions, played no part in the policy process. In contrast to the contacts that had developed when Labour were in opposition in the late 1950s and early 1960s there were few direct meetings between the NUM and the Government. During the preparation of the 1967 White Paper, for example, Richard Marsh met the NUM's Economic Sub-Committee on the 28<sup>th</sup> of June 1966 at which, according to the NUM's account, little was achieved beyond an exposition of positions and an agreement that further meetings might be useful. Five months later, on the 9<sup>th</sup> of November, Paynter, the NUM's General Secretary, wrote to Marsh suggesting that, given the length of time since the last meeting and the changing energy situation a further meeting might be useful. Marsh, on the 23<sup>rd</sup> of November replied:

Although a great deal of work has been done on our fuel policy review, we are still at the stage of assembling material to form the basis for our conclusions. There is therefore little if anything that I could say now that would take our discussion on your proposals for fuel policy much further than we took it at the end of June. I do not think, therefore, that a meeting at the present time would be useful, unless there are additional points arising out of recent developments that you would like to put to me. (DACE, 34)

Clearly bipartite policy-making in opposition is one thing, in Government during the 1960s it was quite another.

The contrast between the union's position in the 1960s and 1974 could not be more dramatic. During Labour's spell in opposition, 1970-74, the ties between the Party and the NUM strengthened. When Labour returned to office they did so against the background of the OPEC fuel crises and two national miners' strikes. The NUM, because of coal's improved market position, could not be ignored and nor did the Labour Government of 1974 wish to marginalise the union. The union had been instrumental in their return to power but more importantly Labour, in an effort to avoid the pitfalls of the 1960s, was about to attempt government by the inclusion of, and negotiation with, the trade unions. In the past, in opposition, they had had close policy-

making contact with the NUM. Bringing in the other mining unions and the NCB, who had apparently worked out solutions to the crises in the coal industry, perhaps seemed like a natural progression when set against the background of tripartism and the *Social Contract*. The Coal Examination therefore emerged from the complex interaction of historical links with the political and energy crises of the late 1960s and early 1970s and it was this interplay that gave rise to institutional arrangements that were unique.

In terms of specific details, however, the NUM contributed little to Plan for Coal. The NUM research archives would appear to suggest that their input into Coal Industry Examination was limited to suggested revisions of NCB and DEn drafts of the Interim and Final Reports (DACE, 645<sup>55</sup>). Although the NUM did submit a paper to the Examination it was one based on an earlier NUM publication, National Fuel Policy (NUM 1972) in which they argued that the future of the industry should be based on 'resource' costs rather than accounting costs; an echo of the 'total sum' approach advocated by Robens in the 1960s. However, they do not appear to have pursued the issue very far. Instead the NUM supported, with some reservations, the NCB's submission, a draft of Plan for Coal, and rejected the DEn's initial paper on the grounds that it reflected 'the attitude that produced the 1967 Fuel Policy White Paper - an analysis of the market place with little basic economic planning' (Submission by L Daly to the Coal Industry Examination. DACE, 645). During the writing of the Interim Report it also appears that the NCB and the DEn submitted initial draft documents.<sup>56</sup> Again the NUM confined itself to suggesting amendments; rejecting the Department's draft and supporting, with amendments, that of the NCB. The main thrust of the NUM's effort was to try and bid up the forecasts of future demand. Whilst a definitive assessment must await the publication of all the documents it would appear that throughout the Coal Industry Examination that the NUM and the NCB, working together, were able to override the more cautious DEn.

If the tripartite structures were unique, they and the Coal Industry Examination Reports, were also flawed. The terms of reference for the Coal Examination were:

---

<sup>55</sup> This is an incomplete set of minutes and documents from the Coal Industry Examination Steering Committee.

<sup>56</sup> Daly was the General Secretary to the NUM.

to consider and advise on the contribution which coal can best make to the country's energy requirements and the steps needed to secure that contribution. (DEn 1974a, 5)

Within these terms of reference were two important assumptions that achieved a remarkable consensus amongst those involved. Firstly, it was assumed that Britain and the World faced, at some time in the future, an 'energy gap'. Extrapolation of the events of the early 1970s led to the conclusion that oil could not be relied upon to meet future energy requirements. Britain, in common with the non-oil producing countries, would need to find alternative sources of primary energy, though it was fortunate to have North Sea oil and gas in the short-term. Related to the depletion of oil was the second assumption, that of high oil prices, again derived by extrapolation of recent trends. OPEC, which analysts had, in the 1960s dismissed, was now assumed to have monopoly market power over the world's oil markets that would last for the foreseeable future. From these two assumptions it was concluded that, wherever possible, indigenous sources of energy must be developed to replace diminishing international supplies and insulate Britain from energy ransom.

The conclusion that domestic energy sources should be expanded became a common assumption. There was, however, less agreement on the role that coal should play. It has already been noted that the DEn had, in contrast to its advice in 1967, come to the conclusion that coal had a secure market in the future but the issue for the Coal Industry Examination was, how big would that market be?

In three months the examination published an interim report which:

agreed that the NCB's Plan should be accepted as a broad strategy for the industry, subject to annual review. We welcome the Government assurance that short-term fluctuations in price and availability of competing fuels will not be allowed to interfere with steady progress in the implementation of the Plan, while accepting that coal must remain competitive in the light of long-term trends.

All the parties to the Examination commend to the whole industry the assurance of a long-term future which now lies before it. (DEn 1974a, 16)

In effect the industry had been handed a blank cheque to maximise its output. The Plan that had been 'broadly accepted' was based on the presumption that energy demand would continue to grow and that demand for coal would exceed what, in the medium term, the deep-mined industry could supply. The industry recognised that it would be difficult to halt the decline in output and that coal supply would be constrained by its ability to identify and implement investment opportunities. Any residual demand for

coal would be satisfied by increasing opencast production. In short, coal production was to be maximised subject to technological, rather than market constraints. The Interim Report did, of course, contain caveats on the need for the industry to maintain its competitive position and to achieve a long run equilibrium between supply and demand. It seems clear that no one - with the possible exception of the marginalised DEn - inside the Coal Industry Examination believed that the industry would not be competitive or that the markets would not materialise.

Plan for Coal appeared to replicate the errors of both its 1950 namesake and the 1967 White Paper. Just as in the 1950s, over-optimistic forecasts on demand were made; and, just as in 1967, preconceptions permeated the policy process. In the 1960s, preconceptions that coal could not compete in the energy markets had led to policy options being constrained; the only course of action was the decline of the industry. In 1974, preconceptions surrounding the future international energy markets once again constrained policy options: the only course of action was to expand the coal industry. In both cases the preconceptions were wrong: in the 1960s the coal industry was at the beginning of a period of technological development that could have led to a greater amount of coal being competitive than was the case; in the 1970s assumption of energy shortages in the 1980s and 1990s ignored the enormity of the energy supply shock and its impact on Western economies. It also ignored the impact of producer and consumer behaviour on the energy markets.

These latter points are, perhaps, open to charges of the application of hindsight: after all Britain was not alone in identifying the 'energy gap'. In Europe and America similar conclusions had been drawn leading to similar solutions and even attempts to co-ordinate EC and OECD responses. However, two points need to be addressed. Firstly, Robinson's (1974) analysis of the international and domestic energy markets has proved to be substantially robust. He anticipated the slow down, but not decline, in overall energy consumption, the emergence of alternative supplies, and the eventual diminishing of OPEC's monopoly position. Whilst he may not have suggested that the energy markets of the 1990s would be as benign as the outcome, he nevertheless identified many of the main features of the latter 1970s and 1980s. Secondly, from a normative perspective, if planning mistakes in the energy sector are inevitable, as would be implied by suggesting that the events of the late 1970s and 1980s could not



have been foreseen, then a major rationale for planning policy, as against market solutions, will have been lost. It is not the contention of this thesis that the energy sector cannot be 'planned' but rather that the structures in which planning and policy-making has been practised has distorted the outcomes. As Robinson observed before the publication of the Interim Report of the Coal Industry Examination:

Fuel policy is too important to be determined behind closed doors in an atmosphere of confused and nationalistic fears about partly-real, partly-imaginary world energy crises. (Robinson 1974, 58)

In the event, acceptance of the NCB's Plan for Coal did take place behind closed doors, did place a great deal of weight on energy self-sufficiency and did make crucial errors in energy forecasting. The NUM, certainly, and possibly the NCB would have rejected Robinson's recommendations of reducing government aid to the industry and introducing more competition into the energy markets. Nevertheless, they and the Government might have benefited from paying some attention to the analysis upon which those conclusions were based.

Plan for Coal and the Coal Industry Examination were flawed because of inaccurate assumptions about future supply and demand conditions; they were also internally flawed. As their titles suggest, both the Plan and the Examination centred on the coal industry and not the energy sector as a whole. At one level, given the assumption of an 'energy gap', co-ordination of the fuel industries appeared less important. The Government policy was to expand all indigenous sources of energy but because of the technical constraints of increasing the contributions of coal and nuclear power there would still be a residual requirement for imported oil. Coal and nuclear power were seen as complements, at least until 1985, and flexibility could be achieved by adjusting the quantities of oil imported.

At a second level, that of choice of fuel for new power stations, co-ordination of policy remained a key issue. How much coal was needed would depend critically on how much the power stations would burn. The Examination had received a memorandum from the CEGB and SSEB about future demand for power station coal. The CEGB suggested that it would *be able to burn* about 90 million tons in 1985 to which the SSEB added a further 10 million tons. However, the amount it actually *would burn* would depend on coal's relative price vis-à-vis oil and other alternatives. As the coal industry representatives recognised at the time, demand would not be a simple function

of the market prices of fuel inputs: what mattered was the relative costs of generating electricity using the different fuels. The demand for power station coal would depend on the relative costs of oil and coal in generating electricity, which was a function of fuel input prices *and* generating technology, both in turn a function of, inter alia, investment. Demand for coal would be depressed if, as seemed likely, ageing coal-fired power stations slipped down the generating 'merit order'. Unless new coal-fired power stations were ordered then demand for coal from the industry's main customer would remain uncertain. As can be implied from the Coal Industry Examination and is clear from the public statements of the CEGB's chairman, Arthur Hawkins, the ESI were sceptical, in 1974 and throughout the succeeding years, that coal would be competitive with the alternative fuels. They saw little need to undertake additional investment in coal-fired generating capacity. Indeed documents in the NUM research archives suggest that during the drafting of the Interim Report the Government deleted a paragraph concerned with the need to build more coal-fired power stations after representation by the CEGB. The paragraph was only re-inserted after pressure from the NUM and the NCB (DACE, 645; Economist 3/8/74; Economist 14/2/76).

The main point to note is that the electricity industry's input into coal policy-making only amounted to the submission of a memorandum. The exclusion of the ESI from the policy process left the long running problems in the relationship between the two industries unresolved. The NCB, the NUM and the Government assumed, in 1974 and beyond, that the amount of coal the ESI *would* burn equalled the amount they *could* burn and the ESI's 'competitive' caveat faded into the background (see MMC 1983, 70-71 for a comparison of alternative forecasts of coal demand). For Plan for Coal to have worked, irrespective of the total energy demand trends, the ESI would have had to have been convinced that coal would remain competitive, and supplies secure, in the long run. Alternatively, the ESI could have been 'persuaded' to build more coal-fired power stations, and convert oil-fired to coal, in spite of their perceptions of future price relatives. In either case a coal-electricity policy required an inclusive policy-making arena.

## **5.6 Policy Networks and Plan for Coal**

In the preceding section it has been seen that Plan for Coal became the new Labour government's response to the energy crises of the early 1970s. It has been argued that

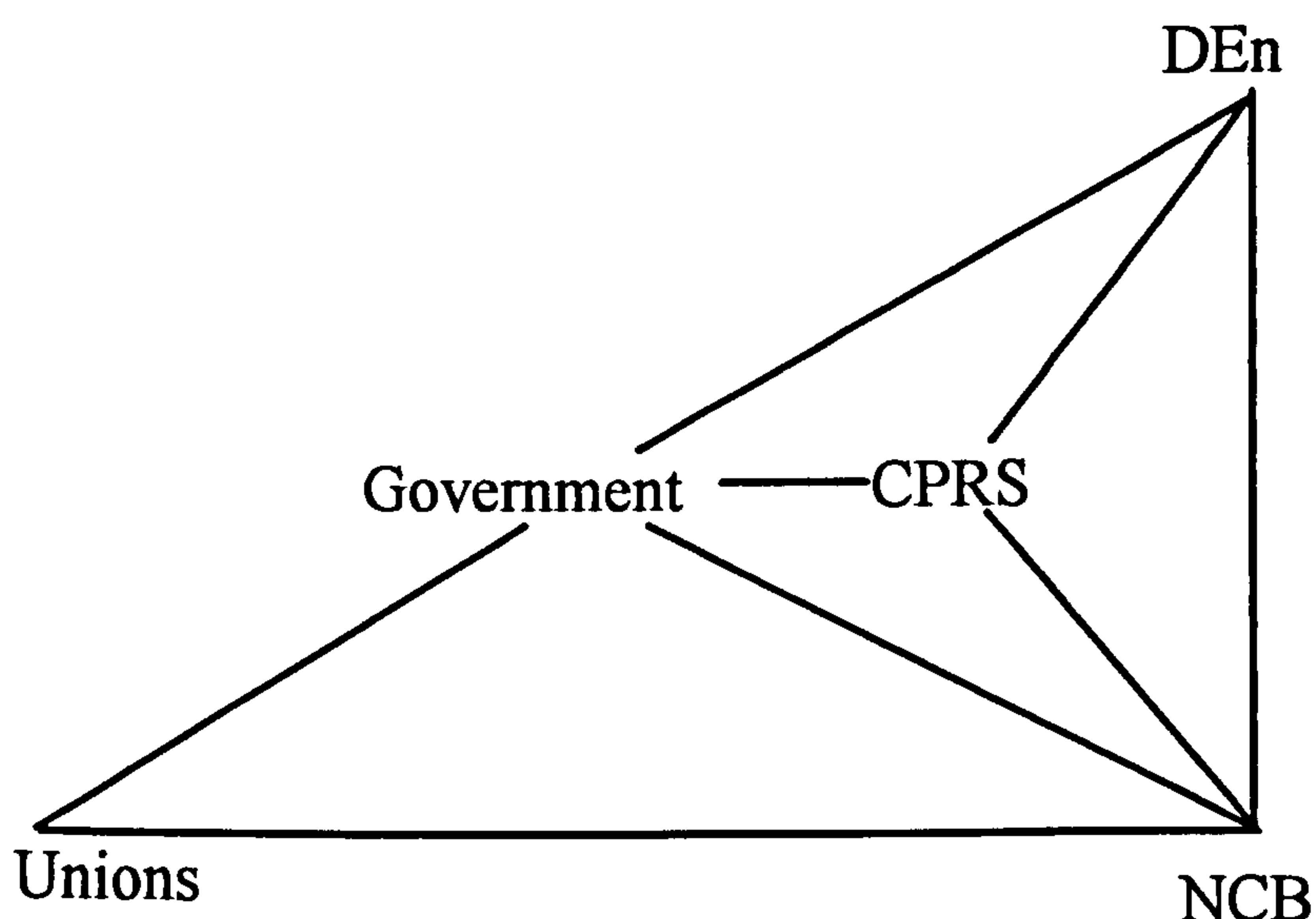
the adoption of the Plan was not an inevitability but emerged from the processes the Government initiated to review coal policy. Those processes were consistent with the Government's underlying approach to industrial policy but they were also shaped by historical ties and the chaos of the circumstances. Labour had returned to office in the midst of an unresolved miner's pay strike and in the wake of the OPEC price rises. It clearly had to do something about energy policy. The urgency of the situation and the experience of the 1967 Fuel Policy White Paper mitigated against a repeat of an integrated solution and the Government sought solutions with the individual energy producers. The overriding aim was to maximise UK energy self-sufficiency. In these circumstances it adopted the Board's Plan, the roots of which lay as much in the preceding run down of the industry and the Board's new planning capacity as the international energy crisis. In short, the Government needed a plan, the Board had a plan and it was one that was acceptable to the NUM, who could no longer be ignored.

Clearly the adoption of Plan for Coal was a result of complex interaction between variables in the energy, economic and political 'systems' and it would be an oversimplification to focus singularly on the policy process to explain its adoption. Nevertheless, it is a key argument in this thesis that policy processes do make a difference. In the case of the 1967 White Paper it was argued that the process excluded the NCB and led to a fuel policy that was disastrous for the industry. In this case it has been suggested the exclusion of the ESI led to a policy that was internally inconsistent. There was little use in having a policy to produce coal without having parallel policies to burn it.

Figure 5.3 attempts to illustrate the key relationships that led to the adoption of Plan for Coal. The image is one of two interlocking sets of relationships. In one, the DEN, the CPRS and the NCB, are seen as crucial in the formulation of the perception that the coal industry could contribute to Britain's future energy requirements. Each brought resources to the community, the NCB the Plan for Coal, the CPRS considerable influence on both government and the DEN, and the DEN legitimisation and, through the Treasury, finance. At a time of energy crisis they offered the political actors a coherent strategy, the expansion of nuclear power and stabilisation of the coal industry, to plug the perceived energy gap. The interactions of these three actors and

between them and the political actors in government explain much of the detail of Plan for Coal. The unions, particularly the NUM, were undoubtedly important actors, but only in the sense that any final proposals had to be accepted by them. They do not appear to have contributed greatly to the detail of policy. However, inclusion of the unions was necessary in order to provide the stability in the industry that implementation of the Plan would require. The unions therefore became an essential part of the network, linked through their relationships with the Government and the NCB.

Figure 5-3 The Plan for Coal Network.



Other key actors in the energy system were excluded from the network, most notably the ESI but also energy economists like Robinson who doubted the wisdom of embarking on a significant investment programme in the coal industry.

As already argued the emergence of Plan for Coal cannot be explained solely by reference to a policy network. Indeed the emergence of the network and the policy were functions of rapidly changing 'system' variables impacting on the industry's historical baggage. Network imagery merely provides a convenient illustration of the relationships. If this was the only significance of the network approach then it might be concluded that the results are rather disappointing: however, the main impact of the policy community set up in 1974 was felt in the following years.

In the period between 1974 and 1979 the policy community maintained its cohesion. The investment programme, the central plank of Plan for Coal, went ahead constrained only by the technical possibilities, planning permission delays and, very marginally, by financial constraints following the sterling crises of 1977 (Ezra interview).<sup>57</sup> Indeed the network went on to produce further optimistic assessments of coal's future through Prospects to 2000, which, although never adopted by the Government, became the backbone of the 1978 Green Paper (Cmnd 7101). Again events appear to resemble the events of the 1950s when the NCB produced its optimistic Investing in Coal (NCB 1956) shortly before the market collapsed. This time, however, there is clearer evidence that self-interest motivated the network actors rather than a realistic assessment of the probable markets.

In 1976 Tony Benn initiated what he intended to be an inclusive policy forum in the form of the Energy Conference.<sup>58</sup> However, this did more to highlight the underlying contradictions of Plan for Coal than it did to resolve them. By 1976 total demand for energy, including electricity, had begun to fall as the impact of the OPEC price hikes was felt. The conference focused on the correct response to the changed situation and on the question of whether this was a short-term or a long-term phenomenon. It illustrated a less than harmonious relationship between the industries on key policy issues.

Hawkins for the CEGB began by complaining about a 15% coal price increase that the NCB had recently announced. He regretted the lack of consultation in the lead up to that increase and hoped that in future the 'Coal Board would abandon this cavalier attitude' (DEn 1976 2). Hawkins went on to suggest that both the ESI and the coal industry were in a similar position 'in that productive capacity far exceeds the present reduced demand for electricity' (DEn 1976, 4). He then contrasted the CEGB's response to these conditions, productivity improvements and power station closures, with that of the NCB, falling productivity. He argued that:

[t]he CEGB's special need is for more coal from low-cost pits and less from high-cost collieries, indeed, the long-term future of supplies from the cheapest pits is of key importance to both industries. (DEn 1976, 5)

---

<sup>57</sup> Most notably for the Selby and Asfordby projects.

<sup>58</sup> With representatives from the NCB, CEGB, SSEB and the Unions involved in the two industries.

Both he and his Scottish counterpart, Frank Tombs, suggested that there was little immediate justification for ordering new conventional (coal or oil) power stations. The ESI adopted a cautious approach to their future coal requirements. Hawkins believed the 90 million tons, assumed by Plan for Coal depended critically on high economic growth rates and relative prices. Significantly, perhaps, he did not identify an 'energy gap'. Tombs, on the other hand, followed Benn in believing that a 'gap' would emerge in the 1990s but one that would have to be filled with nuclear power.

Ezra, for the NCB, also identified the 1990s 'energy gap' and argued that the assumptions underlying Plan for Coal:

remain valid and that as long as coal remains competitive in the light of long-term trends, we should continue to press ahead with the implementation of this plan.  
(DEn 1976, 9)

The problem of over-supply of power station coal was, he thought, a short-term problem and should not be allowed to deflect the industry from its new trajectory. To overcome the short-term difficulties he suggested six measures to increase current coal consumption: the virtual elimination of imports; the conversion of two power stations back from gas to coal; the conversion of Kingsnorth from oil to coal; the conversion of two stations from oil to dual firing; the reconstruction of an old coal-fired station; and the construction of two new dual fired stations. For the longer term he pressed for early starts on the proposed Drax B and West Burton B stations.

Hawkins' reply was to stress the role of the consumer and argue that capital investment should not be undertaken 'just to keep people happy'. The investment suggested would put up prices and lead to further reductions in demand (DEn 1976, 25). He also offered the coal industry some advice:

I don't know whether the miners play dominoes or whether they play draughts; I suggest they should start playing chess. They mustn't just be absorbed with the poor pawns of the electricity industry in front of them; they want to look to the knights and the rooks, that have different forms of movement. ....I would commend you to have regard to the fact that in the free economy it's the ultimate consumer, of whom your wives represent a major proportion, who will influence the use of electricity and consequently the demand for coal. (DEn 1976, 25)

By 1976 the underlying assumptions of Plan for Coal had been falsified and internal contradictions were clearly visible. In real terms the Plan was already becoming less relevant to future energy needs and the future prospects of the coal industry. The

optimistic projections by the Board, supported by the unions and Tony Benn, rested on the assumption that these were short-term factors that, under the terms of Coal Industry Examination, could be ignored. This was something that appears to be little more than blind faith and a repetition of the 1950's belief that 'all would come right in the end' (see chapter four). It was not, after all, in the NCB's or the union's rational interests to think otherwise. Benn on the other hand was pursuing a political agenda that had little regard to the realities of the energy markets.

The key point being made here is that it was the cohesion in the network, rather than the realities in the energy market, which explained the continued strategy of stabilisation and the possible expansion of coal output that had been the aim of Plan for Coal. In contrast to the events of the 1960s, the coal community now showed a high level of cohesiveness and to a limited degree dominated others in the energy sector, which itself exhibited a low level of cohesion. The coal industry was not able, as the nuclear industry had been in the 1960s, to supplant other energy sources, but it was implicit in Plan for Coal that the ESI would be locked into taking large amounts of NCB coal whether it wanted to or not. Between 1974 and 1979 the coal policy community came under increasing stress as the demand forecasts were falsified. As the energy supply began to outstrip demand, competition between energy producers re-emerged as a significant feature of the markets. However, cohesion in the coal community remained strong, Plan for Coal continued to inform coal policy and even more ambitious plans were proposed, winning the support of the Secretary of State if not the Government. Critics of the strategy, including the all-important ESI, remained marginalised.

This conclusion should not be open to charges of hindsight. It had been recognised since the 1940s that projections in the energy market were difficult to make and that plans needed to be flexible. By 1976 there was sufficient evidence to suggest that the 'guesstimates' of 1974 were sufficiently questionable to warrant a review of the assumptions on which Plan For Coal had been based. However, when such a review was undertaken and Green paper published in 1978, even more optimistic scenarios for the coal industry were being suggested. The insight of policy network theory is to offer an explanation for why policies might be pursued even when the rationale for the policy has been undermined. The coal industry between 1974 and 1979 would appear

to offer a good example of such a feature. Within the coal policy community no one had an interest in reducing the investment programme, therefore, the assumptions on which the Plan was based became unquestionable. The coal policy community successfully excluded its critics and maintained the consensus surrounding the long-term objectives of the Plan.

Against this background of continued cohesion in the network the issue of pit closures lay largely dormant. What pit closures did take place were agreed at a local level, a matter of deliberate policy worked out between Ezra and Gormley (Ezra interview).<sup>59</sup> When the cohesion of the network broke down in 1979, pit closures became the dominant issue facing the industry and government. How and why that cohesion broke will be discussed in detail in chapter six.

### 5.7. Conclusions

In this chapter we have explored government's reaction to supply shocks in the mid-to late- 1960s and the early 1970s. It has been argued that, as the events unfolded, the Labour Governments responded in the context of their overall philosophy: in the 1960s 'scientific' government, in the 1970s accommodation and consultation with the unions. It has also been seen that the relationships which developed differed as that philosophy changed. The NCB, which had been excluded in 1967, became dominant in 1974 and the NUM could not be ignored. Conversely, the sponsoring departments influence waned under the weight of past failures. In other words, the shape of policy-making changed in response to changing ideas.

It has been seen that circumstances and events also shape policy-making structures. The 1967 policy review followed the discovery of North Sea gas in significant quantities and the emergence of perceptions of cheap nuclear energy. In these circumstances, coal was seen as dirty, old fashioned and declining. The industry's own perception of a future in which it would become increasingly competitive as mechanisation, concentration and new working practices reduced costs, was discounted; as were the industry's protests about the overstating of the benefits of

---

<sup>59</sup> Derek Ezra; NCB Chairman. Joe Gormley, NUM President. The two enjoyed a good working relationship which the NUM 'left' dubbed the 'Derek and Joe show'. The most notable exception to locally agreed closures was Langwith which led to a national overtime ban in February 1976. The ban, imposed by the NUM's National Executive Committee was called off following a membership ballot and the colliery closed (see Allen 1981, 303).



nuclear power and the folly of over reliance on imported oil. In the case of the 1974 Plan for Coal, the OPEC price hikes brought energy to the top of the political agenda. Energy self-sufficiency became the overriding guiding principle and all indigenous energy producers were encouraged to increase their output. Experience and urgency mitigated against an integrated policy and Government adopted a piecemeal approach. In these circumstances the NCB was able to offer the Government a ready-made plan for stabilising and expanding coal output. The NUM pay strikes, on the other hand, suggested that stabilising industrial relations was a necessary prerequisite to stabilising output. Any future plans for the industry would have to have the support of the unions. It has also been argued that shape of the policy-making structures can, to some extent, explain the policy output. In 1967 the shape was influenced by the methodology employed. The gathering and analysis of 'facts' implied a 'scientific' process. The relationships that developed during the fuel policy review were those which were necessary to quantify all the relevant variables: coal could be excluded from the process because its inability to compete had been predetermined and institutionalised. In 1974 the process was clearly 'political' and the outcome reflected the power relationships of the time. More important, however, was the building of an ongoing cohesive network that perpetuated Plan for Coal, despite the inconsistencies and changing energy market.

It might also be suggested that the policy outcomes had a detrimental impact on the future of the coal industry. For 1967 the impact was obvious and, indeed, intended. Coal was relegated to the last place in the nationalised fuel industry queue for investment funds and the industry's contraction was expected to be a continuing feature. The lack of investment and the signals that the polices sent out further weakened the industry and affected its capacity to respond to changing energy markets. For 1974 the impact is less obvious. It has been suggested that Plan for Coal was internally flawed because of the failure to include the industry's major customer, the ESI, at this crucial stage. This failure never was resolved. Above all the relationships that developed to win approval for Plan for Coal constrained any adjustment to the Plan. In the next chapter it will be argued that this failure led directly to crises of the 1980s.

## 6. The Market Solution

### 6.1 Introduction

In chapter two it was noted that a number of commentators attribute the Thatcher and Major Government's policies for the coal industry to Heath's two defeats at the hands of the NUM in the early 1970s. Whilst the conspiratorial explanation for Conservative coal policies has begun to acquire a popular following it has been seen that others have questioned its validity. Another theme that can be seen in the literature is the 'triumph of ideology'. The Conservatives' commitment to market forces in a sector dominated by market imperfections is viewed as a primary reason for the industry's collapse (see for examples Coyne 1992c; Helm 1991, 1993; Welsh 1994). Clearly, ideology has been a key feature of the history of the coal industry. However, it will be argued in this chapter that its role needs to be placed in a wider context. It is too simplistic to see the Conservatives' strategic policy for the industry in terms of an exogenous political shock; some account must be taken of the relationships between past failures in the energy sector and application of ideologically informed solutions. A third explanation for the demise of the industry in 1980s and 1990s can be detected in the accounts of former ministers. Thatcher, Lawson, Walker and Parkinson view the transformation of the energy sector with some satisfaction. They argue that the energy industries have been transformed from inefficient, self-serving, monopolies into vibrant private companies functioning in a competitive environment and regulated for the benefit of the consumer. On this account the coal industry's demise was unfortunate but merely reflected the levels to which vested and monopoly interests had been allowed to dominate the sector under public ownership (see Thatcher, 1995; Lawson 1992; Parkinson 1992; Walker, 1991). This interpretation, it will be argued, owes more to hindsight than the evidence of the contemporaneous record might suggest.

It has already been demonstrated, in chapter five, that the future of the industry and governments' setting of the overall framework has not been, exclusively, a function of the party in office or its 'ideology'. Both strategic objectives and outcomes have depended upon the interaction of those ideologies with events and the economic and political environments. It will be argued that strategic policy in the 1980s and 1990s emerged from similar complex interactions that cannot be understood in terms of 'revenge', the 'triumph of ideology' or

'policy success' theories. As in the previous chapter, the aim here is to explore the genesis of the overall framework that informed government/industry relations and NCB/BC investment decisions. However, in the 1980s and 1990s we do not have any one single piece of policy-making, comparable to the 1967 White Paper or the 1974 Plan for Coal, to analyse. Instead, strategic policy evolved incrementally throughout the period as the Government reacted to events, or as policy-making in other areas undermined coal policy.

The chapter begins with a discussion of Conservative 'ideology' as it affected the coal industry. In this section the historical attitudes towards nationalised industries will be traced and the impact of the New Right on coal policy explored. The aim is to go beyond an explanation that treats the New Right and Thatcherite 'ideology' as an exogenous political shock in order to discover the rationale behind the policies of 1980s and 1990s. A key argument, which will be developed throughout the chapter, is that Conservative policy for the industry was not, primarily, ideologically driven, but emerged in an attempt to overcome past policy failures and achieve what all post-war governments had sought - an efficient coal industry.

Section three picks up on this theme and explores the implementation of Conservative strategic policy. Its purpose is to tell the story of the Conservatives and the coal industry and to uncover their strategic objectives. The early objectives and instruments of policy will be identified, and it will be argued, in contrast to O'Donnell and Taylor, that in the 1980s coal policy was not subservient to macroeconomic policy. Rather, it will be suggested that the instruments used were compatible with both the Government's wider economic objectives and its supply-side policies for the coal industry. The failure of the initial strategy and the evolution of the Government's post-strike coal policy will then be explored. Here it will be contended that the objectives for the industry remained much as they had before the strike and that the Conservatives did not deliberately, or consciously, embark on policies to close the greater part of British deep-mined coal industry. Indeed it will be argued that the direction of policy was, in some respects, the reverse of the outcome. The section will conclude with an account of the 'meltdown' of the industry: that is, the events leading to the crisis of 1992. Again, it will be emphasised that the outcome was not a consequence of intentional policy but rather the unintended consequence of the 'market solution', brought about not least because the Government maintained a simplistic view of the workings of the energy markets. The section will also seek to demonstrate that the Government was slow to recognise the contradictions of the policies it pursued in the energy sub-sectors and the impact that changes in the energy

system would have on policy. This failure led directly to the 1992 pits crisis. Finally the section asks whether, given the recent history, more of the industry could have been saved. The conclusion drawn is that the answer might be - may be not. For the Government to have intervened to save the industry from the 'meltdown' it would have had to have abandoned the central tenets of the strategic policy it had pursued since 1979. This should not, of course, be taken to imply that the industry could not have been saved in different political circumstances; it could, as numerous commentators argued at the time. However, politics matter and it was politics that constrained the Government options in the wake of the crisis.

Section four draws the threads of the events of the 1980s and 1990s together in the context of network theory. A central argument of the chapter will be that the primary objective of Conservative policy was the replacement of the political relationships, which it viewed as the cause of the industry's successive crises, with market structures. In this section it will be argued that, until the events of 1992 the Conservatives were only partially successful. Whilst the network which had maintained the Plan for Coal between 1974 and 1979 perished, the relationships that sustained the investment programme unleashed by the Plan remained intact.

Section five picks up this issue in some detail and explores the processes by which the Board made its investment decisions and the governments financed them. It re-introduces the themes of asymmetric information, conflicting rational choices and the failures of control first noted in chapter four. It will be seen that despite numerous inquiries and reports the Conservatives failed, as had all post-war governments, to ensure that the Board's investment decisions were in the 'national interest' or indeed the long-term interests of the industry. It will be suggested that whatever the overall outcome had been in terms of the demand for coal, the investment strategy pursued by the Board and financed by the Government would have been sub-optimal.

The concluding section of the chapter seeks to draw the threads together in an analysis that utilises network theory - in the context of the energy system - to account for the rapid decline of the industry.

Before moving on to that analysis, an overview of energy environment the new Government inherited might be useful.

By the late 1970s the energy situation, domestically and internationally was complex and confused. In both settings the reaction to the oil price shocks of the early 1970s had been to

expand non-OPEC sources of energy supply. The reaction of customers had been to reduce energy consumption. The result was a tendency to oversupply the market. Complexity increased in 1978/9 when further oil price rises appeared to confirm the earlier concerns surrounding energy, particularly oil, imports. As a result one of the first actions of the incoming Conservative Government was to sign up to an International Energy Agency agreement that had the use and production of coal, and the establishing of an international steam coal trade, as common objectives (see Parker and Surrey, 1995). However, the real impact of the price-hike was to reinforce the earlier trends. Non-OPEC international energy supply continued to expand and consumers continued to seek efficiency savings, a trend that was exacerbated by a world slow down in economic activity leading to reduced energy demand. The new Conservative Government was in fact receiving conflicting signals. On the one hand, the rise in oil prices appeared to confirm the earlier forecasts of a 'tight' energy market. On the other, the falling demand and increasing supply appeared to falsify those same forecasts.

In terms of the domestic coal industry the situation was no less complex. Production had been stabilised as a result of the investment under Plan for Coal, and a sharp reduction in the number of colliery closures. Productivity remained static and the NCB depended totally on government funds for its investment programme (Parker and Surrey 1995, 823; Ashworth 1986). On the surface, domestic demand for coal appeared to be holding up to the forecasts, though this was a result of compensating errors. The slow progress of nuclear power increased the demand for generating coal while the depressed steel industry reduced demand in that sector. However, the British recession of the early 1980s further depressed demand, which because of structural changes in the economy was not expected to recover for some time. In addition, Plan for Coal had been pursued, albeit more slowly than had been anticipated, as had the nuclear power programme. Both would, throughout the 1980s, bring new capacity on stream in a declining or static energy market. Any government coming to power in 1979 faced an emerging over-supply imbalance in the energy sector.

The Conservative Government also faced a difficult political situation. The leadership positions within the NUM had, since the early 1970s started to fall to the 'Left', a trend that was to continue into the 1980s. The new leadership was implacably opposed to pit closures and believed in the efficacy of industrial action. As others have observed this feature can be traced back to the closure programme, and the falling relative wage levels of the 1960s (see Allen

1982; Crick 1985; Taylor 1991 Ashworth 1986). Perhaps the critical point to make in this context is that the new leadership rejected the corporatist 'social contract' relationships of the past. This latter point was, of course, reflected in the Conservative Party. It is against this background that the events of the 1980s and 1990s unfolded.

## 6.2 The Genesis of the 'Market Solution'

In one sense it is, perhaps, misleading to speak of strategic coal or energy policy in the Conservative Governments' since 1979. The Lawson doctrine suggests that the Government went to great pains to avoid such an 'Energy Policy'.<sup>60</sup> In a speech given in 1982, Lawson argued that:

as Secretary of State for Energy in the UK, I do *not* see the Governments task as being to try to plan the future shape of energy production and consumption. It is not even primarily to try and balance UK demand and supply for energy. Our task is rather to set a framework which will ensure that the market operates in the energy sector with the minimum of distortion and that energy is produced and consumed efficiently. (Lawson 1982, 6)

This rejection of Energy Policy represents a distinct break with the past policies of the Conservative and Labour Parties which had engaged in direct intervention in the sector, justified, in part, by the market failure of the inter-war years. Whilst it is true that Conservative Governments had not engaged in planning of the kind embarked upon by Labour, they had, nevertheless, intervened in the industry for reasons associated with the pursuit of macroeconomic objectives and to align supply with demand. By 1979 they had identified government intervention for macroeconomic purposes as a cause of the perceived failure of nationalisation.

In another sense, it is quite clear from Lawson's statement that Government did have a policy for the energy sector. A policy that was based on free markets. Energy was seen as no different to any other private good and should, therefore, be produced under similar conditions, preferably by the private sector. Government intervention was justified only in so far as it enabled the market to work more effectively. For the coal industry the free market solution was outlined by Lawson, even before he took over at the DEN:

[o]ur original aim was to build a successful, profitable coal industry independent of government subsidies; to de-monopolize it and ultimately open it to private enterprise. (Lawson to Howe, April 1981, cited in Lawson 1993, 142)<sup>61</sup>

<sup>60</sup> Lawson: Secretary of State for Energy 1981-83.

<sup>61</sup> The letter goes on to suggest that no progress would be made on these objectives until they had dealt with the monopoly union power.

As Parker and Surrey (1993) have argued, whilst such a policy may not have been *dirigiste* it was, nevertheless, a policy, one that informed the subsequent traumatic events in the coal industry. Clearly, in the context of this thesis some exposition of how and why the 'market solution' came to be adopted in the 1980s is desirable.

It is, of course, impossible to untangle the policies pursued since 1979 in the energy sector from those pursued more generally. Coal and energy have been caught up in, and have often been at the forefront of what has variously been termed Thatcherism or the Thatcherite project, that was in turn influenced, to some degree, by the New Right. It is beyond the scope of this thesis to attempt to explore these issues in the general sense or to engage in the debate over the meaning of Thatcherism (see for example Gamble 1994; 1996; Ludlam and Smith 1996; Marsh and Rhodes 1992b; Kavanagh 1990). Here only a brief outline will be given.

Nevertheless, it is essential to recognise the impact that the energy sector has had on the formulation of these concepts and the impact the concepts have had on energy policy.

Gamble (1994, 1996) argues the concept of a free economy and a strong, minimalist state, which was at the heart of Thatcherism, was consistent with the historical roots of the libertarian wing of the Conservative Party. He sees the ascendancy of this wing, over the collectivist wing, as a struggle for hegemony.<sup>62</sup> As the old hegemony, centred on social democracy, broke down under the weight of globalisation, world recession and inflation, Thatcherism emerged as the libertarian response. A rightward shift would both counter the shift to left in the Labour Party and, so it was hoped, result in a new hegemony, led by the Conservatives.

In so far as Thatcherism can be equated with the New Right then, at the centre of the concept was the idea that collectivism and big government were now seen as *the* problem rather than the solution to *a* problem. They were to be replaced by an emphasis on individualism, the markets and 'rolling back the frontiers of the state'. For the New Right 'it [was] taken as axiomatic that markets were inherently superior to any other way of organising human societies' (Gamble 1994, 46). The same might be said of much of the rhetoric of Thatcherism and it is this aspect of Thatcherism that is most applicable in the context of this thesis.<sup>63</sup> It

---

<sup>62</sup> Defined in terms of electoral, ideological, economic and political leadership.

<sup>63</sup> It is, perhaps, worth noting that welfare economics, the methodology applied by Labour in 1967, shared with the New Right an assumption in the supremacy of the market. The key difference between the two positions is that of the action required in the event of market failure. In welfare economics this justified government intervention. For the New Right markets will always supersede government intervention even when markets fail, firstly, because government failure is

might also be suggested that the nationalised energy sector in general and the coal industry in particular have contributed to the re-emergence of libertarian philosophies in the Conservative Party.

The analysis begins with nationalisation itself. In chapter three it was argued that, during the second world-war, a consensus was built amongst the political elite that the industry should be nationalised. This view emerged from the poor condition of the industry following the pressures for output and the lack of investment during the war, the failures of the industry to rationalise during the inter-war period and the publication of the Reid Report. However, whilst such a consensus undoubtedly existed, it should not be over emphasised.

Nationalisation was contested by the Conservatives, though somewhat half-heartedly following the acceptance, subject to adequate compensation, of nationalisation by the coal owners association (Arnot 1979, 128). Had the Conservatives won the General Election in 1945 it is unlikely that the industry would have been taken into public ownership. Speaking in the debate on the Nationalisation Bill Harold Macmillan argued that nothing in the Reid report required the nationalisation of the industry:

The policy that should have been followed, which we put forward and which is still our policy, is the policy of compulsory amalgamations; the financing of re-equipment by the industry itself through machinery provided by the State if necessary; a charter for the miners; the restoration of managerial responsibilities; a safeguard for the customer through competition between the reorganised, but proportionately much smaller groups in the industry. (Hansard 30<sup>th</sup> January 1946)

In other words, Macmillan saw that there was a need for some state intervention but not the need for either state ownership or the monopolisation of the industry.

Conservative concern over the issues of state ownership, the control of the industry and the creation of a monopoly ran through the passage of the Coal Industry Nationalisation Act (Chester 1976) and have a resonance with much of the later arguments put forward to support the privatisation measures of the 1980s and 1990s. In the 1940s, however, they were submerged in the ascendancy of collectivism brought on by the trauma of the 1945 defeat and the need to re-align for electoral success. 'A reactionary Conservative programme could have been suicidal for the party' (Gamble 1994, 72). In these circumstances Conservative policy turned to control of the nationalised industries.

---

likely to be more costly than market failure. Secondly, individual choice will always be preferable to collective choice (Henney 1994).



Whilst circumstances may have led to the overshadowing of economic liberalism they did not kill it. Two 'ginger-groups' within the Party, the One Nation Group (1950) and the Bow Group (1951), which sought, while remaining 'fairly heterodox' and without a 'Corporate view' to challenge the collectivist shift and promote economic liberalism. The One Nation Group called, in 1954, for a 'Return to a free economy and a programme of denationalisation'. Participants in these two groups who were to become influential in later years included Keith Joseph, Enoch Powell and Geoffrey Howe (Cockett 1995, 162).

In addition to the 'ginger-groups', located, primarily, within the Parliamentary Party, a number of outside groups were established to promote economic liberalism: most notably the Institute of Economic Affairs (IEA) in 1955, the Centre for Policy Studies (CPS) 1974, and the Adam Smith Institute (ASI) 1976. These groups were to complement each other in the efforts to promote economic liberalism.

The IEA was nominally independent of the Conservative Party and modelled itself 'very much on the Fabians and early Socialists'. They adopted a very long-term view on the processes required to re-establish economic liberalism as the dominant theme in British politics. By producing Occasional Papers, books and other material, primarily aimed at politicians and undergraduates, they sought to challenge and eventually replace collectivism. (Cockett 1995, 130)

The CPS emerged following what economic liberals viewed as the failure of the Heath Administration: it was formed 'to fight the battle within the [Conservative] Party'. Although, like the IEA, financially independent, it was much closer to the Party, and following the 1979 election closer to the centres of power. Like the IEA they were predominantly interested in the 'shape' of the future, rather than in policy detail. The ASI, on the other hand, was more interested in the application of economic liberal ideas, the 'micropolitics' of implementation (Cockett 1995, 238-9, 283).

All three 'think tanks' published on coal or energy policy illustrating the political importance of the sector and its position as an exemplar of what was wrong with British industry. Here was a sector that appeared to stumble from one crisis to another, required seemingly endless amounts of government support and one that they thought ripe for free-market, competitive, solutions. The IEA first published as early as 1963: George Tugendhat's Freedom for Fuel suggested that about 350 of the 611 pits should be closed and that the British markets should be opened up to

import competition. Interestingly, the paper ruled out returning the coal industry to the private sector. This was followed by a multitude of publications by the IEA, the CPS, the ASI and writers associated with the 'think tanks' in other publications. Table 6.1 shows some of this literature.

Table 6.1 'Think - Tank' Publications on Energy.

Author	Date	Title	Publisher
Tugendhat, G.	1963	Freedom for Fuel	IEA
Robinson, C.	1969	A Policy For Fuel	IEA
Tugendhat, G.	1969	Energy Policy	Economic Studies
Robinson, C.	1971	Competition for Fuel	IEA
Robinson, C.	1972	What kind of Fuel Policy for Britain	Journal of the Institute of Fuel
Robinson, C. and Crouch,	1973	Is there a World Energy Crisis?	National Westminster Bank
Robinson, C.	1974	The Energy Crisis and British Coal	IEA
Robinson, C. and Marshall, E.	1981	The Coal Industry and Coal Policy in Britain	IEA
Robinson, C. and Marshall, E.	1985	Can Coal Be Saved?	IEA
Boyfield, K.	1985	Putting Pits Back into Profit	CPS
Henney, A.	1987	Privatise Power	CPS
Robinson, C and Sykes, A.	1987	Privatise Coal	CPS
Robinson, C.	1988	Competition in Electricity	CPS
Robinson, C	1989	Electricity Privatisation: What future now for British Coal	Energy Policy

Assessing the influence of 'think-tanks' on policy is difficult. There is much common ground between their output and the rhetoric of the Thatcher Governments, particularly with respect to the role of competition to provide a discipline on costs and the undesirability of government protection for the industry. It is also clear that many leading figures were influenced by and were involved in the think-tanks (see Cockett 1995). Nevertheless, there are clear differences between the policy prescriptions of the New Right and Government policy. Robinson, for example constantly argued for more competition in the ESI and privatisation of the coal industry alongside that of the ESI, otherwise, he cautioned, the coal industry would face a very difficult future. As Self (1993, 71) notes, there was an inevitable dilution of ideas between academic public choice writing and implementation, but nevertheless politicians 'self consciously' use such writings to justify their policies.

In chapter three it was argued that the role of 'ideas' should not be under emphasised and in chapter five it was suggested that 'ideology' or, perhaps, more correctly, the current 'big idea' shaped the response to the economic factors in the 1960s and 1970s. In the 1960s the big idea was centred on planning, science and technology. These influenced the policy processes, which in turn influenced policy output and then affected outcomes. In 1974, consultation with the unions and the Social Contract dominated Labour's thinking, which again shaped the policy process, influenced policy output and affected outcomes. In neither case can a direct casual link be made between the outcomes and the 'big idea'. Nevertheless, different starting positions led to different processes and different outcomes. Ideas matter.

Similarly, it is possible to suggest, as Cockett (1995) does, that the 'think-tanks' were influential in the formation of the underlying framework of Thatcherite policy in general and in relation to the energy sector. It was a framework that had a resonance with earlier concepts of Conservative economic liberalism and widespread Conservative concerns over the detail of nationalisation. At the core of the framework was the supremacy of the market. Where the market 'failed', then the policy prescription was to remove as much of the failure as possible. Second best solutions, the offsetting of one market distortion by some compensatory distortion, were anathema.

However, whilst the role of ideas should not be underestimated it is important to put them in perspective. In Britain, the impact of ideology appears to have been somewhat muted as politicians on both sides of the spectrum have adopted more pragmatic solutions to problems. Ludlam & Smith (1996, 272) have argued that a number of features 'lends force to the representation of Thatcherism as a continuation of traditional Conservative statecraft concerns of governing competently and winning elections.' They go on to suggest that:

what must be acknowledged is that, in crucial areas such as economic policy and social policy, Thatcher's statecraft was based on different policy preferences from those of previous Conservative administrations..... From this point of view it makes more sense to see the ideological banner-waving of Thatcherism as providing, beyond a platform from which to attack opponents, a basis for rationalising the outcomes of policy initiatives. (Ludlam & Smith 1996, 272)

In other words, the Conservative Government's preferences tended towards economic liberalism, but ideology justified policy *ex-post* rather than dictated it *ex-ante*. Of course it is beyond the scope of this thesis to deal with this question in the general sense. The limited possibility that needs to be explored here is that the 'market solution' went beyond a simple

'private good, public bad' ideological analysis and was embedded in more pragmatic approaches to perceived problems.

In chapter five it was argued that strategic policy had been formulated in networks that emerged from the interaction of ideas and events and which had an impact upon policy. In the case of the 1967 White Paper a semi-sectoral network was identified which was dominated by Ministry of Power officials, the nuclear industry and the electricity industry. This was reflected in policy that pushed the coal industry into a spiral of decline. In the 1970s a different network emerged from the energy and political crises. Ideas of Social Contract had replaced ideas of scientific government and the network was dominated by the coal industry's management and unions, something that was again reflected in the policy as the industry embarked on policy of stabilisation and a massive investment programme.

These features were not lost on the New Right - as seen in chapter three, the network approach has not been confined to any one political perspective. The New Right drew comparisons with the private sector and concluded that if politics were introduced into essentially commercial decisions then vested interests would distort the process. Thus, according to Henney (1994, 11): [t]here is a fundamental difference between 'policies' pursued by companies and 'policies' pursued by government'.<sup>64</sup> Henney goes on to argue that:

[o]ur secretive style of government and secretive nationalised industries, the dominance of the executive over a weak parliament, and too frequent ignorance and servility of civil servants and their preference for 'official' sources of information (generally carefully filtered by themselves) has exacerbated the problem. ....certain parties have a dominance of expertise and information (as British Coal had), they can hide mistakes and mislead the public, and dissenting views and facts that counter the prevailing political wisdom can be sidelined.  
(Henney 1994, 11)

Henney overstates the power of the nationalised industries to pursue their own interests, as the circumstances surrounding the 1967 White Paper demonstrated, though he does point to several features which this thesis has identified as key to understanding the policy process in the coal industry: asymmetric information, vested interest, closed policy-making structures and the exclusion of dissenting views featured in chapters four and five.

The 'failures' of the nationalised industries were also well known to some influential figures within the Conservative Party. Sir Keith Joseph sat on the Select Committee on Nationalised Industries in the late 1950s and Nicholas Ridley on the same Committee during its mammoth enquiry into Ministerial Control in 1967/8. Ironically, Ridley sat listening to Lord Robens

---

<sup>64</sup> For a critique of this position see Self 1993.

expound on the problems of interference, the failure to separate commercial and social objectives and distortions associated with compartmentalised and political policy processes (see chapter five). Lawson had also taken an early interest in energy issues as a reporter on the Financial Times and during the drafting of the Conservative's Election Manifesto in 1974 (Lawson 1993, 130, 164). In other words some key Conservatives were in positions that enabled them to identify the problems, and analyse the causes, which required solutions. Of course it can be argued that the solution was based on the ideological preferences of economic liberalism. Nevertheless, it is also true that the interaction of perceptions of policy failure in the British coal industry and the ideology of the New Right and the Conservatives was dynamic, as one informed the other. It does not make any sense to treat the ideology as an exogenous shock.

For Henney, the New Right and the Conservative Governments of Thatcher and Major the solution has been to change the ethos of the nationalised industries, turning them, in the later phrase of the British Coal Board, from 'an institution into a business' (MMC 1989). The Conservative Governments were attempting to resolve a paradox that had long been seen as a cause of tension in the nationalised industries: that they should achieve economic and financial results comparable to the private sector and at the same time perform social functions, such as the maintenance of employment in depressed areas, and become instruments of macroeconomic policy (Taylor, 1991). From 1979 onwards the rules became much clearer: nationalised industries would become economically efficient and financially independent; they would perform as private sector industries. Other historic objectives- local employment levels, UK energy self sufficiency, and inflation control - were either abandoned as unnecessary or achieved by other means. Only by exposing the nationalised industries to market competition (through, where possible, privatisation - where not, the introduction of the private sector ethos) could their objective, and the objective of all post-war governments, that of economic efficiency in the nationalised industries, be achieved. The 'market solution' was a deliberate attempt to limit government interference and break down the policy networks and communities that were seen as a major reason for the policy errors and inertia of the past. As Henney (1994, 12) put it, 'markets break the political nexus'. Monopoly, trade union power, and the pursuit of vested interest were all government 'failures', which, for the Conservatives, were the inevitable consequence of government intervention. Add to these failures, the insulation from the threat of take-over or bankruptcy that flowed from nationalisation then we have a rationale

for the ad-hoc policies of the 1980s and 1990s. Importantly it should be recognised that the Conservatives were not attempting to replace the corporatist relationships of the 1970s with a 'policy community' more to their liking but attempting to replace a political process with a market process. Markets, at least the perfectly competitive markets of rational choice theory, would remove the distortions that planning and interest group pressure had introduced into the energy sector. Where markets were less than perfect governments could then, and only then, intervene to regulate for competition.

This latter point is key to understanding the events of the 1980s and 1990s and it is important to understand the theory underpinning the policy as it related to the coal industry. First, it was believed that there were no special circumstances in the energy sector generally, or the coal industry particularly, that necessitated treatment different to any other private goods. Energy, like any other consumable good, could and should be exposed to market forces and there were no political, social or strategic reasons to prefer coal or any other fuel. This implies an accounting view of profit, loss and costs, with each determined by the markets; externalities such as the social cost of pit closures or balance of payments issues should not deflect attention from the financial position of the industry. Given this belief then a number of logical, economic, arguments follow: the demand for coal was a function of its price relative to other fuel prices; investment in the industry should be a function of consumers' long-run demand which they will signal if coal is priced at its long-run marginal cost; if price reflects long run costs the need for deficit grants is removed and the industry will be able to finance an increasing proportion of its investment requirements internally.<sup>65</sup> This, again logically, achieves a number of objectives: reducing the industry's dependence on government finance, thus supporting the Government's wider economic objective of controlling the PSBR; increasing the independence of the industry; and, since the future supply will be determined by market signals, balancing supply and demand. It is a process that, theoretically, leads to the optimal use of resources, is automatic and results from all actors acting in their own self interest. It is in short, Adam Smith's 'invisible hand'.

---

<sup>65</sup> Strictly, the arguments assume perfect competition. The logic is also something of a departure from the strict application of economic modelling which argues that it is the opportunity cost capital, not its source, which should be the determining factor. Internally generated profits can come from two sources: depreciation, the amount required to replace existing capital, usually reflected in costs; and profits. The Government's aim that the industry finance more of its investment internally implied that the industry make profits. This does begin to raise complex issues of accounting procedures in the coal industry, which need not detain us here (see Berry *et al.* 1985).

There are of course many criticisms that can be made of such simplistic 'economic' prescriptions, however, these are beyond the scope of this thesis (see Ormerod 1994 for an accessible attack on the theoretical position; Helm 1991 for a spirited defence of the need for government intervention in the energy markets). A key presumption of this thesis is that given a level playing field and the optimal use of available resources much more of the coal industry could have survived into the next century. Coal could and should have been able to compete in a competitive environment. If it could not, then there were few convincing arguments for maintaining the industry and even less justification for the millions of pounds invested by the Conservative Governments. The problem, as will be seen, was the unevenness of the playing field and the waste of resources.

The Conservatives came to power with a solution to the seemingly endless crises of the energy sector and the coal industry. The industry had been nationalised to, inter alia, increase the efficiency of coal production and despite two large investment programmes still required government financial support. The solution was to open the industry to market forces in the context of a competitive energy sector. It was a solution that had emerged outside the machinery of government and a policy that could be expected to encounter a great deal of opposition. Opposition from within the DE, as civil servants were asked to abandon their role in dirigiste energy policy; and opposition from the industry, as it sought to defend the status quo. As we saw in the previous chapter, Plan For Coal 1974 had been sustained primarily because of the close community relationships between Tony Benn, the NUM and the NCB. It was seen in chapter three that 'network theory' emphasises continuity of policy, where strong community-type relationships exist. So continuity of agricultural support is attributed to the close institutionalised relationships in that industry which have survived successive changes in government and the impact of EC membership. To be sure, the agricultural community adapted to the changes but nevertheless the need to maintain support for farmers remained the central premise of policy (Smith, 1990). This could suggest that the new Government might have had some difficulty in imposing radical solutions on the coal industry. That they succeeded, in their own terms, is perhaps remarkable. However, as the next section will demonstrate such success can be attributed more to fortune than the implementation of a coherent strategy.

### **6.3 Implementing the 'Market Solution'**

When the Conservatives came to power in 1979 the 'market solution' could not be implemented. As noted, conflicting signals regarding the energy situation, internationally and

domestically, were appearing. The country was 85.6% dependant on coal for its electricity (Parker & Surrey 1995, 822) so the NUM could not be challenged without running the risk of another Conservative defeat at the hands of the miners. The industry's monopoly could only be challenged in the long-term with, or so it seemed at the time, a new programme of nuclear power stations. Looked at from the perspective of the early 1980s, the Conservative Government, no less than their predecessors since the early 1970s, were reliant on coal for the foreseeable future (see Sweet 1985). Privatisation was no more than a very distant possibility.

The problem for the Conservatives, again no less than their predecessors, was how to achieve the aims of the market solution, that is an industry that was financially independent, producing coal at least cost and with supply and demand in balance, in the absence of competition and a *real* energy market. Initially the strategy adopted appears to have been to reverse the logic of the market. Government could control the level of profit/loss that the coal industry made, by setting a tight financial framework, and signalling the intention to stick to the targets. The industry would then have to equate supply to demand at the price customers were prepared to pay. If those prices were too high, the industry would have to close surplus capacity and/or reduce long-run costs. Since only the industry was in a position to know the long run supply curve, the decision on the correct mixture of closure and cost reduction could be left to them. To set these mechanisms in motion and achieve the objectives in the coal industry all government had to do was to signal to the industry that it would not continue to bale it out. In much the same way that the Government sought to control inflation through indicative monetary targets it sought to control the coal industry through increasingly tighter External Financing Limits (EFLs). Requiring that it should break even by 1983/4 and that it should increase the level of internally generated investment funds (Coal Industry Act 1980).

Much has been written about the failure of this initial strategy, the 1981 U-turn on pit closures and the relaxing of the EFLs (see chapter two). There is little that needs to be rehearsed here, though two points are relevant to this thesis. First, the events of 1981 appeared to confirm, from a New Right perspective, the earlier analysis that second best solutions were no solutions at all. In essence, the strategy of tightening of EFL's was a political strategy, one open to the faults of the past. EFLs were negotiated with the industry, which had a virtual monopoly on information (Haslam Interview). They could also be rendered useless by the unions, as had happened in 1981. Networks and vested interests remained a central feature of policy implementation. In addition, unless a government was prepared, or able, to see a nationalised



industry default or go bankrupt, EFLs were empty threats. Nationalised industries, because of their centrality to economic activity could always expect that government would cover its losses. In other words, the 'invisible hand', if it was to work, could not be seen upon the tiller. Market mechanisms cannot work through a political process and if the 'market solution' were to be applied to the coal industry it would have to be done through real market forces.

Second, and related, was the replacement of Howell by Lawson at the DEn, a ministerial change that, arguably, had an impact on energy policy well beyond his two-year tenure of office. Lawson's 'ideology' has already been noted, but what is equally important to this thesis, he recognised the difficulties of implementing a 'market solution' within a sector conditioned by years of dirigiste government intervention:

[v]irtually all the people and institutions associated with energy policy were still drenched in corporatism ..... There clearly had to be changes both within the department and in the coal, gas and electricity industries. (Lawson 1992, 132)

The energy industries' chairman he believed to be antagonistic to the government's economic policies; and in his view the NCB was controlled by the NUM, which still had considerable market power and a leadership willing to deploy it. The DEn officials were wedded to the notion of energy planning and in the light of the events of 1981 expected to be engaged in the preparation of a new, dirigiste, energy policy. Indeed, under Howell at least two starts had been made on an energy Green Paper (Whitehall Interviews). On the face of it, changing all this and imposing a 'market solution' did not look easy.

However, two key features eased Lawson's task. First, as Marsh and Rhodes (1992) suggest, ideological change can impact on networks. In this case the election of the Conservatives in 1979 and emergence of a 'left' leadership within the NUM resulted in two ideological shifts that were diametrically opposed, and in terms of the network, reinforced each other. Both the Government and the NUM rejected the corporatism of the past. The Government did not seek to build a consensus with the union and even if it had the union would not have been interested - by the early 1980s they were pursuing an industrial rather than a political, or dual, strategy (Taylor 1991). Second, both the NCB and CEGB chairmanships were due for renewal, enabling Lawson to replace Derek Ezra and Glyn England with Ian MacGregor and Walter Marshall. Marshall's main tasks were to prepare the ESI to withstand a coal strike and promote the nuclear power industry, then still seen as the best means of reducing the country's

dependence on coal for electricity generation.<sup>66</sup> MacGregor's appointment owed much to his reputation in handling trade unions; he was put in place specifically to challenge Scargill (Lawson 1993, 152-7).

Taken together the ideological shifts, changes at the top of NCB and CEGB, the emergence of benign energy markets and the NUM's internal difficulties proved sufficient to neutralise the NUM's industrial strategy and since, as Taylor (1991) argues it had no political strategy, it was reduced to a bystander. Again, so much has been written about the events of 1984-5 that there is little need to repeat the discussion here. It is sufficient to note that the defeat of the NUM in 1985 changed the political balance of power. Arguably, the Government was no longer constrained: it could impose the 'market solution'. It has also been seen that on one analysis this explains the subsequent demise of the industry. The Government set about 'liberalising' the energy sector and in the process coal lost its markets. Whilst there is much that can be said for such an analysis there is a danger that too much 'consciousness' may be imputed into the Government post-strike strategy.

### **6.3.1 Post-strike strategy**

After the strike both Haslam, the new BC Chairman and Peter Walker, the Secretary of State, took the view that the major part of the restructuring of the industry would be completed by the middle of 1987. It was, in Haslam's words, 'moving into calmer waters' (HC 196 I Q952; Q1053). The expectation was that closures would continue but on a much reduced scale. Of course, both Haslam and Walker refused to be drawn into specifying how many men would be employed in how many mines. It must have been clear to them that rising productivity would lead to fewer of both for any given quantity of coal production, but acknowledging this in terms of figures was politically sensitive. However, the real issue, which was not fully pursued by the Energy Committee, was the perceptions they held on the future demand for coal. Again both refused to be drawn, hiding behind the inaccuracies of previous forecasts. Nevertheless Haslam did suggest that BC's electricity generating market would continue to be about 80 million tonnes (compared with 85 mt. in 1985-6) and from the mid 1990s start to grow. In addition other markets, including the export market, would expand if the productivity increases continued and the real price of coal fell (HC 196 I, Q960; Q1022). Nothing Walker said appears to contradict these expectations. In short, what comes out of the Energy Committee

---

<sup>66</sup> Ian MacGregor followed on from Norman Siddall's caretaker chairmanship of the NCB.

questioning is that both Government and BC expected a reasonably stable demand for coal because increasing productivity would increase competitiveness. Indeed Haslam throughout most of his period as Chairman, 1986-1990, took the view, which he suggests was shared by Government and the DEN, that the 'fighting weight of the industry' would be 100 mt. produced in 100 pits employing 100,000 men (Haslam Interview). Even as late as March 1989, when annual total production was 103 mt. Haslam was suggesting that, following the uncertainties surrounding the ESI privatisation, the industry faced 'two more exacting years', but that:

I believe, however, that the major restructuring and reshaping exercise we have been vigorously pursuing will be largely accomplished in this period and we will be able to face the future with confidence. (BC Annual Report and Accounts 1989)

Only towards the very end of his tenure, December 1990, did he recognise that these estimates were beginning to appear overoptimistic and that an outcome of about 50 pits was more probable.

Pit closures would continue but only at the rate of exhaustion and increased productivity. The industry had a viable future at its then current level of output (around 100 mt.) and, potentially, at higher levels.

Walker's successor, Cecil Parkinson appears to have maintained similar expectations about the eventual size of the coal industry. In a speech to the Institute of Mining Engineers in May 1988, he made it clear that the industry would have to win its market share in competition with other fuels and imported coal, and also that fuel diversification was desirable; but he went on to suggest an up-beat future for the industry:

When you think that after privatisation the electricity industry will still be looking for 80 mt. of coal, that is a huge potential market..... British Coal is showing, by its productivity improvements, that it is capable of producing coal at keen competitive prices..... The Government continues to back British Coal in making huge investment - investing two million pounds every single working day of the week, way into the foreseeable future..... Coal is by far and away Britain's biggest indigenous fuel reserve.

So big reserves, a big demand for the product, modern investment, modern working practices to go with that investment, and the future for coal and everybody who works in it can, in my view, be very bright indeed. (Parkinson 1988)

Similarly, civil servants have been keen to point out that the intention during the post-strike period was *not* to close the industry down (Whitehall Interviews).

This evidence is supported by the continued level of actual and proposed investment. The Board in July 1981 had drawn up a new strategic plan, Development Plan to 1990, that

supposedly recognised the changed economic and energy market climates. The plan, which was not accepted by the Government, proposed investment expenditure of £730m (at September 1980 prices, about £1200m in 1987 prices) in each financial year between 1982-3 and 1990-1 (MMC 1983, 182). The Development Plan to 1990 was based on continued optimism about future coal markets, albeit at reduced volumes to previous forecasts. They anticipated that total NCB disposals would rise from 112 mt. in 1981-2 to 124 mt. in 1990-1. In essence the Plan was a revision of Plan for Coal and can be viewed as something of a rearguard attempt to maintain the underlying principles of Plan for Coal at a lower level of output.

Following the strike, BC downgraded its estimates for total inland demand to a range of 105 mt. to 115 mt. in 1990 (MMC 1989, 19), but refused to be drawn into giving estimates on its share of that market. The impact of this new realism on the investment programme was a reduction in actual and planned expenditure. From a peak in 1982-3 of £939m, expenditure fell to £623m in 1985-6; £579m in 1986-7 and £563m in 1987-8. Planned expenditure for the period between 1988-9 and 1992-3 shows a further decline, down to £442m in 1992-3 (MMC 1989, Tables 4.1 and 4.4. All figures are in constant 1987-8 prices except planned expenditure which is shown at September 1987 prices. All exclude opencast). The figures clearly show a slackening of investment expenditure both in comparison to the past record and with what the NCB had planned in the early 1980s. However, what the figures do not illustrate is a policy of decline. As investment under Plan for Coal came to completion, some decrease in spending was to be expected. Rather the figures suggest some planned stability at a lower level of activity.

This latter point can be derived, albeit somewhat crudely, by exploring the relationship between 'other' investment expenditure and the number of collieries. 'Other' expenditure is primarily related to expenditure required to replace worked out coalfaces and surface installations. It is that part of capital expenditure that is peculiar to mining industries as it is consumed by the production process, if pits are to remain open it must be incurred. Planned 'other' expenditure for the year 1988-9 (as calculated in 1988 MMC 1989 Table 4.4) was £184.2m which if shared between the 94 collieries operating in March 1988 gives an average of £1.96m per mine. Using this figure then a planned 'other' expenditure of £157.5m in 1992-3

suggest that about 80 mines would be operational.<sup>67</sup> A further rough extrapolation would suggest that 80 collieries could produce in the range of 80 mt. to 100 mt. coal per year.<sup>68</sup>

In terms of actual expenditure on investment the Board spent £1.7 billion (at current prices) between 1988-9 and 1991-2. This is, of course, considerably below the £2.1 (in September 1987 prices) billion that had been planned in October 1987 (MMC 1989, table 4.4). However, it is clear that the adjustment to the Board's investment programme came after 1988 and that investment continued, albeit at a reduced level, in pits that would soon close.

The key argument being made here is that the Conservatives' overall objective for the coal industry was, as it had been before the 1984/5 strike, to turn it into an 'efficient' and financially self-sufficient industry leading to its privatisation. Despite continued denials that they held a position on how large that industry would be, there is some evidence to suggest that it was believed that about 100 mt. of coal would be competitive in the 1990s. It was on that basis BC planned its investment programme and the government approved and financed it in the late 1980s. There is no evidence that suggests that the Government either planned for, or anticipated, that the industry would be reduced to a rump of 16 pits by 1995.

Whilst the evidence suggests that there was a conspiracy to close the British deep-mined coal industry is unfounded there is some evidence to suggest that the Government did intend that BC coal should play a diminished role in total energy supply, particularly in terms of electricity generation. Parker and Surrey (1995) while rejecting the more extreme conspiracy theories, use the reduction in the investment programme, the 'silence' on the industry's future and 'hints' that Government saw a 'strategic value' in the industry's contraction as evidence of a policy of its run down. These features are not being challenged here. However, we do not need 'conspiracy' theories, extreme or otherwise, to explain such a policy. Firstly, it can be seen as part of a process of fuel diversification that had started in the 1950s (Gibbon and Bromley 1990). Secondly, such a policy was rational, in the general sense, since over reliance on a single energy supplier had had disastrous consequences in the past. In the 1950s, when coal had supplied the bulk of Britain's energy needs, the industry had been unable to keep pace with

---

<sup>67</sup> If, on the other hand, BC had been planning for the reduction of collieries to about the 50 that were in production in March 1992 then the implication would be that they expected face and equipment replacement costs to escalate by 50% in real terms, something which appears improbable. It should be recognised that the use of heavy duty face equipment and the introduction of MINOS systems would increase face replacement costs but set against this is the expected increase in output from such investment.

<sup>68</sup> In reality the figures would also depend upon the expected improvements in mine and overall productivity that was built into the estimates.

demand; this was followed by over reliance on 'cheap oil' that suddenly became expensive in the 1970s. Over reliance on coal for electricity generation had never been the policy in the aftermath of the OPEC crisis; rather coal would have a place alongside other fuels, primarily nuclear power. The fact that NCB/BC coal supplied so much of the input fuel for electricity in the 1980s was a consequence of the failure of the nuclear industry and short-term political fixes to avoid challenging the coal industry (see Helm 1993). Even more significantly, the events of 1984/5 and the continued belligerence of the NUM leadership graphically illustrated the danger of disruption to the supply of coal. On any analysis, fuel diversification, if possible, must be a desirable objective whatever the politics pertaining in an individual sector.

What is at issue here is the scale of the intended run down of the industry. What this analysis implies is that in contrast to the 1960s, when Robens had failed to convince the Labour Government of the potential of the industry, the Conservative Governments identified two coal industries. One that was costly, inefficient and should be closed, the other a high - tech industry capable of competing in the energy markets. The weakness in the energy markets and the defeat of the NUM had allowed it to force through closures. Investment in the remaining mines would lead to reductions in costs, the elimination of the industry's call on government support and facilitate its privatisation. Closures and investment were the primary instruments for implementing the 'market solution'. The process would involve the gradual closure of uncompetitive pits and a shift in the fuel mix used for electricity generation. The optimum size of the industry would then be determined by the level of competitive supply, which was expected to increase with investment. The governments' strategy was in fact more dirigiste than their 'ideological' aims and retrospective accounts suggest. That the strategy failed became apparent in the events leading to the 1992 crisis, to which the chapter now turns.

### **6.3.2 The Meltdown**

Four features of the late 1980s and early 1990s undermined the strategy. Firstly, the weakening of the markets which was a function of the recession of the early 1990s and the increase in world energy supply that depressed the price of oil and therefore other energy prices. Such changes in the 'energy system' that would have caused the industry some difficulties and perhaps some additional contraction. However, they are not sufficient to explain the crisis of the coal industry in the 1990s.

Secondly, environmental concerns began to influence energy policy. Initially, concern focused on 'acid rain', which was linked to sulphur emissions from the combustion of high sulphur content fuels. As with later concerns over 'greenhouse gases', the issue took on an international dimension since pollution was exported across national boundaries. The European reaction was led by Germany, which embarked on a large programme of retrofitting flue gas desulphurization (FGD) equipment at its coal-fired power stations. This culminated in the EC's Large Combustion Plant Directive in 1988, which committed the Britain to reducing SO<sub>2</sub> emissions (Parker and Surrey 1995, 830).

Evidence to suggest that the Government consciously used the environmental issue to diminish the importance of the coal industry is somewhat patchy. Indeed, it would appear that the Government was divided over how far to pursue environmental issues if they conflicted with other domestic considerations. In February 1992, Heseltine, Secretary of State for the Environment, failed to persuade a Cabinet Committee to bring Britain's carbon dioxide reduction targets forward by five years. The measure was opposed by the Secretary of State for Energy because it could undermine the privatisation of British Coal (*The Times*, 27/2/92). Nevertheless it is also true, as Parker and Surrey point out, that the Government was less than committed to clean coal technology, which became an early casualty of Research & Development cutbacks.

The third, and most significant feature of the late 1980s was the privatisation of the ESI (see Parkinson 1992; Roberts, Elliott, Houghton 1991 for detailed accounts).

Parkinson's overall objective for the ESI privatisation was the introduction of as much competition as possible (Parkinson 1992). An objective which sprang from some disappointment with the earlier privatisations of Gas and British Telecom which had not been broken up on sale. As Helm (1991) points out, many thought opportunities had been missed. By the time of the ESI privatisation it had been:

recognised that an efficient industry required more complex regulation, private ownership, and the separation out of elements of natural monopoly from the competitive ones. What had begun under Lawson as a simplistic withdrawal by the State now became an extremely complex task for fostering competition. Regulation *for* competition had become at least as important as regulation *of* monopoly. (Helm 1991,6 original emphasis)

For the Government now, only real competition could set the market mechanisms in motion, increasing efficiency, financial independence and lowering prices. The ideas of the New Right had become the new orthodoxy. A third election victory made them possible.

In order to introduce that competition into the electricity market, the Regional Electricity Companies (RECs) were allowed to generate up to fifteen per cent of their own requirements.

It was felt that:

the area boards which had been at the mercy of the monopoly supplier would, given the ownership of the grid and the urge to diversify their sources, be keen either to build their own power stations, or to go into joint ventures with private suppliers. (Parkinson 1992, 271)

Parkinson's prescience appears impressive. The RECs did enter into partnerships, but these were partnerships to build gas fired power stations that were to lead directly to the fourth feature that undermined coal policy, the 'dash for gas'. Parkinson's comments on the coal industry in 1988, cited above, do not suggest such a trend was anticipated.

Perhaps the most important point to make about the 'dash for gas' is the remarkable speed with which gas emerged as a competitor to coal. Until 1990 it had been assumed by BC, the NUM, the Government and most commentators, that the threat to the deep-mined coal industry came from imports. Opinion differed on the likely impact this would have on the industry.<sup>69</sup> The Board and the Government appeared confident that they could beat off some of the challenge, believing international coal prices would rise over time, that domestic costs would fall and that customers would appreciate their ability to offer long-term competitive contracts with prices in terms of sterling and the retail price index (BC Report and Accounts 1989, Parkinson 1988).

It was noted in chapter five that the use of gas for electricity generation had been considered a possibility by the 1967 Fuel Policy White Paper. The issue had also been raised in 1974 but circumstances, and pressure from the coal industry, resulted in the elevation of natural gas to premium fuel status: as such, its use as a secondary source of energy was deemed wasteful.<sup>70</sup> This policy became further entrenched when a European Community directive in 1975 all but prohibited the use of gas for electricity generation. By the late 1980s, two features of the gas industry led to the relaxation of this prohibition. Firstly, technical change in the transformation of gas into electricity led to greater thermal efficiency (see Goddard 1989). Secondly, estimates of gas supplies in the 1980s were continually revised upwards. More recoverable reserves were discovered and recovery rates increased. In addition, the development of a Pan European

---

<sup>69</sup> The NUM research archives contain a great deal of information and research work on coal imports but little work on the threat from gas.

<sup>70</sup> The NUM's submission to the Coal Industry Examination argued for classification of natural gas as a premium fuel and low depletion rates.



supply network gave access to supplies from Norway, North Africa and, following the fall of communism, Russia and other former Soviet States. The result was a diversification in supply sources which reduced the prospect of an OPEC-style cartel and a quantity of supply that, given the current growth in consumption and discovery, should last well into the twenty first century (Odell 1996, First Energy Studies Lecture, University of Sheffield 1996).

New supplies and new technology reduced the rationale for a prohibition on burning gas in power stations and pressure built up to rescind the 1975 directive. Initially, the Directorate-General for Energy was reluctant to revoke or amend the directive, recognising the impact such an action would have on the Community's coal and nuclear industries and that it would run contra to past EC policy by increasing dependency on energy imports. In 1990 the Commission gave approval in principle and in January 1991 the European Parliament voted to repeal the directive. However, it is also clear that some pre-emptive planning of gas fired power stations had occurred in the UK on the basis that the prohibition would be lifted (Fothergill and Guy 1992, 13-22).

The speed with which gas replaced coal was breathtaking. Starting from a base line of zero mega watts from gas-powered stations in 1990, by 1992 there was enough capacity either built, under construction or with all the necessary planning consents obtained, to generate 10.1 giga watts in 1995: equivalent to 25 mt. of coal (Fothergill and Guy 1992, 22).

The interaction of weakening markets, environmentalism, the ESI privatisation and the 'dash for gas' created the conditions for the closure announcements of 1992. Again, there is no evidence to suggest a conspiracy. Indeed, until Government received the Rothschild report in October 1991, there is little to suggest that it was even aware of the impending crisis.

Assessing the degree of ignorance in BC, Government and Whitehall is, of course, extremely difficult. Participants in the debacle are keen to suggest their own control and command of events and much of the contemporary record remains locked away under the thirty-year rule.<sup>71</sup> However, some points can be made.

It has already been argued that up until the early 1990s the main Government objective for the coal industry was its restructuring into an 'efficient' and financially independent industry; a policy pursued by financing the industry's restructuring and investment costs. It has also been

---

<sup>71</sup> Even when the papers are made public it may be difficult to build a complete picture. The Government's concern over 'leaks' led to the use of oral presentations rather than written submissions (Haslam Interview).

suggested that up to that point the commonly held view was that the industry would produce some 100 mt. in the 1990s, even though it should be noted that depressed demand had already led to deep-mined output falling to 75 mt. in 1989/90.<sup>72</sup> There is some evidence to suggest that during 1990 perceptions began to change. Haslam indicated that by the time he left, in December 1990, he had down sized his estimation of the industry's 'fighting weight' to some 50 mt. in 50 pits, because the 'gas thing was beginning to take off' (Haslam interview). British Coal clearly recognised the necessity of further restructuring and between March 1990 and March 1992 closed twenty three collieries, reducing the number to 50. However, significant rises in productivity meant that the closures had little impact on deep-mined output, which fell from 75.6 mt. in 1989/90 to 71.0 mt. in 1991/92. British Coal, between 1990 and October 1992, appeared to be operating a policy of maintaining output from a reducing number of collieries, in the long-run it was not a policy that was sustainable. Coal stocks were beginning to rise, from 34.6 mt. in March 1990, to 42.2 mt. in March 1992, as the recession reduced demand and the privatised ESI imported coal (BC Annual Report and Accounts). Even without competition from gas, the industry faced further retrenchment.

From 1990, BC was privately warning the Government about the threat to coal's markets posed by the new gas power stations. However, the Government appears to have remained convinced that privatisation of the industry was possible and, as already noted, they continued to invest in pits that would soon close. They also contemplated the end of the 'generous' redundancy payments that had helped facilitate the closure of many pits. It is possible to suggest that throughout 1990 and until 1991 it was expected that there would be further closures, due to the weakening market and productivity gains. What they did not foresee was the scale of the closures necessary in 1992.

If this is true, then it would appear that full recognition of the impending crisis could be dated as late as autumn 1991, with the receipt, by the DEN, of the first Rothschild Report. Rothschild had been commissioned by Government in May 1991 to advise it on the privatisation of the coal industry. Their first interim report concluded that the likely market for coal in the 1990s would be such that only 14 pits would survive, *irrespective of privatisation*.<sup>73</sup> The issue for Rothschild was not how many tonnes of 'competitive' coal could be produced, but how many

---

<sup>72</sup> This does not necessarily imply an abandonment of a 100 mt. in the 1990s. Output and capacity are different things and new projects such as Selby and Asfordby were still to come into full production.

<sup>73</sup> A copy of the report can be found amongst the NUM's research documents, DACE 389.

tonnes could be sold. Significantly, the merchant bank had advised the RECs during the privatisation of the ESI and therefore would have some insights into their likely ambitions to develop gas-fired power stations. Just as the 'city' had exposed the real costs of nuclear power station decommissioning, it was the 'city' that very quickly pointed out the inconsistencies in Government policy towards the ESI and the coal industry. It was clear that one could not have a policy of encouraging diversification and competition in the ESI and maintain a market for coal.

The response to the Rothschild Report was interesting. John Wakeham's reaction was to play down the possibility of large-scale closures, arguing that the statements made about the Report were speculative but that strong environmental pressures would favour gas and nuclear powered generation and that there was bound to be some decline in coal's market (The Times 09/10/91).<sup>74</sup>

British Coal now went public in its criticism of policy. Neil Clarke said that 'we have no plans to reduce collieries to 14' but he went on to admit that the generating companies were in a strong position and that despite the fact that BC could further reduce prices they might be denied the opportunity of competing for the ESI market. He then argued that:

What we are seeing is a sort of energy arms race, with attempts to justify it on the grounds of guaranteeing security, diversity and competition, but in reality guaranteeing nothing but higher electricity prices, a rapid abandonment of other fuel reserves and a reliance on as yet unproven overseas resources. (Clarke, cited in The Times 06/10/91)

There was, in a replication of the 1960s, an expectation by some of the Board that 'all would come right in the end' and that the Government would not close an industry in which it made substantial investments which was rapidly moving towards international competitiveness (Interview Evidence).

In the coalfields and the country the reaction was muted, a feature which Crick (1997, 387) argues, 'wrong-footed' Heseltine, leading him to believe there would be little reaction to the October 1992 announcement that two thirds of the industry would close. It is arguable that most found such a prospect quite simply unbelievable. The outcome for the industry, the closure of all but fourteen pits, went beyond anything anyone, including Scargill, had predicted and seemed incomprehensible.

---

<sup>74</sup> In fact the document had been leaked and the statements were more than speculative.

Rothschild had exposed the central contradiction of Conservative policies in the energy sector: that of attempting to build a commercially viable coal industry on the one hand, whilst undermining the industry's future markets on the other. It had done so by asking the simple question: what are the likely markets for coal in the 1990s; precisely the kind of question that Government saw little point in asking, since the answer always turned out to be wrong. The recognition of this contradiction presented the Government with an impending crisis. Not only would there have to be further, substantial, pit closures but they would have to be achieved within two years; a timetable dictated by the end of the agreement between the ESI and the coal industry.<sup>75</sup> It also brought the issue of coal privatisation into question.

The key to the future size of the coal industry, and its successful privatisation, lay in the volumes of coal that it could sell to the ESI after March 1993; and throughout 1991 and 1992 Government became entwined in negotiations with National Power, Power Gen, the RECs and BC to secure new contracts, which were signed in September 1992. The delay in reaching the new agreement was largely a result of disputes between the two generators and the RECs. The main impact of the delay on the coal industry, and the reason for increasing Government frustration, was to add to the uncertainty surrounding its privatisation (see The Sunday Times 12/07/92). What was clear from the outset was that the volumes of coal involved would be very much reduced. The RECs had contracts with gas-fired stations and were under a statutory duty to take ten per cent of supply from non-fossil fuel sources. Power Gen and National Power would not contract to buy coal unless they could contract to sell the electricity. Quite simply, this they could not do, the market for coal-produced electricity had been lost.

In other words, the only way to secure a larger coal industry was to intervene in the market. The 'dash for gas' had to be halted, older nuclear power stations phased out, Sizewell put on hold and coal imports stopped, the options put forward to, and to some extent adopted by the Energy Committee following the October crisis. However, whilst these were obvious solutions to the 'friends of coal', they were 'economic' solutions that were 'politically' anathema to the Government. The Conservatives had invested a great deal of time and effort into removing itself from the energy markets on the basis that government was *the* problem rather than *the* solution. In the wake of the 1992 crisis government restated its belief in the markets and competition:

---

<sup>75</sup> In 1990 Government had brokered a deal with the two generating companies which would run until March 1993 and meant that they would take 65 mt. in the last year.

Competitive markets provide the best means of ensuring that the nation has access to secure, diverse and sustainable supplies of energy in the forms that people want and at competitive prices. (CM 2235)

Politically, the Government was constrained by the policies it had pursued since 1979. Whether those policies had been correct, consistent, intended, or not, was largely irrelevant. Reversing them would have required a U-turn of unimaginable and, in the context of a fragmenting Conservative Government, unachievable proportions.

In any case there is little to suggest that the crisis sparked any questioning by Government of its overall strategy for the energy sector. They remained convinced that government should withdraw as much as possible from the sector and that competition would lower costs and benefit the consumer. The ideas that had informed its energy policy in the 1980s remained valid. If private companies wanted to build gas stations then it followed that gas stations must make commercial sense. If, in a competitive environment, gas power stations made commercial sense, then they must also be, in an economic sense, optimal. A beleaguered Michael Heseltine asked reporters at the press conference which sparked off the pits crisis in October 1992: ‘would any rational private company build power stations that produce more expensive electricity than their competitors? Tell me that?’ (Cited in The Guardian 17/10/92; see Crick, 1997 for an account of the crisis from Heseltine’s perspective). The outcome was consistent with the belief in the superiority of the markets. The electricity industry was now acting commercially and the Government could be satisfied with the new competitive sector. In the process the coal industry became a victim. Competition had exposed the true extent of its potential market and the level of protection it had enjoyed in the past. Its demise was the welcome, if unforeseen consequence of the pursuit of market philosophies. Welcome, since the coal industry had, historically, a difficult relationship with governments generally, and Conservative Governments particularly. Unexpectedly, gas had emerged to rid the Government of a troublesome industry and Government seized the opportunity. In the end an extended Review of the coal industry and additional help for the effected communities was sufficient to dissipate the opposition (Crick 1997, 393). All that remained to complete the task was the industry’s privatisation.

To summarise the discussion so far: it has been argued that when the Conservatives came to power in 1979 the contradictions and errors of Plan For Coal had become apparent. The energy sector generally, and the coal industry particularly, were over-supplying the market and

the completion of projects begun in the 1970s would exacerbate the situation. Not for the first time the industry was in crisis as changes in the 'energy system' impacted on it. The Conservatives also came into office with a solution, the 'market solution', which would not only solve the immediate crisis but, so they hoped, remove the causes that led the industry into successive crises. The solution was informed by an ideological preference, a preference that was informed by the ascendancy of the New Right. It was a solution also grounded in a particular analysis of the past problems in the coal industry and energy sector. That analysis focused on the distortions that political processes brought to commercial decisions, most notably problems of asymmetric information in closed policy communities.

However, whilst the Conservatives came to office with an analysis of what was wrong and a solution to correct the problems, it lacked an opportunity to implement the solution. The Government's aim was to finance the reconstruction of the industry, to make it profitable and self-financing and close any parts which could not contribute to that aim. However, circumstances meant that for the immediate future the Government was dependent on the coal industry and the NUM held considerable power and was implacably opposed to any solution that required pit closures.

In the aftermath of the 1984-5 strike the main objective remained the restructuring of the industry along profitable and self-financing lines along with the closure of 'uneconomic' pits. This became possible following the defeat of the NUM, the termination of the NCB's strategic influence and the emergence of benign energy markets. The Government continued to finance new investment, albeit at a reduced level and continued to finance the restructuring costs.

This objective was undermined by three features: the market structures of the privatised ESI; the rise of environmentalism; and the continued weakness in energy markets. The final blow for the coal industry was struck by the 'dash for gas' which emerged from the interaction of these three features and the rise in the availability of gas. Coal's market had been undermined to a degree that no one had planned or foreseen.

#### **6.4 The Breaking of Strategic Networks**

Chapter five used the concept of policy communities to give a partial explanation for the outcomes. In the case of 1967 fuel policy review it was suggested that a sectoral network developed which perpetuated and amplified perceptions of the relative cost of nuclear power. In 1974, the political and energy crises led to a coal sub-sectoral community which accounted

for Plan For Coal and its continued influence even though its basic assumptions had been falsified. As we have seen earlier in this chapter, the breaking up of 'communities' which pursued producer interests was a strategic objective of the Conservative Governments. In terms of the network that had maintained the consensus that coal output should be stabilised or increased the Conservatives were singularly successful. Indeed they hardly had to try as the ideological shifts in the Conservative Party and the NUM brought the corporatist politics of the industry to an end. Importantly, the roots of these shifts lay in the history of the energy and economic systems. For the NUM, the closure programme of the 1960s, the associated low wage levels in the industry and the subsequent 'victories' of the early 1970s facilitated the rise of the 'militant left' and the adoption of an industrial strategy. For the Conservatives, the successive crises in the energy sector, the New Right analysis of those problems and the defeats of the early 1970s led to a policy prescription of government withdrawal from the sector and the introduction of competitive, rather than political, processes. For both, the days of consensus politics had come to an end.

This did not mean the end of the policy network. The NCB remained a committed advocate for the industry. Under Ezra's Chairmanship the relationships were undoubtedly strained; however following the strike and the appointment of Haslam some stability was achieved and a consensus developed over the objective of achieving commercial viability subject to restructuring funds (redundancy payments) being sufficient to head off opposition. The consensus even went as far as most Board members embracing privatisation as the best way forward for the industry (Interview evidence). That consensus came under increasing strain as the 'dash for gas' became a feature, culminating in open disagreement in 1992.

Throughout the period 1979 to 1995 the relationship between the Board and the Government remained one of power and resource dependency. Both the politicians and the DEN were dependent on the Board for information and the Board was dependent on government for the continued financing of its investment and restructuring programmes. Resource dependencies and exchange relationships remained key features of coal policy. To be sure, the consensus that the industry's output should be maintained had disappeared. Government had clearly signalled that commercial viability was the only long-term objective whilst the Board pursued something of a rearguard action, attempting to minimise the losses, primarily through attempting to maximise the level of competitive output. The network could no longer be described as a 'community': nevertheless a network remained that influenced and constrained policy.

It is to these ongoing relationships that this chapter now turns. Critically it will be argued that the Conservatives, in common with all post-war governments, failed to grapple with the perennial problem of how to 'control' the nationalised industries. Specifically it facilitated, through funding, a sub-optimal investment programme. One which, as under Plan for Coal (1950), led to investment such that - whatever the final demand conditions in the sector - would have resulted in a supply profile out of step with the industry's demand profile.

### 6.5 The Investment Policy Network

In chapter four it was seen that during the period of expansion between 1947 and 1957 the industry, in terms of its investment decision-making process, enjoyed a policy community relationship with government. There was a consensus that investment to increase coal output should proceed as rapidly as possible and there is no evidence to suggest that delays in planned expenditure resulted from a lack of funds. It was also argued that the structures in which the annual investment reviews were carried out and the characteristics of the actors help explain the continuity of Plan for Coal (1950) despite changing circumstances. The process was typified by low levels of horizontal integration, asymmetric information and power dependency. In other words the NCB's rational interest, at both local and national levels, was to continue the investment programme. It enjoyed a monopoly of information on both the supply and the demand for coal. The community can be characterised as an economic policy community dominated by the coal industry experts. A notable feature of the period was that the Area shares of total production remained remarkably constant despite the differing Area costs. This was seen as, partly a matter of economics as transport was constrained and its costs evened out the production differentials and partly a matter of politics as Areas sought to maintain their position relative to total output.

Similarly, it can be argued that the investment programme unleashed by Plan for Coal 1974 was implemented despite the changing circumstances. The hypothesis to be explored now is that the investment programme was implemented in such a way that it worked against the long-term interests of the industry and that the failures of the 1950s were, to some extent, repeated. As in the case of its predecessor, Plan for Coal (1974) shaped the industry for nearly two decades. The consequence was millions of pounds being spent on productive capacity that was either aborted by closure or sold off into the private sector at a fraction of its initial cost.



The great irony, of course, is that much of the investment was carried out under a Conservative Government that was ideologically opposed to nationalised industries and 'planning' and one that some commentators believe was out to destroy the industry to avenge the defeat of 1974 (see chapter two).

The central questions that need to be addressed are: why, at the micro level, did NCB pursue investment policies that led to so much aborted expenditure and why did Governments finance those investments? For Henney (1994) the answer lies in monopoly: the NCB's monopoly on coal production and mining expertise; the NUM's labour supply monopoly and trade union power. This combination led to asymmetry of information and power dependencies that enabled the industry to pursue its own objectives whilst Government looked helplessly on, funding the investment programme, NCB deficits and the re-structuring costs. All in the mistaken belief that it would result in a profitable and financially self-sufficient industry.

Here Henney's explanation should not be totally rejected and some evidence to support his assertions will be offered. However, it will be argued that the explanation is incomplete for two reasons. First, as argued in chapter three, rational choice analysis can only offer a partial explanation, primarily because it ignores the politics. Are we really to believe that government was not informed of the plans or if it was, was unable to make a judgement about their wastefulness or if it knew them to be wasteful, unable to prevent them? These questions have, partly, been answered and it has been argued that the Government failed to foresee the meltdown of the industry until the early 1990s. However, the focus now shifts to the detail of investment policy. Because of the Board's dependence on government funds a primary function of the DEn was to approve the NCB/BC's investment strategy on an annual basis. It will be argued here that the Board's investment strategy was flawed and that some investment would have been wasted even if coal's market had not been lost to gas. The issue, therefore, is why did government continue to fund such investment? Second, the paradox of the late 1980s and early 1990s cannot be ignored. Then a monopoly supplier of coal, in the public sector, did demonstrate the potential of achieving economic and financial efficiency comparable, if not better, than might be expected from the private sector. Of course, by the late 1980s the power of the NUM and the NCB had been broken but it would be unfair to lay the blame for all the ills of the industry at the NUM's, the NCB's or the miners door. Henney's assertion (1994, 9) that the NCB pursued a policy of replacing 'miners who would not work with machines that

could not work' is a gross distortion of miners' attitudes to the jobs they do and the NCB's investment policies.

A fuller explanation for the wasted millions requires an account of how investment decisions were made by the NCB and why the investment budget was approved by Government. At the centre of the process was an annual investment review that began with a planning exercise within the NCB/BC and culminated in the submission of its proposals, and application for Treasury funds, to the DEu. Before moving on to the analysis a brief overview of the formal Government/industry relationship under which that annual investment review was conducted might be useful.

### 6.5.1 The Annual Investment Review.

To understand the annual investment procedures it is necessary to back track a little to 1961 to the Review of the Financial and Economic Obligations of the Nationalised Industries (Cmnd 1337). This review, conducted by the Treasury, set the framework for the coal industry's relationship with government which, in very broad terms, persisted until the late 1980s. Under the Review existing procedures were codified under three heads - The Revenue Account; The Capital Account; Prices and Costs. In the context of this thesis the capital account is most relevant.

The nationalised industries would discuss with government, annually, their plans for development and capital expenditure for the next five years. Following such consultations the government would approve the capital allocation for the first year and give provisional approval for the second. In addition, government would be ready to approve 'long-term commitments as appropriate' (Cmnd 1337, 8). Except for projects that were expected to yield relatively low returns, government was only interested in a global investment sum. Individual project appraisal was left to the industries, though such appraisals would be carried out using procedures agreed by government.

Translating the review in terms of the coal industry, the Board drew up annually its five-year investment programme and submitted it to the sponsoring ministry. The Ministry, after consultation with the Treasury, authorised the Board's investment expenditure for the following year and gave provisional authorisation for the years ahead.<sup>76</sup> Adjustment to the

---

<sup>76</sup> The details varied over time. By the late 1970s the Board was allowed to commit up to 85% of the second years investment and 70% of the third year (MMC 1983, 81).

programme, failure to authorise expenditure or delays in authorisations were in fact infrequent. Lord Ezra complained of some restrictions on investment funds which delayed implementation of Plan for Coal but suggested that the long-term effects were not significant. Lord Haslam, on the other hand, made no complaint concerning the availability of funds, be it for investment purposes or to cover re-structuring costs and redundancy costs. Generally speaking, the informal day-to-day contacts between government and the industry resulted in investment submissions that would be authorised (Interview Evidence). Exceptions to this occurred in 1967, while government awaited the outcome of its review, and again in 1978 and 1980. In the latter cases authorisation was only given for the first year's investment (HC 371, 1968; MMC 1983, 81). The only significant, outward, change in procedural terms was the reduction in the number of years ahead which the annual investment review considered - from five to three (Energy Committee 1986). A change which appears to have resulted from the Whitehall reforms under the Financial Management Initiative.

In addition to the annual submission of the NCB's investment budget, and in contrast to the general provisions set out in the 1961 White Paper, the Board also submitted some individual projects for the sponsoring department's approval. These were projects that either cost more than £2.5m and did not expect to yield a return of at least 10% per annum, or projects which presented 'special features': for example, ones on primary capacity costing more than £1m (HC 371, 1968-II, 127). It is this latter provision which signalled a 'hands on' approach by government and gave rise to Robens' complaints of interference and delays in approving projects. These criteria had been agreed between the government and the NCB in 1958 but it is doubtful that they can have had the significant impact on the industry that some commentators (O'Donnell and Taylor for example) suggest. Robens may have been lively in his complaints about government interference but there appear to have been very few instances when individual projects were submitted to the Ministry of Power under these criteria and even less evidence of projects being rejected.<sup>77</sup> Between 1958 and 1963 only three such submissions were made; and between 1966 and the early 1970s no submissions falling within the criteria were made (HC 371, 1968 III, 52; HC 65, 1973 Minutes of Evidence, 33). By 1978, with the publication of the White Paper, The Nationalised Industries (Cmnd 7131) only projects requiring an expression of the national interest were, individually, sent to the DEn (Energy Committee 1986). This again appears to have codified a practice that had already developed

---

<sup>77</sup> Even the oft cited Horden project went ahead unaltered.

and it seems that by the time of the implementation of Plan for Coal (1974) close involvement by the DEn in individual projects had ceased. (Ezra Interview)

The 1961 Financial and Economic Obligations White Paper not only institutionalised the annual review of investment programmes but also suggested that it was 'the governments task to satisfy themselves that the procedures within each organisation for scrutinising and approving capital expenditure was effective' (Cmnd 1337, para 25). It was felt, perhaps, that if the industries investment appraisal methods were considered satisfactory and consistent with Government's overall objectives, then the details of the programme could be left to the industry. This issue will be discussed in more detail in section three.

Given the centrality of aborted investment to this thesis it is worth exploring the investment decision-making processes in some detail. The analysis begins with the Board's formulation of its bid for investment funds under three heads. Section 2 looks at the procedures of investment appraisal and seeks to establish how the Board's overall investment budget was derived. The key questions posed are: who influenced the Board's programme and how did they influence it? Section 3 looks at the related issues of financial appraisal of individual projects. At first glance, this might appear to take us into the realms of unnecessary and complicated detail. Yet the importance of financial investment appraisal should not be underestimated: from 1961 onwards it became the main instrument by which both the government and the NCB hoped to control investment in the industry. No understanding of the incidence of aborted investment can be achieved without an understanding of what the rules of investment were, how they changed and how they were implemented.

The analysis presented here differs from that of writers such as O'Donnell and Taylor who argue that investment in a colliery led to a virtuous cycle of cost reduction, profitability and further investment, non-investment in a colliery led to a downward spiral of rising costs unprofitability and closure. At a very simplistic level, this argument is true of course, but the implication which may be drawn from it - that any colliery could be made profitable with investment is simply invalid. By contrast, this thesis will posit that there has been sufficient investment in the industry but it has often been directed at the wrong pits producing high cost coal - for which there were limited markets. Implicit in this argument is that more pits should have closed earlier (or kept open for some limited period for social reasons) and investment

concentrated on the historically profitable ones or ones that offered, in so far as certainty is possible in an extractive industry, profitable opportunities. In other words, the virtuous and downward spirals should have been pursued with more vigour.

### 6.5.2 The Investment Decision-Making Process

In chapter three the structures used to implement the 1950 Plan for Coal were outlined.

Summarising these: it was seen that Area and Divisional Plans were drawn in the context of the National Plan, which itself was based on the original, 1950, Plan for Coal and the subsequent updates in 1956, 1957 and 1961. It was seen that Robens was highly critical of the structures he inherited and instituted a number of changes, the most significant of which was the removal of the Divisional and Group tiers.<sup>78</sup> In addition, as was seen in chapter four, changes in the flow of information between the NCB and government and the NCB's concern over the long-term future of the industry had led to the setting up of a central planning unit at National Headquarters. Both changes can be seen as an attempt to increase the level of co-ordination and the level of control over the Areas by Headquarters with respect to a range of production and financial objectives, including investment. The impact on the quality of investment decisions was largely untested during the period of the industry's contraction. They were, however to be severely tested by the rapid investment programme following Plan for Coal 1974.

As in the case of its predecessor, investment projects that occurred under the umbrella of Plan for Coal (1974) began in the collieries and Areas. Colliery managers were required to maintain Colliery Plans which included: An Action Programme updated quarterly, covering a period of between 18 months and two years; Medium term plans, updated annually, covering five years ahead; and long-term plans, again updated annually, covering up to 20 years ahead. These Colliery Plans were then aggregated by the Areas and the Area Plans formed the basis of the annual National Planning Exercise and the successor, from 1985 onwards, the Strategic Planning Exercise (see below). In both cases the procedures were broadly similar. Colliery managers and Area Directors produced their plans, including investment plans, on the assumption that resources would be freely available and that all output could be sold (MMC 1983, 128; MMC 1989, 28). The main aim of the medium and long-term plans at this stage

---

<sup>78</sup> Under the old structure Divisions lay between Headquarters and the Areas whilst Groups lay between Areas and collieries.

being to establish what was physically possible rather than what was financially viable (MMC 1983, 133).

Although it has been suggested above that the Area Plans were aggregates of Colliery Plans, it should also be recognised that such plans were framed in the context of the National or Strategic Plan. It is extremely difficult from the published material to determine the precise relationship between the National Plan and individual colliery plans. Nevertheless, some points can be made by drawing on the two Monopolies and Mergers Commission Reports of the 1980s.

It appears that until 1980 the basis for the National Plan was the output targets contained within Plan for Coal. Headquarters produced forecasts of future demand and Area Plans were assessed on the contribution they would make to the total. Physical factors, output, productivity and manpower dominated the thinking. The final result was the Medium Term Development Plan which became the basis of the NCB's submission for government funds (MMC 1983 chapter four).

Following the turbulent events of the early 1980s the NCB reviewed its planning procedures and in 1985 the Strategic Plan replaced the National Plan. Output and other physical objectives were replaced with financial and cost related objectives. The Strategic Plan emerged from the Strategic Planning Exercise that was preceded by a two-day conference aimed to review the likely future environment. National Headquarters would then send out instructions to the Areas, who would prepare an Area business strategy. Following this, discussions took place with colliery managers and future investment opportunities were identified consistent with the business strategy. From this Headquarters produced a Strategic Plan which set out the capital investment programme for the next five years. The entire process was completed when Areas were informed of their provisional capital allocations and asked to submit a five-year business plan - which included a revised investment programme. The Strategic Plan then became the basis of BC's application, to government, for investment funds. Essentially the whole planning exercise and the new language were designed to change the culture of the NCB/BC from, as they put, it an 'institution to a business' (see MMC 1989, chapter 4).

The MMC were highly critical of the Board's investment procedures. The main thrust of their criticism was that in the earlier period of the National Planning Exercise they focused on physical factors (output, manpower requirements and productivity) rather than business and

financial strategies and that they consistently overestimated the benefits that would accrue from investment. They recommended 'that the NCB should go further and develop a formal system of National and Area business planning' (MMC 1983, 164). But even when such a system had been put in place and the focus shifted from physical to financial targets, the MMC still found room for criticism. In 1989 they:

found it difficult to form a clear picture of the extent to which BC believes that its mines form a coal supply system - that is the extent to which the output of one mine is affected by, and in turn has an effect on, the output of other mines. (MMC 1989, 60)

In other words, potential investment opportunities were appraised on a stand-alone basis. If they passed the Board's appraisal criteria (see below) then approval would be forthcoming and little account was taken of the wider picture.

Further criticisms focused on the appraisal procedures. The National Planning Exercise or the Strategic Planning Exercise did not in a, formal sense, commit either the Board or the Areas to investment projects. Formally, they went through a three-stage procedure, the essential elements of which changed little throughout the period of nationalisation. At stage one an outline of the proposal was sent to headquarters and permission sought to proceed with stage two, a full financial appraisal. If permission were granted the scheme would be subjected greater scrutiny and, in most cases, stage three permission to incur expenditure would follow. Here the MMC expressed concerns that projects might gain a momentum at an early stage that would be difficult to stop. They felt that a considerable amount of time, effort and in some cases money, could be invested in a project before the detailed, stage two, financial appraisal had been completed. They found that in the period between 1974-5 and 1981-2, 288 major investment projects had been considered. Of these, 44 were rejected at Area level and 244 were sent to Headquarters as stage two submissions; 33 of these were withdrawn by Area Directors after consultation, 13 were amended and re-submitted and 16 were rejected. This left 195 projects which were approved by the Board at stage two. Clearly, there is some evidence to suggest that once projects had jumped the Area hurdle, they gained a momentum (MMC 1983, 197).

According to the MMC, during the early years of the implementation of Plan for Coal, the Board took investment decisions on the basis of figures that were rapidly becoming outdated; and in the later period on the basis of future costs which had little reference to the overall supply and demand conditions. At one level this seems somewhat perverse. It would suggest that in the earlier period more notice was taken of the relationship between supply and

demand: the mistakes stemmed from the over optimistic forecasts contained in the original plan. In the latter period, when the Board was claiming to be taking greater account of the market realities, it appears they failed to explore the relationship between differing investment projects and between those and existing sources of output. However, it should be remembered that until 1990 the Board had assumed a market of around 100 mt., providing the price was competitive with imported coal. The focus on costs was intended to reflect that assumption. Following the defeat of the NUM they were relatively free to adjust total capacity to equal demand through closures and the Board can hardly be held accountable for failing to see the subsequent catastrophic loss of the ESI market (see chapter five). Nevertheless, the failure to assess the impact of investment projects on the whole industry does appear to be a damning criticism - nor, as will be seen, was it a feature confined to the post-strike period.

The key question being raised here focuses on the extent to which the NCB/BC can be viewed as a homogeneous organisation with one set of interests. It is possible to argue that the National Board and the Area and pit managers held differing interests and the Areas and pits were in direct competition with each other. In one sense, the National Board and the Areas can be viewed as output maximisers; 'rationally' they had an interest in maximising the amount of investment available and an interest in securing as large an energy market share for coal as possible. However, the two operated in different environments. The National Board, at least nominally, was under a 'break-even' constraint and was answerable to government for the financial position of the industry. Securing Treasury investment funds depended on their being able to convince government that such funds would achieve the strategic objectives for the industry, which, this thesis has argued consistently, included an efficient and financially independent industry. The Areas and pit managers, on the other hand, were perhaps more concerned with winning their fair share of available investment funds, rather than maximising the total. Promotion and status depended on association with success and on identification with the 'cutting edge' of mining technology and methods. In the 1980s survival depended upon their ability to convince Headquarters that their pits and Areas had long-term futures. Winning investment funds was, arguably, the best way of achieving that, since there is a natural reluctance on the part of those who have approved investment to admit mistakes and abort the project. In addition, the Areas and pits were in competition - they had a rational interest in overstating the benefits of investment opportunities. In the 1980s this became more pronounced, since, in the context of a stagnant or falling market, investment which increased



productivity and output in one mine would mean the closure of others. In other words, it seems likely that local management put local interests first, even if they conflicted with national interests.

This point can be demonstrated using data from the 1983 MMC Report which shows the Area output as a percentage of total output for selected years and investment figures for the period 1974/5 to 1981/2 (Table 6.2). The figures exclude investment in new mines as their location owes at least as much to geology as to politics.<sup>79</sup> Three points should be noted from these figures. Firstly, some adjustment of the Area production patterns did take place during the closure programme of the 1960s. Peripheral Areas, particularly the North East and South Wales, declined more than the central coalfield, with North Yorkshire and North Nottinghamshire winning substantially higher shares of total production. Secondly, following the shake-out of the 1960s, supply patterns appear to have stabilised, though the North East and South Wales continued to lose production share until 1976/7 and Scotland's share began to fall. Between 1976/7 and 1981/2, the period of heavy investment in the industry, greater stability was evident, with the only notable exception being Scotland, which continued to lose out. The relative decline in the North East and South Wales appears to have been halted. It seems possible to suggest that against the background of optimism and investment, the NCB reverted to the 1950s policy of maintaining existing patterns of Area production.

Thirdly, the Area pattern of investment once again appears, to suggest a policy of maintaining existing production patterns or even, in some cases that had suffered during the period of decline, reversal of past trends. Only in the North East, one of the oldest coalfields, and in Scotland, did the share of investment fall substantially below the 1976/7 share of output (-1.4 points and -2.4 points respectively). In the South Wales, Barnsley, Doncaster and Western Areas which had experienced some relative decline in the past, the share of investment was greater than the 1976/7 share of output (0.8 points, 3.6 points, 1.9 points and 1.0 points respectively): on the whole there appears to be a high degree of symmetry between output patterns and investment patterns.

---

<sup>79</sup> Though it might be possible to argue that the decisions to proceed with Asfordby and not with Margam in S. Wales and Thorn in Yorkshire did have political dimensions.

Table 6.2 Output and Investment 1976/7-1981/2, by Area

AREA	Area output as a percentage of total output				Investment (excluding new mines 1974/5-1981/2)	
	1966/7	1970/1	1976/7	1981/2	£m	% of total
North Yorkshire	5.8	7.1	7.0	7.1	342	9
Barnsley	6.0	5.8	6.2	7.2	374	9.8
Western (N. West+Staffs)	11.9	10.8	9.6	9.5	403	10.6
North Nottinghamshire	6.6	9.1	9.1	10.5	397	10.4
North East (N.umberland+N. Durham+S. Durham)	16.5	14.2	11.2	11.5	374	9.8
Doncaster	5.2	6.0	6.7	6.1	329	8.6
South Wales	10.2	8.8	6.6	6.5	283	7.4
South Midlands inc. Kent?	7.2	7.4	7.5	7.3	309	8.1
South Yorkshire	6.7	7.1	6.6	6.2	280	7.4
South Nottinghamshire	7.5	7.9	7.7	7.3	272	7.1
North Derbyshire	7.6	7.3	6.2	7.3	244	6.4
Scottish	8.8	8.5	7.7	6.2	200	5.3
Total	100.0	100.0	100.0	100	£3,807	100

Source: From NCB Report and Accounts, MMC 1983 II, 26, 65

The key question being raised here is, what drove the NCB investment strategy under Plan for Coal? According to the Board, as seen above, the primary aims were to stabilise output (though this was always discussed in National rather than Area terms), to reduce costs and through the use of DCF, ensure that investment funds were not misallocated. Here it is being suggested that actual investment patterns were a function of historical production patterns.

Further evidence of this can be inferred by contrasting the relationship between investment and output with investment and profitability.<sup>80</sup> Appendices 3.4(a), 3.4(d) and 3,15 (MMC 1983, Volume 2, 26, 29, 65) gives us the saleable output and the operating surplus/loss, by area, for the six years 1976/77 to 1981/2 and the capital expenditure, by Area, for the years 1974/75 to 1981/82. If, Plan for Coal investment had occurred in the pits which offered the best financial return we would expect to find a relationship between operating profit and investment i.e. investment would occur where pits were currently and historically profitable. If on the other hand there is a stronger relationship between investment and output than investment and profit we have some supporting evidence for the arguments made above. It should however, be pointed that the aggregation of the data from pit-level to Area-level (the only basis on which

<sup>80</sup> Here profit/loss has been used as a representative measure. Since profit/loss, costs and productivity are highly correlated the same arguments presented here would apply to those measures of efficiency.

data is available) may distort the picture. Nevertheless, it seems fair to assume that a proportion of the investment made in loss-making Areas would be made in, consistently, loss making collieries.<sup>81</sup> Table 6.3 shows the capital expenditure for the period 1974-5 to 1981-2, mean saleable output and mean operating surplus (loss) for the period 1976-7 to 1981-2. Table 6.4 illustrates the same data in rank form from the lowest value to the highest.

Table 6.3 Capital expenditure 1974-5 to 1981-2, Mean Saleable Output and Mean Operating Surplus 1976-7 to 1981-2, By Area.

	Capital Expenditure by Area 1974-5 to 1981-2, Excluding New Mines. Average 1981-2 prices	Mean Saleable output 1976-1977 to 1981-1982. Million Tonnes	Mean Operating Surplus (Loss) 1976-1977 to 1981-1982. £ per tonne
Scottish	200	8.1	-2.8
North Derbyshire	244	7.8	0.8
South Nottinghamshire	272	8.8	-0.8
South Yorkshire	280	7.6	0.9
South Wales	283	7.7	-6.6
South Midlands	309	8.6	-0.4
Doncaster	329	7.4	-1.8
North Yorkshire	342	8.3	-1.9
North East	374	13.4	-1.6
Barnsley	374	7.8	-1.4
North Nottinghamshire	397	11.6	3.7
Western	403	11.1	-1.6

Source: MMC 1989 Appendices 3.4(a), 3.4(d) and 3,15

<sup>81</sup> To take the extreme example, South Wales 16 of the 33 pits made losses in all six years under review, 8 made losses in 5 years, 3 losses in 4 years, 3 losses in 3 years, 1 losses in 2 years and 1 a loss in 1 year. Betws New Mine which came on stream in 1978/9 made losses in two of the four years (MMC 1983 II 53)

**Table 6.4 Rank Order of Capital expenditure 1974-5 to 1981-2, Mean Saleable Output and Mean Operating Surplus 1976-7 to 1981-2, By Area.**

	Capital Expenditure by Area 1974-5 to 1981-2, Excluding New Mines. Average 1981-2 prices	Mean Saleable output 1976-1977 to 1981-1982. Million Tonnes	Mean Operating Surplus (Loss) 1976-1977 to 1981-1982. £ per tonne
Scottish	1	6	2
North Derbyshire	2	4	10
South Nottinghamshire	3	9	8
South Yorkshire	4	2	11
South Wales	5	3	1
South Midlands	6	8	9
Doncaster	7	1	4
North Yorkshire	8	7	3
North East	9.5	12	7
Barnsley	9.5	5	5.5
North Nottinghamshire	11	11	12
Western	12	10	5.5

Source: Table 6.3

As argued above, there appears to be a symmetry between investment expenditure and output. The three of the four largest areas in terms of output; Western, North Nottinghamshire and the North East feature in the four Areas receiving the largest capital expenditure. Of these and in terms of the relationship between investment and profitability only North Nottinghamshire, the most profitable Area, stands out. The Western and North East Areas fall mid-way in the profitability table. Similarly two Areas which received relatively lower investment, North Derbyshire and South Yorkshire, ranked low in terms of output (second and fourth respectively) but tenth and eleventh in terms of profitability.

Using Spearman's rank correlation coefficient we can illustrate that there is a stronger relationship between investment and output than investment and profitability. The correlation

coefficient between investment and output is 0.470 against a much lower correlation coefficient of 0.079 between investment and profit.<sup>82</sup>

Of course, correlation is not causation and it is important to be clear about what is being claimed here. There may have been other reasons which explain the Board's investment patterns, nevertheless the statistics do offer some supporting evidence to the claim being made in this thesis. The central argument has been that the rational self-interest of Area and pit managers has been, since 1974, to attract investment funds to their mines. Careers, status and even survival has depended upon being successful. For the National Board and the Government the aim of investment has been to stabilise national production and to invest to reduce costs, and therefore improve profitability, leading to a financial self-sufficient industry. In reality there was an investment fund 'pot' that was shared between the Areas according to their output levels.

To summarise these points then: during the 1970s investment money that had been denied during the 1960s became available, leading to a scramble in the pits and Areas to win as much as possible. As one colliery manager was to put it later: 'money was available and the first Area Director to put his hand up got some' (Interview Evidence). In the 1980s survival depended on producing cheap coal which in turn depended on investment in the latest technology. In both the 1970s and 1980s 'rational' colliery managers, Area Directors (and local union officials) all had self interested motivations for identifying and pursuing investment opportunities. The planning process began on the assumption of freely available resources, allowed a momentum to develop and ignored the impact of individual projects on the whole industry. What we appear to have had in the coal industry throughout its period of public ownership is a collective action problem, one that the National Board had little capacity, or little desire, to resolve.

Two features of the implementation period suggest that we cannot leave the argument there. First, the NCB/BC Chairmen involved in the investment programme strongly deny that the processes were flawed. Lord Ezra stated that:

---

<sup>82</sup> The correlation coefficient of 0.470 is significant at the 10 per cent level against the one sided alternative (critical value 0.406) but not significant at the 5 per cent level (critical value = 0.503).

Well my view was that we were extremely careful about the way in which we set about investment, and we had careful preparation, we had a presentation to the full Board, we had to be convinced by the mining engineers concerned that it was a valid proposition, and we were well aware of the shortcomings which had arisen over the past. Geological problems of course were always a big uncertainty in mining investment but we tried to minimise the impact of those. I remember that I always mentally said to myself whenever we had a proposition 'what will it look like if I double the cost and double the length of time it's going to take will it still look valid' - that was my approach to it. In other words we were extremely cautious, and I think quite a lot of the investment made in the '70s was perfectly justified.  
(Ezra Interview)

In a similar vein Lord Haslam argued that the investment appraisal techniques were comparable with those he had been familiar with at ICI and that they were satisfactory (Haslam Interview).

Secondly and more importantly, oversight of the Board's investment appraisal methods, in particular its financial appraisal, emerged as government's main instrument for controlling investment - an issue which takes on greater significance when it is recognised that the industry was totally reliant on Treasury funds for investment purposes. With the correct appraisal methodologies in place it was hoped that government could leave the detail of investment programmes, which it neither had the capacity nor the competence to check. The next section goes on to outline the search for suitable appraisal methodologies and their failures.

### 6.5.3 Financial Appraisal

Rational choice and procedural relations may help explain why the coal industry pursued its chosen investment strategy but how can we explain why government funded that investment? To answer this question it is necessary, once more to back-track a little.

Concern over the NCB's investment decisions began to emerge in the mid and late 1950s. Initially, during periods of fuel shortages, the concern focused on why investment had not resulted in more coal being available. After 1957 concerns focused on the financial return of investments. The SCNI of 1958 noted that the Ministry of Fuel and Power and the Treasury had assumed that the NCB would not invest in uneconomic schemes and had therefore limited their scrutiny of the Board's investment programme to the broad picture. However, the committee also received evidence from the NCB (HC 187, 1958 appendix 16) of the wide variations in return on capital it experienced. This led them to recommend that schemes with very low yields should be scrutinised by government (HC 187, 1958, x). As already seen, the Ministry and NCB came to an agreement in 1958 that not only required low-yield investments

to be submitted to the Ministry but also all those costing more than £1m on primary capacity. In retrospect this can be seen as beginning of a process, pursued by all governments, of tightening the financial and economic criteria used in coal investment appraisal. It is through this mechanism that governments hoped to achieve control over the Board's investment policies. As will be seen, it proved to be an ineffective instrument.

In addition to establishing the criteria to be used to refer individual investment projects to the Ministry, the late 1950s and early 1960s saw a tightening of the NCB's internal appraisal methods. During the early years potential investments were not required to pass any 'return on capital' tests. The NCB argued that it would be:

inappropriate in an industry in which, say, in the East Midlands large profits are being earned in pit after pit and most of the capital they are spending is bringing in a huge yield, whereas in South Wales it is extremely difficult to find a proposition with a satisfactory yield. (HC 187, 1958, Q600)

In practice the NCB calculated two yields. One showing the incremental yield to an investment proposal - the marginal yield, the other an expected yield for the colliery as whole once the investment had been undertaken, giving an average yield on capital employed at the unit. Either yield could be used to justify capital expenditure. A colliery which was currently experiencing a very low yield on capital employed could justify capital expenditure if that expenditure showed a high marginal yield, providing the coal was needed. On the other hand, a colliery with a high yield on capital employed could justify investment in projects that showed low marginal yields on the grounds that such investment kept the colliery in production while maintaining flows of high yields to total capital employed.

As already noted, the Financial and Economic Obligations White Paper (Cmnd 1337, para 25) suggested it was 'the governments task to satisfy themselves that the procedure within each organisation for scrutinising and approving capital expenditure was effective'. In 1962 the Board introduced criteria that lay down that they 'ordinarily' expected a return on capital of at least 12.5% from major reconstruction's and 15% from projects specifically designed to improve efficiency.<sup>83</sup> These criteria were accepted by the Ministry, though they expressed some reservations, primarily concerning past performance, that led them to believe that higher return rates might be more appropriate. In the end they concluded that the right course was to 'wait and see' (HC 371, 1968 III appendix 13).

---

<sup>83</sup> Some projects have always been allowed to proceed that show low yields where they are shown to be necessary for safety reasons.

During the ensuing period the ground began to shift radically. The issue in the mid 1960s centred, not on the correct percentage yield that projects should show, but on the correct test that should be employed. To understand this and the resultant arguments employed by the NCB it is necessary to understand a little of the theoretical concepts behind the various tests.

The yield figures cited above showed the minimum rate of return that investment expenditure was expected to produce in its first year following completion. For three reasons this became to be regarded as an insufficient test. Firstly, it took no account of the future, and therefore no account future risks and uncertainties. Secondly, it was a poor guide for making comparisons between investment opportunities. Thirdly, an alternative test, discounted cash flow (DCF) appeared to overcome the difficulties.

Governments' use of DCF as a policy making instrument emerged out of the same blending of ideas and events that led to the use of cost-benefit analysis. These were: Britain's relative economic decline; the Suez crisis and the questioning of the competence of the civil service; and Wilson's 'scientific' government (see chapter 4). Very simply, the technique involves estimating the cash benefits of a proposed investment project over the project's life and using a compound formula to discount those benefits. The benefits can then be measured against the capital costs of the project. The technique can either be performed to derive the net present value of the project using a test discount rate, or the internal rate of return. In this way the future is introduced into appraisal and comparisons can be made between projects. Any project showing a positive net present value should be undertaken (i.e. Discounted Benefits - Capital Costs > 0). Where, as will always be the case, investment finance is constrained the choice between alternatives is made by ranking them according to their net present value or internal rate of return and selecting the highest ones.<sup>84</sup> Underlying the technique, in common with CBA was the optimal use of resources. DCF, theoretically, offered the possibility of identifying the optimal use of investment funds not only between competing projects in the same industries but also across sectors, including the optimal mix of private and public investment.<sup>85</sup> There have, of course, been numerous controversies both at the theoretical and practical levels over the use of DCF, CBA and the related concept of long-run marginal cost pricing (see HC 371,

---

<sup>84</sup> In addition to the obvious constraints of Government policy and the ability to raise money on the domestic or international markets investment funds will also be constrained by a society's saving/consumption preferences

<sup>85</sup> The latter involved the identification of the correct test discount rate to be used in each sector as many economists argued that special circumstances in the public sector justified a lower rate than the private sector.



1968 chapter 5; Self 1975 for early examples) These need only detain us in so far as they have had a direct impact on the coal industry.

The initiative for adopting DCF in the nationalised industries was taken by the Treasury in 1962. After preliminary research, consultation and testing they ‘summoned’ a conference, in 1965, of all sponsoring Departments and nationalised industries, followed by individual meetings, to discuss the application of DCF techniques. As a result the NCB began to use DCF in its investment appraisal of non-mining projects (HC 371, 1968 I, 95). The use of DCF by all nationalised industries became a Treasury recommendation following the 1967 White Paper, Nationalised Industries: A Review of Economic and Financial Obligations (Cmnd 3437).

However, the Board were less than enthusiastic. Before 1967 they had not used DCF for its mining activities because they felt the uncertainty inherent in mining made the calculation of future income impossible (HC 371, 1968 II, Q485). By 1972 the Board had adopted DCF for all relevant investment decisions but continued to argue that the peculiarities of the industry required other tests to be applied.<sup>86</sup> In particular they felt that the ‘go no-go’ feature of DCF would be a weak test because if investment did not take place very often the pit would close, in which case they argued any investment could be justified (HC 65, 1973, Q 478). For this reason the Board adopted a dual approach, using DCF but also making a comparison of the results immediately before investment with the expected benefits after investment, using DCF techniques. In other words investment appraisal used both marginal and average criteria.

At first glance this explanation appears to be at odds with the theory underpinning the use of DCF techniques. The concept is essentially a marginal one, whereby projects are judged on their incremental impact and not by their average impact on a colliery. However, two factors differentiate the mining industry from investment in other industries. First, as the NCB argued, the greater degree of uncertainty surrounding the industry. Second, the peculiar feature whereby the industry consumes part of its capital in the production process. A given level of capital expenditure must take place in order to access replacement reserves. During the period when DCF was being introduced into the nationalised industries, the mid-to-late 1960s, nearly all NCB investment was restricted to either replacement capacity or small efficiency improving schemes. Schemes that were designed to maintain existing production would have to be carried out whatever the marginal condition unless the colliery concerned was to close. Thus, the NCB

---

<sup>86</sup> Throughout the Board made a distinction between revenue and non-revenue investments. The latter were schemes required to improve safety and were not expected to earn a return on capital.

argued that the correct test was the average one, schemes would proceed if the colliery as a whole showed a profit following investment, otherwise the colliery would be considered for closure. It can be argued that the Board's investment appraisal techniques were rational during the period and they were regarded as satisfactory by the sponsoring Department, the DTI, who undertook a detailed examination of them in 1970 (HC 65, 1973, 32). It might also be argued that the NCB's internal appraisal methods were consistent with the Government's objectives for the industry as outlined in chapter 4 above. The industry was not investing in new primary capacity but in replacement capacity, in order to maintain supply and cost reduction schemes. Whilst the latter might be expected to yield high marginal yields, maintaining supply until alternative 'cheaper' fuels became available was best done at collieries currently experiencing high yields irrespective of the alternative opportunities. Quite simply, against the background of the 1967 fuel policy statement, the NCB was not in a position to seek out and finance investment opportunities that were optimal for the long-term future of the industry.

The problem with this, of course, is that investment appraisal methods which might have been appropriate in the conditions of the late 1960s and early 1970s might be inappropriate in the changed circumstances following the adoption of Plan for Coal 1974. Then funds became readily available for new projects including new mines and major re-constructions. The motivation was no longer merely limiting closures but the stabilisation of capacity, the lowering of costs and possible expansion of output. Yet in 1983 the MMC, in its review of the NCB's investment appraisal methods between 1974 and December 1981 found that they were very similar to those which had pertained in the earlier period (MMC 1983, chapter 9). They, again, found that the Board used marginal and average criteria to assess potential investments.

Projects were expected to show a return on investment of 10% and the colliery was expected to yield a 5% return on its assets following the investment, in both cases DCF being used to calculate the returns (MMC 1983, 192).<sup>87</sup> The latter element was supposed to ensure that investment that could be justified because of its marginal DCF yield did not take place at collieries that could not demonstrate long-run profitability.<sup>88</sup> Given that this was precisely what occurred throughout the 1970s and 1980s, the MMC's criticisms and the efforts made to rectify the position are worth exploring in greater detail.

---

<sup>87</sup> Stage two submissions also included a return on capital in the first year for project control purposes (MMC 1983, 192).

<sup>88</sup> In addition the 1978 White Paper: The Nationalised Industries (Cmnd 7131) stipulated that the industries should aim to make a Required Rate of Return (RRR) on their investment programmes as a whole.

The MMC criticised the Board's investment appraisal methods on a number of grounds. Firstly, they believed the NCB overestimated the returns to its investments. Prior to July 1979 the Board had, somewhat myopically, believed that it would have little difficulty selling coal at the prevailing list price. This view changed when the British Steel Corporation refused to accept an increase and negotiated prices aligned to the delivered price of imported coal. Similar conditions effected the NCB's electricity and industrial markets in 1980 and the Board was forced to offer discounts in order to retain sales. Before 1980 the Board had used list prices in its DCF calculations (MMC 1983, 190). Here the influence of the assumptions behind Plan for Coal 1974 are apparent. The assumption then had been that the NCB could sell all it could produce and the NCB's forecasting since had done little to undermine that view. Paradoxically, the Board was planning incremental increases in production and productivity, operating in an increasingly competitive world energy market and was unable or unwilling to reduce capacity through closures, yet it assumed constant real prices. Such analysis as the Board did undertake of the sensitivity of projects to disappointing outcomes focused on shortfalls in physical performance, lower output, lower productivity or longer construction times rather than 'market related factors' (MMC 1983, 192)

Secondly, the MMC believed that the Board consistently overestimated the output and productivity benefits that would accrue from new investment; a feature that seems to have been prevalent since the 1950s. This, as with overestimating the price available, inflated the amount that could be credited to schemes, making them appear more attractive than they were. As the MMC put it:

The most sophisticated of appraisal procedures are of little value to management or the Government if the assumptions upon which the financial appraisal is based are consistently wide of the mark. (MMC 1983, 206)

A third criticism focused on the dual approach which had developed in the 1960s. The MMC was concerned that using the DCF yield to the colliery could, in circumstances where the colliery already experienced high returns, 'induce' the Board to make investments that had relatively low marginal yields. What this implied was that the MMC believed that past profitability should not be used to judge the value to the Board's finances of future investment. They recommended that the two issues, colliery profitability and the marginal DCF yield, should be treated separately. What this recommendation highlighted was two different approaches to the industry. As others (O'Donnell, G. Taylor, Winterton) have argued investment and profit are interrelated. They, and to a lesser degree the NCB itself, took a pit-

based approach: if a pit could attract investment funds then it would become profitable. The problem with this approach, as was argued in chapter two, was that it ignored market realities. The MMC, on the other hand took a much wider view. Although many of their recommendations concerning closures are omitted from the text for 'public interest' reasons it is clear that they believed unprofitable pits, or at least pits that could not be made profitable, should close and investment should be focused where the marginal yield was greatest. In defining profitability it was also clear that they believed coal should have a market-determined sale price.

Finally, the MMC criticised the Board's examination of alternatives. As was seen above, DCF is a technique suited to the rank ordering of alternative investment projects. In theoretical terms this is particularly true where finance is, as is usually the case, not unlimited. This requires that alternatives, beginning with the option of 'do nothing', should be appraised using DCF and ranked. That showing the highest yield should be chosen. Where there is a range of alternatives to overcome one problem each incremental step should be appraised and, similarly, the option with the highest yield selected. In this context the MMC argued that 'do nothing' should be the 'minimum technically feasible'; and that in cases where there were a number of individual components, each component should be appraised individually and 'the most profitable' taken as the base case for appraising successive combinations of components. In other words, combinations should only take place when it could be shown that they improved on the best individual component (MMC 1983, 199).

The MMC report of 1983 and, more importantly, the miner's strike of 1984-5 prompted the 'New Strategy for Coal', which the NCB presented to the Coal Industry National Consultative Council in October 1985. The two main aims of the strategy were the phasing out of subsidies, including the need for the external financing of investment and the meeting of market requirements at competitive prices (MMC 1989, 15).

A major element in the new strategy was a reassessment of the Board's investment appraisal methods. Despite a fresh appearance, perhaps the most striking feature of the new methods was the similarities with what had gone before. The dual approach described above was replaced. From June 1986 onwards investment opportunities were assessed using marginal DCF yields but the financial environment was to be assessed on a 'cost per gigajoule', GJ, criteria. This latter test replaced the 'colliery DCF yield' test and had been criticised by the

1983 MMC report.<sup>89</sup> Under the new guidelines only collieries operating below £1.50/GJ, after accounting for the new investment, would be considered for investment and only then if the incremental capacity could be produced at a cost below £1.00/GJ. Two points can be made about this change. Firstly, as the NCB/BC intended, it shifted the focus towards costs and away from profitability as the primary justification for new investment. This however, was more a question of psychology than a real shift in targets. In a competitive market that limits the ability to raise or even maintain prices, costs and profits are directly related. Secondly, a key element of the average DCF yield approach remained. Future investment opportunities were being judged, partly, on past performance. The new guidelines did not overcome the 1983 MMC criticisms that investment opportunities that enhanced the overall profitability of the industry could be missed. In 1983 they had recommended a separation of the marginal and average assessments; the new guidelines applied different methods but seemed to bring the two closer together. It is perhaps surprising then that the MMC Report of 1989 noted the shift with approval (MMC 1989, 42).

The MMC also welcomed the tightening of criteria used for investment appraisal. The £/GJ hurdle was not adjusted to reflect inflation and so represented real-term cost reductions and after 1988 appraisals assumed a 2% real terms reduction in revenue (MMC 1989, 21). In addition, the DCF yield hurdle had been increased from 10% to 15%. However they also made a number of criticisms, some of which were carried over from the earlier report. In particular, they were not convinced that BC took into account the uncertainties they faced; especially the impact that privatisation of the ESI and the coal industry might have. BC continued to believe that coal consumption would remain relatively high with a lower limit of 105 mt. between 1990 and 2000 and an upper limit rising from 115 mt. to 130 mt. in the same period - though they stressed that BC's share of this market would depend on its ability to reduce costs (MMC 1989, 19). The Report was also critical, as the 1983 Report had been, of the evaluation of alternatives at stage one of the submission procedure and of the methods used for assessing composite projects.

To summarise: before the late 1950s it had been assumed that nationalised industries would not make uneconomic investment decisions. However, disappointing results and comparisons with the private sector led to a reassessment and after 1961, with the first White Paper on Financial

---

<sup>89</sup> Cost per GJ: A measure which related the heat capacity to cost of production.

and Economic Obligations, governments have involved themselves in the Board's investment decisions. Critically, government had to approve the NCB's appraisal methods. Through the White Papers of 1967 and 1978 and more importantly in the context of the coal industry the MMC Reports of 1983 and 1989 investment appraisal shifted from a discretionary to a rule based approach. The rules evolved as changes were made in an attempt to correct the apparent failures of earlier versions. Throughout, the underlying objective was to ensure that the Board's investment decisions were compatible with governments' objectives for the industry, the industry's market position, its financial position and the efficient use of national resources. The extent of the failure to achieve this objective is only partially seen in the derelict or reclaimed colliery sites in the old mining regions and the sale of BC's assets at a fraction of their cost. The greater part of the evidence lies entombed underground.

The reasons for this failure are many, varied and complex. One possible explanation, the differing interests of those charged with seeking out investment opportunities and the interests of the industry as a whole, has already been explored. Investment appraisal techniques based on a theory that views the 'firm' as a single entity does not transfer easily to multi - unit organisations. A second explanation, that the most sophisticated appraisal techniques will be of little use if the starting assumptions are consistently wrong, has also already been noted. The NCB/BC consistently over-estimated its future markets and never contemplated the unthinkable, the collapse of demand. There are two reasons why this should not surprise us. Firstly, contemplation of the 'unthinkable' was, rationally and institutionally, improbable. Rationally, as already noted, all those involved in the industry can be viewed as output maximisers, or in the context of the 1980s, contraction minimisers. No one had an interest in reducing the industry to a rump. At an institutional level, the NCB's only *raison d'etre* was the production of coal. The industry has been dominated by its mining engineers who focus on the physical aspects of production rather than market opportunities (Henney 1994). Also, the Board had been charged with the production of coal the country wanted, at a price that it was prepared to pay, but from Nationalisation onwards both quantity and price had become political variables. The size of the industry had, since the arrival of competition in the 1950s, been decided through bargaining in political arenas. Chapter five drew on the network approach to illustrate the fragmented and compartmentalised nature of those arenas. Essentially, fuel policy was bargained for in competing networks as the individual fuels sought to maximise their own share of the market. It would have been a poor bargaining strategy in

the late 1980s to have conceded defeat before the final play. As was seen in this chapter, the Board did privately begin to have serious doubts about the industry's future as the 'dash for gas' began to unfold. But they were dependent on a political 'fix'. Historically such a fix had been forthcoming and one was achieved in 1991 when Government brokered a deal with the ESI.<sup>90</sup> In the context of the late 1980s and early 1990s what was 'unthinkable' was that the Government would abandon an industry in which they had invested so much money. In a repetition of the late 1950s, BC appears to have held on to the belief that 'all would come right in the end' (see chapter four).

Further possible explanations for the failure of investment appraisal centre on the theoretical nature of the concepts. DCF investment appraisal is a stylised theoretical construction of the behaviour in the theoretical 'classical firm' rather than a picture of how large businesses behave. As the memoranda from Shell and Rio Tinto Zinc to the 1973 SCNI make clear, DCF was a part of the process they used but it was only one of a number of appraisal methods: assessment of market potential, future price movements, technological developments and political changes were equally important. They were also features which did not easily fit into mathematical models. Although work had been ongoing, throughout the period, to incorporate risk, uncertainty and imperfect information into the models, (see Gravelle and Rees 1992) no model could possibly produce single, optimal solutions. Investment appraisal remained an art as well as a science.

This section has outlined the evolving appraisal methods used by the NCB/BC. It has been seen that government, through its White Paper and MMC Reports, sought to encourage appraisal methodologies that were consistent with the overall policy objectives and avoided misapplication of resources. In the process, the government/industry relationship, on issues of investment, shifted from the 'leave it to the industry' approach of the early 1950s, through a 'hands on' approach in the 1960s, to a rule based approach from the 1970s on. The failure of the latter to achieve the objectives, particularly concerning the appropriate use of resources, has been attributed to rational and institutional interests, the misuse of appraisal methods and to the inadequacy of those methods on theoretical grounds. This analysis now allows us to grapple with the paradox that has run through this thesis, that of Conservative Government finance for investment in projects that were subsequently aborted.

---

<sup>90</sup> Policies were adopted, for example tax on fuel oil, encouraging the CEGB to burn more coal than it otherwise would, which slowed down the rate of decline in the 1960s.

To resolve this question we need, perhaps not surprisingly, to return to the 'old chestnut' of the problems surrounding the Morrisonian conception of nationalisation. (see Chester 1975 for a comprehensive account). As originally conceived, the concept involved a dual system of management whereby government was responsible for the 'national interest' and Board's were set up to deal with 'day-to-day' and operational policy. In terms of coal investment policy, Government would set the overall framework whilst the industry dealt with the specifics of where, and in what, to invest. As noted, the original assumption had been that the Board would not invest in uneconomic projects. An assumption which, perhaps, sprang from the general ethos of collectivity and confidence in Britain's organisational capacities in the immediate post-war period. This assumption was, however, short lived. The perception of Westminster in the mid and late 1950s was that little benefit could be discerned from the investment which government had financed. There then followed a period of pro-active government involvement in the NCB's investment decisions much to the consternation of the Board, Parliament and some outside commentators (see HC 371, 1968).

Concern over government interference culminated in the 1968 SCNI Report, a Report that is pivotal to the understanding subsequent events. As seen in chapter four, the Select Committee welcomed, with approval, the adoption of CBA and DCF techniques. This was after all the era of great confidence in science and scientific government.<sup>91</sup> CBA would quantify the 'national interest' and DCF ensure that only 'economic' investment decisions were made. Government could then withdraw from detailed involvement in the nationalised industries investment programmes, providing it ensured they used the correct methodologies. Whilst CBA very quickly ran into serious theoretical and application problems faith in the use of DCF continued into the 1970s, through the 1980s and on to the 1990s. If anything, the Conservatives, including those influenced by New Right ideology, were more likely to embrace DCF than were Labour. The concept originated in, and was used by, the private sector. It was also the model of how the 'classical firm', which the New Right believed the public sector should ape, operated. Apparently, all the Conservative Governments needed to do was ensure the methodology was correctly applied, something it sought to achieve through the MMC enquiries.

---

<sup>91</sup> A cynic might suggest that anything the committee could not understand was embraced as the solution to long standing problems.



The problems with over reliance on a rule-based approach to investment control have been identified. The NCB at both the national and local levels can be viewed as output maximisers, constrained only by the willingness of government to inject finance. Rational interests diverged as Areas attempted to maximise output, or minimise closures through attracting investment and the National Board sought to pursue a policy of investment to maximise profitable output. There was an asymmetry of information as the details of investment possibilities were held at Area and Pit level and there was a tendency for projects to gain momentum at an early stage. Government either failed to recognise the potential for uneconomic decisions or were powerless to intervene.

Although the Government recognised some of these problems it retained faith in DCF - how could a project that showed a positive net present value running into millions of pounds be uneconomic? The final answer is, of course, that it is when the assumptions upon which it is based are false. If, as in the case of the coal industry, the market (at any price) collapses, then the result will be aborted investment. It has been argued that the emergence of gas as an alternative to coal in the generation of electricity was an unforeseen and largely unintended consequence of a number of features in the energy sector: the discovery of politically acceptable foreign reserves, the privatisation of the ESI and the environmental pressure to control acid rain and greenhouse gas emissions. These features were however, questions of strategic policy and therefore questions for government. The NCB/BC had no interest in thinking the unthinkable, the near total collapse of its market, and no interest in feeding that possibility into its investment appraisal. Their rational strategy was to continue investing to reduce costs with the aim of securing as large a share of the energy market as possible. Government up to the very late 1980s pursued a strategy of maximising the quantity of British coal, subject to the constraint that it was competitive with imported coal, and failed to recognise the consequences of the pressures building up in the energy system. They had no reason to challenge the Board's strategy. But equally they had no capacity or reason to challenge individual investment decisions. *Even if the government had been aware of the impending crisis they would still have funded uneconomic investment projects - a consequence of the separation of 'strategic' and 'day-to-day' management, acceptance of the concept of DCF methodology, rational interests and asymmetric information. As the example of RTZ above illustrates investment appraisal needs to take into account all variables: the political,*

economic and financial - something that no simple DCF model can accommodate. If these are not taken into account then conflicts and paradoxes will be the norm.

## **6.6 Policy Networks in the 1980s and 1990s.**

It was seen in chapter three that policy network approach aims to provide a framework for understanding outcomes. In the paradigm policy community the relations between the MAFF and the NFU are seen as central to explaining the persistence of agricultural support. In this thesis the approach has been applied to a number of features of the post-war coal industry. It has been argued that the approach offers some insights into the 1967 White Paper and the 1974 Plan for Coal. In this chapter the analysis has focused on the Conservative attempts to break down the policy communities.

Earlier it was noted that the break-up of the community that had sustained Plan for Coal at a strategic level presented the Government with few problems. It was also seen, that, following Ezra's replacement as Chairman and the 1984/5 strike, a new consensus developed between the Board and Government, one that emphasised the need for the industry to be commercially viable and the need to shed uneconomic capacity. It was, however, a consensus built on the premise that a substantial part of the industry would become viable and that a substantial part of the market would hold up. When the markets collapsed so did the consensus and with it any sense of a policy community.

At the investment decision-making level it has been seen that the essential power and resource dependencies remained a key feature of the industry. It could be suggested that the institutionalised relations surrounding the annual review might explain the continuance of the investment programme in much the same way as Smith (1990) has argued that support for the agricultural industry has been maintained. In the case of the coal industry of the mid to late 1980s the Government depended upon BC for implementation of its strategic objectives which they themselves shared. The Coal Board appeared happy to go along with the reduction in capacity providing a substantive part of the industry survived into the 1990s. For that to happen, they believed, substantial investment funds were needed to bring costs down and enable British coal to compete with imported coal. In other words the relationships appear to exhibit many of the characteristics of a policy community as defined by Marsh and Rhodes (1992).

However, the key question that needs to be addressed is one of causality - did the network *cause* the continuance of the investment programme or did the continuance of the investment programme *cause* the network? The analysis offered here suggests that the primary driving force behind the investment programme was the methodology employed to appraise individual investment opportunities rather than the relationships between the Board and the Government - relationships which were determined by the methodologies of investment appraisal - a feature that has already been noted in relation the 1967 Fuel Policy Review (see chapter five). The irony, of course, is that all this happened despite an analysis that led the Conservatives to believe nationalised industries could not make commercial investment decisions and a MMC Report that supported that analysis. However, whilst there is irony there should be no surprise - the prescriptions of the New Right owe much to simplistic economic modelling.

This is not to suggest that the relationships within the policy processes are unimportant or that we should view the Government as a hapless victim of forces beyond its control and which it could not have foreseen. As Greenaway *et al.* argue:

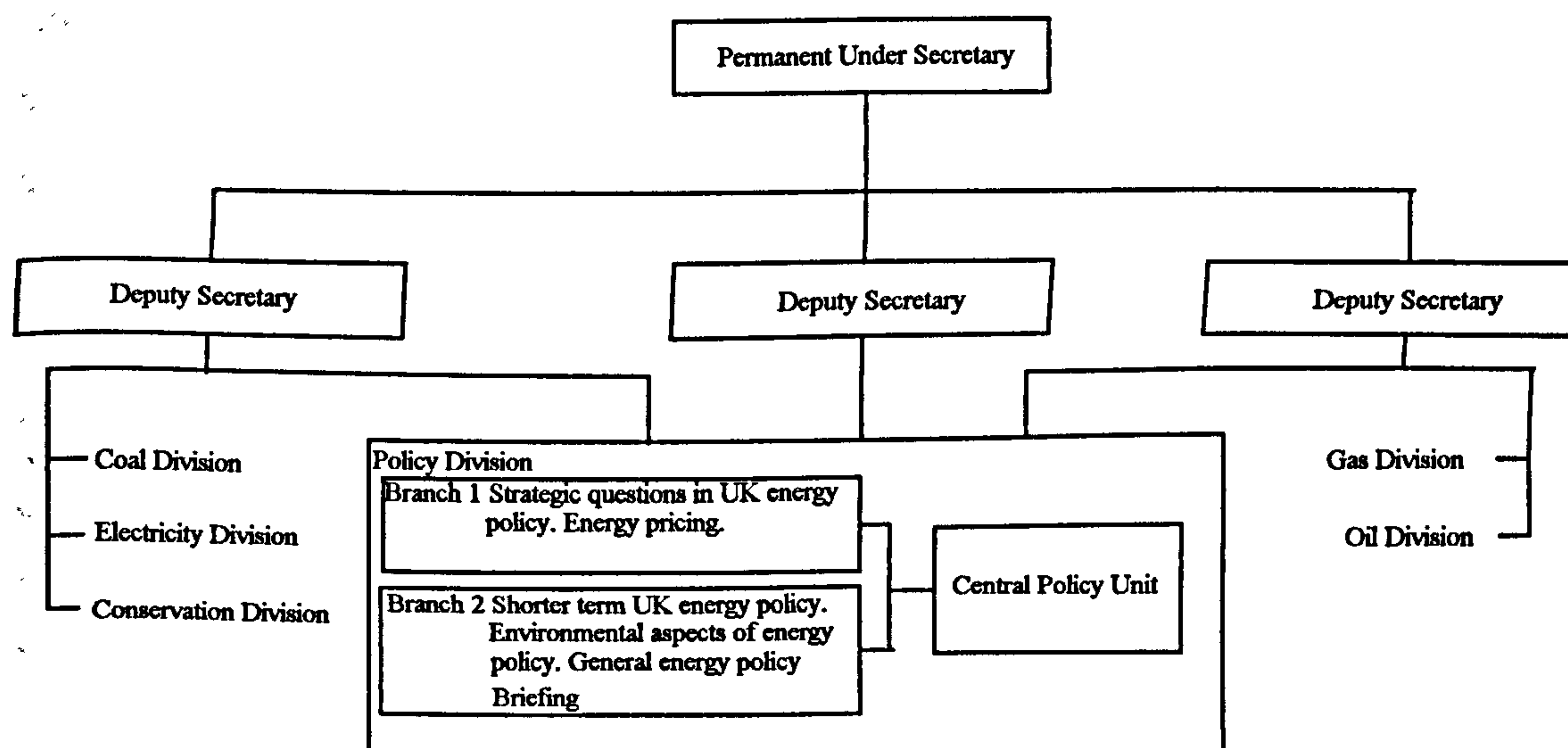
The state of knowledge is itself a variable over which government may exercise control. At one level, the Government may make itself more or less accessible to certain sources of information. Its ignorance may, therefore, be a consequence of not choosing to listen. At another level, the lack of knowledge may be a result of a decision not to spend more on research. (1992, 70)

An interesting feature of the 1980s policy-making procedures was the changes that occurred within the DEu, changes that contributed to the government's deafness, increased the likelihood of ignorance and, therefore, policy confusion and contradiction.

The best published guide to the Department as it was structured in the early 1980s is found in a memorandum by the DEu submitted to the 1982 Energy Committee (HC 80). Formally the Department was headed by a Permanent Under secretary and three Deputy Secretaries, reduced to two under Lawson. The Permanent Secretary was assisted by the Management Board, on organisational questions, and the Steering Committee, on policy questions. The two Deputy Secretaries heading the industrial Divisions had day-to-day responsibility for policy co-ordination reporting to the Permanent Under Secretary twice a week. The memorandum makes it clear that where policy-making is involved the informal structures were equally as important. Under the arrangements pertaining in 1982 the three Deputy Secretaries had 'line management responsibility' for the Energy Policy Division. Within the Energy Policy Division was the Central Policy Unit (CPU) which 'handles the domestic side, for example common strands in

the Government's relations with nationalised industries and discussions across a whole span of energy supply'. The CPU is also 'responsible for identifying issues that require consideration at the highest level in the Department and to provide independent advice on them' (HC 80, 53, para.13). Figure 6.1 attempts to capture the relationships.

Figure 6.1 The Department of Energy Structure 1982.



Changes in the formal structure can be traced through time using the Civil Service Year Book. Focusing on the coal industry, two Divisions can be identified which may have had a significant input into policy and which feature in the 1982 guide to the informal structure: the Coal Division and the Energy Policy Division.

Initially, in 1974, the Coal Division composed of three Branches. Branch 1 dealt with NCB finance and policy for the coal industry; Branch 2 was concerned with international and environmental questions and Branch 3 with colliery closures and civil emergencies. During 1975 the three Branches merged into two with Branch 2 taking all of the functions except civil emergencies that were transferred to Branch 1. In broad terms the two Branches showed a high degree of continuity between 1976 and 1992. Branch 1 typically listed NCB finance, the supply distribution and demand for solid fuel and the NCB's corporate plan amongst its functions. Branch 2 continued to be concerned with international, environmental, closures and related issues. It also, for the most part, took on civil emergencies and NCB appointments. However, it should be noted that functions were transferred between the two branches as the

relative importance of issues changed. So for example when the Chairmanship of the NCB became a critical issue in 1981-2 responsibility shifted from Branch 2 to Branch 1.

From the emergence of the DEN in 1974 until 1987 an 'Energy Policy Division' can be identified which was on occasions linked to other areas such as Conservation and the Nationalised Industries. The Division experienced a number of name changes throughout its life.<sup>92</sup> In general terms the 'Policy' part of the Division operated with two branches. Branch 1 was, typically, concerned with 'general energy questions' whilst Branch 2 has dealt with environmental issues. Again, as in the case of the Coal Division there have been some changes in the listed functions of Branch 1. In 1978 the Energy Commission was added and in 1981 the wording changed from 'general energy questions' to 'strategic questions'. Perhaps more significantly, in 1982 Branch 1's only listed function was the Central Policy Unit, the focus of the informal policy-making structure outlined in figure 6.1. In 1983 this grandeur had been reduced to 'nationalised industries policy' and an additional Branch formed charged with 'policy co-ordination', to which 'policy studies' was appended during 1984. Also in 1984 an additional Directorate (Directorate 5) was added to the Energy Efficiency Office, taking the Assistant Secretary from Branch 2 of the Energy Policy Division and listing its functions as, *inter alia*, 'market advisors' and 'the role of nationalised fuel industries'. All these changes were, however, short-lived. Effectively the 'Energy Policy Division' was closed down in 1986 though a Nationalised Industries Policy Branch functioned for a further year. Directorate 5 also ceased in 1987. Nor do the functions allocated to the deceased branches appear to have been re-allocated elsewhere in the DEN.

Rather interestingly, from analysis of the formal structure it would seem that the DEN began to lose its policy-making capacity from 1982, a process that was complete by 1987. This is of course consistent with Government's objective of replacing a political process with a market process. The rejection of Energy Policy implied little use for a policy-making capacity.

It is also worth noting that this observation appears to be a direct contradiction with Dunleavy's bureau-shaping model outlined in chapter three (Dunleavy 1991). There it was seen that Dunleavy argued that top civil servants acquiescence to reforms in Whitehall can be explained because they were able to re-shape their bureaux so that they spent more time

---

<sup>92</sup> 1975 Energy and Nationalised Industries Division; 1976-78 Energy Policy and Conservation Division; 1979-1981 Energy Policy Division; 1982 Energy and International Division; 1983-86 Energy Policy Division.

performing 'valued' policy work. In the case of the DEn we had a Department, which in the past had spent much of its time involved in policy making, lose those functions. Indeed the only growth area within the Department during the 1980s was the emergence of new Divisions to deal with the privatisations; a feature that ultimately undermined the primary function of the Department and led to its re-absorption by the DTI in 1992. This would, on Dunleavy's (1991) account, appear to be irrational behaviour. However, it was argued in chapter two that the logic of bureau-shaping does not preclude civil service acquiescence in 'shaping' away from policy work. If the full model is considered then ministerial preferences 'shape' the officials preferences and Ministers might have more influence on the outcome than Dunleavy allows. In this case, from 1982 onwards, there was a clear and strong ministerial preference that Government should distance itself from energy policy. Civil servants, even those who held the belief that the energy industries should be retained in the public sector, have implemented such a policy without complaint (Whitehall interviews).

The key point being made here is that the Department lost the core policy-making and policy co-ordinating Divisions that had emerged following the criticism of Fulton. In its formal structure the shape of the Department resembled that of the old Ministry of Power which Robens had heavily criticised because of its compartmentalised nature. As was seen in chapter five, fuel policy-making can be characterised as occurring in communities focused on individual fuels: coal, gas, oil, nuclear power and electricity. It was argued that attempts to co-ordinate policy were either unconsciously hijacked by vested interests, as in 1967, or not seriously considered, as in the 1974. Here it is being suggested that the capacity to co-ordinate policy in the late 1980s was even weaker than it had been in the past. That policy mistakes were made and that policies contradicted each other is, perhaps, not surprising. The network approach argues that the structures in which policy is made can have an impact on the resultant policy output. The shift back to a more compartmentalised DEn may go some way in explaining the apparent lack of co-ordination in the post strike era. Of course, the history of policy co-ordination within the 'Energy' departments might lead to the conclusion that even if it had retained those policy and co-ordination Divisions it might not have detected the policy contradictions. Nevertheless, such failure must be more likely in their absence.

There is perhaps one caveat that needs to be added to this analysis. It has just been suggested that the Government embarked on a restructuring of the policy processes that reduced their capacity to co-ordinate policy just at a time when dramatic changes in the energy system

implied an increase in co-ordinating capacity was needed. Critics of this position could argue that the result, the opening up of the energy sector to competitive forces (no matter how imperfect) depended on the reform of the policy processes. Had the structures of policy-making remained the same, or planning capacity increased, then the opportunity for vested interests to pervert the processes, consciously or unconsciously, would have been greater. The network approach suggests that communities endure because of the institutional relationships, so it seems logical to suggest that the way to break-up networks would be to reduce the importance of those relationships. Two points can be made. First, it is a strategy with a potential for disaster. The Government were fortunate in this case in the sense that the variables in the energy system were working with them. Had the energy markets tightened in the late 1980s the lack of capacity within the DEn may have become critical. Second, from a normative perspective, the costs, both economic and social, have been too high. Millions of pounds have been spent on restructuring, on aborted investment and on conflict. Communities and individual lives have been decimated and uncertainty about the future remains a pervading feature of what is left of the industry.

## **6.7 Conclusions**

This chapter has sought to explain the role of policy processes in the decline of the coal industry during the 1980s and 1990s. It has been a complex story involving an account of the circumstances leading to Conservatives adoption of the 'market solution', the implementation of that solution, the consequences of implementation and the failure to resolve the long-standing issue of the control of the nationalised coal industry. Yet despite the complexities the reasons this thesis identifies for the decline of the coal industry in the 1980s can be simply stated. The Conservatives inherited an industry that was already in crisis; a consequence of over ambitious plans laid in 1974 and the failure of the previous government to adjust those plans. When they came to power the Conservatives, or elements of the Party, came with an analysis of the problems of the industry and a solution - the 'market solution'. Time and fortune enabled them to pursue policies in the energy sector that were broadly consistent with that solution. During the mid- to late-1980s they were operating within energy and economic systems in which key variables were changing rapidly. The forces that had been unleashed as a result of the oil price-hikes had reached a critical point. The markets experienced over supply as new sources came on stream, the economy restructured and consumers conserved energy. Total energy demand ceased to grow year-on-year. Environmental issues came to the forefront

reinforcing these trends and the collapse of Communism in Eastern Europe brought even more supplies of energy on stream. In the midst of these changes the Government embarked on the privatisation of the ESI, the provisions of which interacted with energy system to produce unforeseen consequences. They failed to recognise the impact that policies in one part of the energy sector would have on the others or the impact of changes in other key variables in the 'energy system'. Throughout most of the period they believed that a substantial part of the coal industry would be commercially viable and continued to finance investment to achieve that aim. In the end the coal industry fell victim to the contradictions of policy. Were that not bad enough the industry did little to help itself. In a repetition of the failures of the 1950s investment decisions under the umbrella of Plan for Coal appear to have been driven more by the short-term interests of the Areas than by the long-term interests of the industry. Even more ironically, Conservative Governments continued to finance those investments, a function of the over use of a rule-based financial appraisal system and the deliberate diminution of the DEN's capacity to oversee and co-ordinate policy.

Of course, there were other significant factors involved in the decline of the industry, not least the industrial relation problems and the restructuring of the British economy. However these lie outside the scope of this thesis that has focused on the impact of policy processes on the decline.



## 7. Conclusions

The primary aim of the research undertaken for this thesis was to explore the policy processes during the decline of the coal industry. This chapter will draw the main conclusions together, and attempt to tie up any loose ends. It then focuses on some of methodological issues thrown up by the research and concludes with a discussion on the application of economic methodologies in the analysis of political phenomena.

In chapter one some recent contributions to the literature on the history of the coal industry were criticised. Specifically it was argued that the critique of 'traditional' explanations failed because they down played the importance of the market and elevated the role of macroeconomic policies. It was also suggested that some of the work was at best anachronistic and at worst can be empirically challenged, nor had some of it been fair to the 'traditional' work it sought to criticise.

However, the main criticism of both 'radical' and 'traditional' explanations has been the failure to account for the processes through which policy was formulated and implemented. Much of the work has focused on the turbulent industrial relations and has often aggregated the actors in order to explore the relationships between them. Thus the Government, the NCB/BC and the NUM are treated as single bodies with even the boundaries between the Government and the Board becoming blurred. Taylor (1991) noted that this focus put the spot-light on two actors, the NCB and the NUM, which commentators were increasingly concluding played little part in the formulation of strategic coal policy. Conversely, the focus tended to marginalise the role of the DEN that, he suggested, might have been an influential player. From this position this research has attempted to provide an alternative perspective on the decline of the coal industry by focusing on the policy process and exploring the inter- and intra-relationships of the key actors, including the sponsoring ministry.

Policy has been researched on two levels. At the strategic level the aim has been to determine how successive governments have formulated the overall policy framework for the industry. That is how Governments have set long-term objectives for the industry, objectives which shifted between decline, expansion and stabilisation. Whatever the governments' objectives for the industry in terms of its size, it has been argued that all governments have shared the objective of achieving an 'efficient' industry. Restructuring for efficiency was a primary

motivation for the industry's nationalisation; its first investment programme; the rationalisations of the 1960s; Plan For Coal 1974; and the policies of the Conservative Governments of the 1980s and 1990s. Behind this objective have been other objectives such as a 'cheap' energy policy, UK energy self-sufficiency and fuel diversity to maximise security of supply. The primary instrument for pursuing these objectives, and the focus for this research, has been investment policy. In an extractive industry investment is a key determinate in the industry's future size, its supply curve and therefore its competitive position in relation to alternative supplies.

At a second level, investment policies are implemented. The NCB twice embarked on ambitious investment programmes and in both cases a substantial amount of that investment was sterilised as the pits closed. To be sure, part of the explanation for this lies in inconsistent strategic policy. However, it has been a contention of this thesis that the explanation also lies in the implementation of those programmes.

The thesis has also adopted a strong historical perspective. In the case of the coal industry this is particularly important given the pervasive influence of the past. Mining techniques can be constrained by past mining methods and labour /capital relationships have been influenced by the development of the industry. Most importantly for this research past investment decisions influence contemporaneous and future possibilities. Here a chronological summary of the main events might be useful.

In chapter four the turbulent inter-war history of the industry and movement towards its nationalisation was outlined. The key point to emerge from this was that a primary motivation for nationalisation was the industry's restructuring. The fragmented ownership of the past was seen as a barrier to the modernisation of the industry, modernisation that was necessary to secure the perceived need for coal to fuel post-war economic growth. The primary instrument for the industry's restructuring was Plan For Coal (1950). This, it was argued, was essentially a child of the NCB adopted by the Government. Only the Board had the necessary information and expertise to assess likely demand and supply possibilities and, in the wake of the 1947 fuel crisis, the Government could do little but welcome any plan that promised to expand coal production.

The implementation of Plan For Coal (1950) was, however disappointing. The NCB at the time argued it failed to significantly increase production because of the run down condition of many of the pits; the lack of qualified engineers and the pressures for output. This has been challenged by writers such as O'Donnell and Taylor who argue that the programme was constrained by lack of finance. Governments held down the price of coal for macroeconomic reasons leaving the industry dependent on the Treasury for investment finance. This research has found evidence that suggests that the NCB's position - that the constraints were physical rather than financial - is the more likely explanation for the failure to expand coal production as quickly as had been hoped.

The failure to satisfy the growing market was one factor in the emergence of competition. In the 1950s Britain was over 90% dependent on coal for its non-transport energy needs. The introduction of oil, nuclear power and gas has steadily eroded that position and coal lost its monopoly. As a result, just as the ambitious plans to expand production began to bear fruit, the market collapsed and there was little option but to embark on a period of retrenchment. However, a key argument made in chapter three was that we need to explore beyond the global figures of the market collapse and disaggregate the changes in the market and the Board's investment strategy. It was found that the NCB appeared to have invested most heavily in Areas to produce classifications of coal where demand had most failed to live up to expectations. This was particularly true in the case of South Wales where the costs of production were the highest but where the expectation had been of rising domestic and export demand for coals that could attract a premium price. Conversely, relatively low investment had occurred in the central coal fields to produce for the electricity market, the only sector where demand was growing. It appeared that the NCB had invested in the wrong mines to produce the wrong classifications of coal. Posner, who noted this feature in 1962, exonerates the Board and argued that the NCB could not be expected to identify trends that the economists had failed to spot. He went on to suggest that the Board's investment strategy appeared essentially correct because few mines had closed where money had been invested. Both these arguments can be challenged to a degree. First, why the NCB and the sponsoring ministry failed to identify the changes in the market structure is an open question. In this thesis it has been suggested that Whitehall failed because of weaknesses in its co-ordinating structures and that the NCB had no interest in identifying features that implied the abandonment of its investment programme. It was further argued that the NCB's Area structure and a weak centre

empowered those with rational interests in maximising investment at a local level, whatever the long-term interests of the industry as a whole. Second, by the late 1960s many pits that had benefited from investment closed as the changes in the market continued. Third, history was to substantially repeat itself in the 1970s and 1980s.

The result of the market changes and the mistakes of the 1950s and early 1960s was an industry whose market profile differed substantially from its production profile. Further, the discovery of North Sea gas and a second nuclear power programme implied a further weakening of coal's position. The energy sector was undergoing significant changes that suggested a restatement of energy policy. The election of a Labour Government, the angst surrounding the debacle of Suez and Britain's relative economic decline brought changes in Whitehall and Westminster. In the spirit of the 1960s, indicative planning and scientific government became the 'big' ideas and were applied to the energy sector. The culmination was the White Paper of 1967, the only attempt, so far, at an integrated energy policy. The aim of the Review undertaken for the White Paper was to apply the latest economic and statistical methodologies to discover the optimum supply of Britain's future energy needs. It was an attempt at a 'total sum' approach that sought to take account of non-market factors such as balance of payments implications, unemployment in the mining areas and the high capital costs associated with nuclear power. In chapter five it was argued that the attempt foundered in a policy process that was compartmentalised, closed and infected by pre-conceptions of the relative costs of nuclear and conventionally generated electricity. Some of the blame for this was put on the methodologies employed. Those involved believed that were collecting the 'facts' from which policy could be made. They drew a clear distinction between apolitical facts and political policy. A key argument in chapter five was that such a distinction is difficult to draw. The imagery of policy networks was used to trace the impact of the policy process on the policy outcome and it was suggested that the nuclear network had dominated other sub-sectors. Coal lost out in the process as it was never able to challenge the pre-conceptions that the industry was inevitably declining. This despite the fact that technology in the industry was developing rapidly and, with investment, there was a possibility of significant cost reductions. For the coal industry the implication of the 1967 White Paper was that it was entering a period of decline that was terminal. The failure to invest in new and reconstruct capacity would eventually lead to rising costs, reduced demand and an even greater reluctance to invest.

The ink had hardly dried on the 1967 White Paper when the circumstances began to change. In 1970 there were coal shortages; by the early 1970s the nuclear power stations were taking much longer than anticipated to build and OPEC emerged as a credible force. In 1974 a new Labour Government emerged out of the political, economic and energy crises. Again the energy sector appeared to be in chaos, implying a complete reassessment. However, the experience of 1967 mitigated against an integrated solution. In addition, events surrounding the previous Labour Governments *In Place of Strife* and the two miners' strikes suggested the inclusion of the Unions in the policy processes. The result was the corporatist Plan For Coal 1974. Like its namesake of 1950 this was essentially an NCB plan, one that had emerged out of the decline of the 1960s and changes within the NCB that gave it planning capacity, though there is little doubt that the main impetus stemmed from the energy crises. The Plan was acceptable to the unions and adopted by Government. It had as its primary goal the stabilisation of the coal industry through a new investment programme.

It was argued in chapter six that Plan For Coal was flawed. First because it failed to recognise the enormity of the shock that oil price hikes had inflicted on importing countries. It failed to account for the impact of high energy prices on both the supply and demand for fuel. The presumption was 'business as usual', economic growth would continue and the energy content of that economic production would remain as it had in the past. No account was taken of new fuel supplies or energy conservation. These mistakes were attributed, in part, to closed policy-making structures. Those within the process either had a rational interest in maximising investment in the industry or had a pre-disposition towards the industry. Critics, like Robinson (1973, 1974) whose analysis of the situation was to prove more robust, were excluded.

Second, it was argued that Plan For Coal was internally flawed. There was little point developing a plan to stabilise coal production unless there were parallel plans to burn the output. The ESI, the dominant customer, would need to build new, and refurbish old, power stations if coal was to maintain its position as the input fuel for base load. The ESI, however, remained sceptical, preferring the nuclear option. They too were excluded from the policy process, their input limited to memoranda which the coal 'community' re-interpreted - the quantities of coal that the ESI said it *could* burn was taken to mean the amount it *would* burn. The competitive caveat faded into the background.

Plan For Coal provided the framework for the NCB's investment strategy for nearly a decade. Something that again can partly be attributed to the structures used to win its approval. The

tripartite community locked the Government and the NCB into a structure that included the NUM, which became increasingly militant in its opposition to pit closures - re-adjustment through closure became difficult, re-adjustment through the investment programme was not considered. The industry, until 1979, enjoyed good relationships with the Government and it was not in its (short-term) interests to curtail the investment programme. Indeed the period, in replication of events in the 1950s, saw even more optimistic scenarios for the industry's future.

As early as 1976 the contradictions of Plan For Coal had begun to emerge. The relationship between the industry and the ESI was never resolved. Growth in energy consumption had halted followed by decline as the impact of conservation, economic recession and a shift away from smoke stack industries was felt. By 1978 there was an emerging imbalance between supply and demand. However, a further oil price shock in 1979 sent conflicting signals. On the one hand it appeared to confirm the analysis of 1974: that economic survival depended on energy self sufficiency. On the other, it strengthened the forces working against the coal industry - consumers sought to lower demand, producers sought alternative supplies. The latter features were to dominate.

All accounts of the history of the nationalised coal industry note the sea-change following the election of 1979, there, however, agreement ends. Chapter two noted three themes that can be detected in the literature to explain Conservative Government policies towards the industry: the revenge theory, the triumph of ideology theory and the policy success theory. Either the Government was out to destroy the industry and to avenge the defeats of 1972 and 1974; or the coal industry became a victim to an ideological crusade; or its demise was inevitable and merely illustrated the level of artificial support it had received in the past. The first and the last of these explanations were rejected because both imply a level of coherence in the Conservative policies that is difficult to detect in the 1980s and 1990s. The triumph of ideology theory is partly accepted: the industry did become a victim of market forces, and imperfect market forces at that. However, chapter six sought to demonstrate that the ideology of the market was not an exogenous political shock. Rather the genesis of the 'solution' lay in policy mistakes of the past and an ideologically informed analysis of those errors. Here the importance of an historical approach is highlighted as we need to include the dynamics between the identifiable phases of the industry.

It was argued in chapter six that the underlying objective of Conservative policy was an efficient and financially independent industry. Whilst the Conservatives were essentially

indifferent as to its eventual size they did, as their continued financing of investment demonstrated, hold some views on what that size might be. The suggestion in this thesis is that up until around 1990 the Government felt that around 100 mt. might be competitive with alternative energy supplies and only around the time of the first draft of the Rothschild Report did they recognise that the industry was looking into the abyss. There is no evidence to suggest that the 'meltdown' of the industry in 1992 was planned, or anticipated. The sudden collapse of the industry is viewed as the unintended consequence of a 'solution' designed to overcome the failures of the past interacting with policy in other sub-sectors, primarily the ESI, and rapidly changing variables in the energy system. Environmental issues gave Government an *ex-post* rationale for the outcome as did the emergence of a competitive energy sector and falling real energy prices.

Governments have set frameworks for the industry's operations. In 1967 that framework spelled decline, in 1974 stabilisation and in the 1980s decline but not total collapse. The lack of consistency in an industry that requires medium-term stability has undoubtedly impacted on its efficiency. One of the major problems of the late 1970s was the difficulties experienced in reversing the downward trends of the 1960s. It would, however, be wrong to attribute all the industry's problems to the failure of strategic policy. As noted, an underlying objective of all governments has been an efficient (usually defined to mean least cost) coal industry.

Governments have invested in the industry in the expectation that such investment would lead to an economically viable industry. To understand the failure of investment in the coal industry we need, therefore, to go beyond strategic frameworks and question the detail of investment decisions. Only if the industry's own record is good can it claim to have been a victim of Governmental inconsistencies.

Chapter six also explored the implementation of the 1974 Plan For Coal. It was argued that actual investment decisions were based on unrealistic expectations about markets and prices, that individual investment proposals were made on a stand-alone basis, without reference to the impact such investment would have on the wider demand or supply balance, and that composite projects were incorrectly appraised. It would appear that, whatever the claims of past NCB Chairmen, investment decisions were not always optimal.

It was seen that individual investment projects began in the pits and Areas, where managers had a rational interest in attracting investment funds; careers and survival rested on creating the perception that individual collieries had a long-term contribution to make to the future of the

industry. Winning investment made that point. It would also appear that once projects had overcome the initial, Area, hurdle they gained a momentum that was difficult to stop. This was seen as, partly, a consequence of the physical nature of mining; holes in the ground do not have an alternative use, and, partly, a consequence of the natural tendency not to admit mistakes.

The consequence of these failures was, as it had been in the 1950s, an industry with a production profile out of step with its market profile. Again 'high cost' Areas such as South Wales seem to have benefited disproportionately from new investment. Further analysis suggested that there was a correlation between the historical Area production patterns and the pattern of investment spending. Significantly there are lower correlations between investments and costs, profits or productivity. It seems that there was an investment fund 'pot' that was distributed to the Areas on the basis of 'fair shares'. A feature that followed from rational choices and the structures of the NCB which concentrated power in the Areas.

The paradox of course is that governments, including the Conservative governments of the 1980s, continued to finance such investment. Here asymmetric information and an over reliance on a rule-based appraisal methodology may account for this feature. Governments from the late 1950s on had recognised the potential for nationalised industry's to embark upon 'uneconomic' investment. Their initial response in the coal industry was to increase the level of government interference, requiring projects to be vetted by the Ministry of Power. Later a series of White Papers led to the adoption of discounted cash flow appraisal methods, the view taken that with those in place all government needed to do was set the correct discount rate and assure themselves that the methodology was correctly applied. The problem identified by this thesis is that a methodology based on notions of the *classical firm* failed to take into account the rational choices of those making the investment decisions and the internal politicking of a multi-tiered organisation. As in the case of the 1967 Fuel Policy Review, the methodology used to make policy helped establish the relationships between the industry and Government and distort the outcome.

One point should be made before moving on to discuss the theoretical issues raised in this thesis. It has been argued that the New Right's critique of the nationalised coal industry had some validity. Some of the failures at both the strategic and implementation levels have been attributed to the political nature of decisions that were (or should have been) commercial.<sup>93</sup> It

---

<sup>93</sup> This is a different argument to arguments focused on conflict between commercial and social obligations. Here the focus is solely on the commercial obligations.



must be true that politicisation inevitably follows government intervention. This is not to argue that the recommended solution, and the one eventually taken in the case of coal, privatisation was the only, or even the correct solution. The strides towards competitiveness and efficiency that the industry exhibited in the late 1980s and early 1990s demonstrated that the ethos and environment under which the industry operated mattered more than the issue of ownership. The Government was fortunate enough to have operated within the context of benign energy markets. Had the markets been tight it could not have challenged the industry in the way it did. However, solutions that may be appropriate in situations of benign markets may not be appropriate if, or when, the energy markets once again show a tendency to under-supply. It should be recalled that energy markets failed in the inter-war years and that market failure continues to be a significant feature of the sector. It seems quite possible that Government may become more involved in energy markets than it is at present - ensuring the lights do not go out (or the taps run dry) will remain a government objective. To be sure, the re-nationalisation of utilities is firmly off the agenda for the foreseeable future. That may not always be the case and if some form public intervention - beyond the present regulatory framework - once again became the solution to energy problems it would be as well if the mistakes of the past were not replicated. That will only be achieved if it is recognised that actors have rational interests, that the methodologies employed in policy formulation and that the structures in which policy is made will have a significant impact on the outcome. Policy processes matter.

The research for this thesis set out to determine the influence of the policy processes on the decline of the coal industry. The primary aim was to explore the relationships between the actors as they reacted to changes in the energy and economic environments. In chapter three a methodological framework was developed which - whilst avoiding the temptation to build a super-model - argued that a synthesis of models would be needed in order to analyse complex phenomena such as the decline of the coal industry. At the centre of the framework has been the policy network model. Policy network analysis focuses on the who? and how? of policy processes and therefore on features of the decline of the industry which much research has paid scant attention to. However, network analysis will frequently see policy as being made in policy communities, a model which is essentially static - ideally suited to the explanation of continuity and inertia but less ideal in rapidly changing situations such as those found in the energy sector. Nor does the network model, as it is often applied, deal satisfactorily with the tensions and conflict interests of those within a policy community. Something which can lead

to the over emphasis of the degree of cohesion within the network. So, when viewed from the perspective of outsider, such as the environmentalists, the energy sector appears to be a unified community of the big players working to pursue their collective interests. Yet, as this thesis has demonstrated, when viewed from within the network, disagreement and conflict were significant features which need to be taken into account.

To overcome these deficiencies two theories have been used to underlay the application of the network approach. First, the networks have been viewed as operating dynamically within energy and economic 'systems'. It was argued in chapter three that dynamism and a 'systems' approach were features of complexity theory which could usefully be applied to the analysis of a political phenomenon. In this case, I believe, it has helped emphasise the linkages between the periods of expansion, decline and stabilisation of the industry and helped 'endogenise' the political and economic 'environments'. However, whilst complexity theory has underpinned the approach to change in this thesis, for two reasons it has not dominated. Firstly, the use of complexity theory is at an early stage of development within Political Science and much more work is needed before we understand how it might be applied and integrated with existing approaches. Secondly, there may be a danger that over-emphasis of 'chaos', 'complexity' and 'systems' may lead to the conclusion that political processes are driven by the variables within the system with little autonomy for the decision-makers. TINA (there is no alternative) is only true to a point.

The second theory underlying the network approach has been to view the actors and organisations as economically rational. That is they have 'interests' which they can identify and will attempt to pursue. Again the intention has been not to let rational actor explanations dominate the analysis. In addition, the focus here has been on 'interests' of organisations and institutions rather than individuals. Undoubtedly, in a sector which has seen a number of powerful and forceful characters, some useful work could be undertaken at level of the individual. I believe the 'rational actor' approach has offered some useful insights, particularly when used at a disaggregated level. Again, more work is needed - to date most of the work using Public Choice theory has come from the 'right' of the political spectrum and the analysis often leads to the preconceived policy prescription of economic liberalism. There is no reason why this should be the case.

Another area for future work will involve the impact of this analysis, and others like it, on macro-political theory. This thesis has been conducted entirely at the micro-level and no

attempt has been made to draw conclusions about the nature of state/society relationships. Nor shall I attempt to do so now. Whilst this may be seen, by some, as an omission it follows from the conviction that theory-building should proceed from the micro- to the macro-level. Macro theories will only be robust if they are consistent with all the relevant empirical data.

One final point should be made, during the research it became clear that there is more to 'policy processes' than relationships of resource exchange and power dependencies. The methodologies used in the processes could have a significant impact on both the relationships that develop and the outcomes. This was clearly seen in the case of the 1967 Fuel Policy Review when the 'scientific' methodology limited the analysis; in 1974 when consensus building replaced 'science'; and in the implementation of Plan for Coal in the 1970s and 1980s. Methodology is, of course, a political variable; why one approach should be preferred over any other is a function of the wider political forces and the predisposition of the actors. So, a scientific methodology, cost-benefit analysis, emerged from the 'white heat of technology' and tripartism from the Social Contract.

DCF, on the other hand, emerged out of the attempts to control the nationalised industries at a micro-level in the face of asymmetric information and a desire to limit direct government intervention. Significantly, faith in DCF cut across the political divide.

Whilst methodology is undoubtedly a key variable, British political science seems to play scant attention to it. More often the focus is on the relationships without exploring the methodological framework in which those relationships are occurring. In some instances this omission may not be significant. If the relationships are essentially political such as bargaining and power relationships there is a congruence between the methodologies employed by the subject and the analyst. However, more often those relationships are occurring within a framework informed by economic modelling. This was true of the coal industry in 1967 and throughout the 1980s. Ormerod has noted that:

Economics dominates political debate, to the extent that it is scarcely possible to have a serious political career in many Western countries without being able to repeat more or less accurately its current fashionable orthodoxies. (Ormerod 1994, 4)

It would appear logical to argue that where policy-makers employ 'economic' methodologies then much will be missed unless the political scientist recognises the influence of the method and builds it into the analysis. Peter Self argued in 1975 (194) that: 'A book is waiting to be

written about the influence of economic ideas upon the behaviour of governments.' Seventeen years later Carter *et al.* after noting Self's observation argued that:

The intellectual history of the influence of economists and their notions on the techniques of government still awaits to be written. (Carter, Klien & Day 1992, 13)

Six years on the need is not so much for a 'book' or an 'intellectual history' as for all political analysis to take account of 'economic' frameworks. In short, whilst much has been gained from the separation of the disciplines of Politics and Economics more could now be gained if future research brought them together.

## Bibliography

- Adam Smith Institute (1984), *Energy policy*, London, Adam Smith Institute.
- Adency, M. and Lloyd, J. (1986), *The Miners' Strike: Loss Without Limit*, London, RKP.
- Allen, V. (1981), *The Militancy of British Miners*, Shipley, The Moor Press.
- Anthony, L. T. (1975), *The Investment Decision Process in the NCB*, Sheffield Management School MA Thesis No. 1007, The University of Sheffield.
- Arnot, R. P. (1979), *The Miners, One Union One Industry*, London, George Allen & Unwin.
- Ashworth, W. (1986), *The History of the British Coal Industry Volume 5 1946-1982*, Oxford, Clarendon Press.
- Bailey, R. (1968), Britain's Fuel Policy in a European Context, *Nature*, 220, 966-969.
- Barratt-Brown, M. (1969), Coal as a Nationalised Industry, *Economic Studies* 4, 1-2, 95-134.
- Baumgartner, T. and Midttun, A., eds. (1987), *The Politics of Energy Forecasting*, Oxford, Clarendon Press.
- Benson, J., Neville, R. G. and Thompson, C. H. (1981), *Bibliography of the British Coal Industry*, Oxford, Clarendon Press.
- Berkovitch, I. (1977), *Coal on the Switchback*, London, George Allen & Unwin.
- Berry, A. J., Capps, T., Cooper, D. J., Hopper, T. M. and Lowe, E. A. (1985), NCB Accounts: A Mine of Misinformation?, *Accountancy*, January, 10-12.
- Beynon, H., Cox A. and Hudson, R. (1990), Opencast Coal Mining and the Politics of Coal Production, *Capital & Class*, 40, 89-114.
- Beynon, H. and McMylor, P. (1985), *Decisive Power: The New Tory State against the Miners*, in Beynon, H., ed., 1985, *Digging Deeper: Issues in the Miners' Strike*, London, Verso.
- Beynon, H., ed. (1985), *Digging Deeper: Issues in the Miners' Strike*, London, Verso.
- Blackstone, T. and Plowden, W. (1988), *Inside the Think Tank*, London, Heinemann.
- Boyd (1993), *Independent Analysis 21 Closure Review Collieries*, British Coal Corporation, John T Boyd. for Department of Trade and Industry Coal Review Team, London, HMSO.
- Boyfield, K. (1985), *Putting Pits Back into Profit*, London, Centre for Policy Studies.
- Brady, C. and Catterall, P. (1996), *Assessing Cabinet Committees 1945-1966*, Paper presented to Political Studies Association, Annual Conference, University of Glasgow 10-12 April 1996.
- Bromley, S. (1996), *Energy*, In Coates, D., ed., *Industrial Policy in Britain*, London, Macmillan Press Ltd.
- Brown, C. V. and Jackson, P. M. (1990), *Public Sector Economics 4th edition*, Oxford, Blackwell.
- Bruce, A. and Wright, M. (1994), Privatising British Coal, *Energy Policy*, 22, 1, 57-67.
- Burgi, N. and Jessop, B. (1991), *Flexibilization and State Strategies: Coal and the City*, in Jessop, B., Kastendiek, H., Nielsen, K., and Pendersen, O., *Great Britain: State-Driven Liberalism*, Aldershot, Edward Elgar Publishing.

- Burns, A., Newby, M. and Winterton, J. (1985), *The Restructuring of the British Coal Industry*, *Cambridge Journal of Economics*, 9, 1, 93-110.
- Burns, A., Newby, M. and Winterton, J. (1988), *The Restructuring of the British Coal Industry*, in Cooper, D. J. and Hopper, T. (1988), *Debating Coal Closures, Economic Calculation in the Coal Dispute*, Cambridge, Cambridge University Press.
- Cairncross, A. (1995), *The British Economy since 1945, 2nd edn.*, Oxford, Blackwell Publishers.
- Cavanagh, M., Marsh, D. and Smith, M. (1995), The relationship between networks at the sectoral and sub-sectoral levels: a response to Jordan, Maloney and McLaughlin, *Public Administration*, 73, 627-33.
- Chester, N. (1975), *The Nationalisation of British Industry 1945-51*, London, HMSO.
- Chester, N. (1951), *The Nationalised Industries, an analysis of the statutory provisions*, London, George Allen & Unwin.
- CINA, *Coal Industry Nationalisation Act 1946*, London, HMSO.
- Cm 2235 (1993), *White Paper: Prospects for Coal 1993*, London, HMSO.
- Cmd 2600 (1926), *The Samuel Report*. London, HMSO.
- Cmd 6610 (1945), *Coal Mining Report of the Technical Advisory Committee*, London, HMSO.
- Cmd 8647 (1952), *National policy for the Use of Fuel and Power Resource*, London, HMSO.
- Cmnd 1337 (1961), *The Financial and Economic Obligations of The Nationalised Industries*, London, HMSO.
- Cmnd 2798 (1965), *Fuel Policy*, London, HMSO.
- Cmnd 2805 (1965), *The Finances of the Coal Industry*, London, HMSO.
- Cmnd 2919 (1966), *NBPI, Report no 12 Coal Prices*, London, HMSO.
- Cmnd 3437 (1967), *Nationalised Industries: A Review of Economic and Financial Objectives*, London, HMSO.
- Cmnd 3438 (1967), *Fuel Policy*, London, HMSO.
- Cmnd 4027 (1969), *Ministerial Control of Nationalised Industries. Governments Reply to First Report*, London, HMSO.
- Cmnd 5567 (1974), *Pay Board, Special Report: Relative Pay of Mineworkers*, London, HMSO.
- Cmnd 7101 (1978), *Energy Policy: A Consultative Document*, London, HMSO.
- Coates, D., ed. (1996), *Industrial Policy in Britain*, London, Macmillan Press Ltd.
- Cocckett, R. (1995), *Thinking the Unthinkable*, London, Fontana Press.
- Cooper, D. J. and Hopper, T. (1988), *Debating Coal Closures, Economic Calculation in the Coal Dispute*, Cambridge, Cambridge University Press.
- Coyne, P. (1992a), Power needs a harness, *New Statesman & Society*, 28 February, 24-26.
- Coyne, P. (1992b), Mining Disaster 1992: 30,000 lost, *New Statesman & Society*, 16 October 12-14.

- Coyne, P. (1992c), What is to be dug?, *New Statesman & Society*, 23 October, 14-15.
- Crick, M. (1985), *Scargill and the Miners*, Harmondsworth, Penguin Books.
- Crick, M. (1997), *Heseltine*, London, Hamish Hamilton.
- Cullis, J. and Jones, P. (1992), *Public Finance and Public Choice: analytical perspectives*, Maidenhead, McGraw-Hill.
- Cutler, T., Haslam, J., Williams, J. and Williams, K. (1985), *The Aberystwyth Report on Coal*, University College of Wales.
- Cutler, T., Haslam, J., Williams, J. and Williams, K. (1988), *The Aberystwyth Report on Coal*, in Cooper D J, Hopper T, *Debating Coal Closures, Economic Calculation in the Coal Dispute*, Cambridge, Cambridge University Press.
- DACE, Energy Archives (including NUM research files), Division of Adult Continuing Education Library, The University of Sheffield.
- Daugbjerg, D. (1995), *Policy Networks and Policy Choices in Changing Environments: Environmental Policy in Swedish and Danish Agriculture*, Paper presented to the Political Studies Association, Annual Conference, University of York, 18-20 April.
- Delafons, J. (1982) Working in Whitehall: Changes in Public Administration 1952-1982, *Public Administration*, 60, 3, 253-272.
- Department of Energy (1974a), *Coal Industry Examination: Interim Report*, London, HMSO.
- Department of Energy (1974b), *Coal Industry Examination: Final Report*, London, HMSO.
- Department of Energy (1976), *National Energy Conference*, June 22 Energy Paper no13, London, HMSO.
- Department of Energy (1977), *Coal for the Future: Progress with 'Plan for Coal' and Prospects to 2000*, London, HMSO.
- Department of Energy (1978), *Energy Forecasting Methodology*, London, HMSO.
- Dowding, K. (1991), *Political Power and Rational Choice*, Aldershot, Edward Elgar.
- Dowding, K. (1995a), Model or Metaphor: A critical Review of the Policy Network Approach, *Political Studies* 43, 136-58.
- Dowding, K. (1995b), *The Civil Service*, London, Routledge.
- Dudley, G. and Richardson, J. (1996), Why does policy change over time? Adversarial policy communities, alternative policy arenas, and British trunk roads policy 1945-95, *Journal of European Public Policy*, 3, 1, 63-81.
- Dunleavy, P. (1985), Bureaucrats Budgets and the Growth of the State, *British Journal of Political Science*, 15, 3, 299-328.
- Dunleavy, P. (1991), *Democracy Bureaucracy & Public Choice*, Hemel Hempstead, Harvester Wheatsheaf.
- Dunleavy, P. and Stayner, J., eds. (1994), *Contemporary Political Studies*, Belfast, Political Studies Association.
- Else, P. and Curwen, P. (1990), *Principles of Microeconomics*, London, Unwin Hyman.

Ezra Interview, conducted by myself on 14, 1, 97, see note on interview sources below.

Ezra, D. (1993), A Framework For Energy, *The Political Quarterly*, 64, 4, 391-395.

Fine, B. (1989), Privatization of the ESI, *Energy Policy*, 17, 3, 202-207.

Fine, B. (1990), *The Coal Question*, London, Routledge.

Fine, B. and Harris, L. (1985), *The Peculiarities of the British Economy*, London, Lawrence and Wishart.

Fine, B., O'Donnell, K. and Prevezer, M. (1985), *Coal After Nationalisation*, in Fine, B., Harris, L. (1985), *The Peculiarities of the British Economy*, London, Lawrence and Wishart.

Fothergill, S. and Guy, S. (1992), *The End of Coal? The impact of the 'dash for gas' in UK electricity Generation*, Barnsley, Coalfields Communities Campaign.

Gamble, A. (1994), *The Free Economy and the Strong State: The Politics of Thatcherism 2nd edn.*, London, Macmillan Press.

Gamble, A. (1996), *An Ideological Party*, in Ludlam, S. and Smith, M. J., eds., *Contemporary British Conservatism*, London, Macmillan Press.

Gibbon, P. (1988), Analysing the Miners' Strike, *Economy and Society*, 17, 2, 139-194.

Gibbon, P. and Bromley, S. (1990), Changes in the British Coal Industry 1985-1989, *Economy and Society*, 19, 1, 56-94.

Glover, P. (1987), Management and Organisation- Forty years of National Coal Board, *The Mining Engineer*, 147, 311. 70-73.

Glyn, A. (1985), *The Economic Case Against Pit Closures*, Sheffield, National Union of Mineworkers.

Goodman, G. (1985), *The Miners' Strike*, London, Pluto Press.

Gormley, J. (1982), *Battered Cherub*, London, Hamish Hamilton.

Grant, W. P. and Marsh, D. (1977), *The Confederation of British Industry*, London, Hodder and Stoughton.

Gravelle, H. and Rees, R., (1992), *Microeconomics. Second edition*, London, Longman.

Greenway, J., Smith, S. and Street, J., (1992), *Deciding Factors in British Politics*, London, Routledge.

Hall, T. (1981), *King Coal*, Harmondsworth, Penguin Books.

Hargreaves Heap, S., Hollis, M., Lyons, B., Sugden, R. and Weal, A. (1992), *The Theory of Choice: A critical guide*, Oxford, Blackwell.

Haslam Interview, conducted by myself on 7, 1, 97, see note on interview sources below.

HC 304 (1957), *Report from the Select Committee on Nationalised Industries*, London, HMSO.

HC 187 -I (1958), *Report of Select Committee on Nationalised Industries*, London, HMSO.

HC 77 (1966), *Second Report from the Select Committee on Nationalised Industries*, London, HMSO.

HC 381 (1967), *Report from the Select Committee on Science and Technology*, London, HMSO.

HC 371 (1967-8), *First Report of SC on Nationalised Industries*, London, HMSO.



- HC 471 (1969-70), *Report of SC on Nationalised Industries*, London, HMSO.
- HC 65 (1973), *Report from the Select Committee on Nationalised Industries*, London, HMSO.
- HC 135 (1982-3), *Second Report from the Energy Committee: Pit Closures*, London, HMSO.
- HC 237 (1992), *British Energy Policy and the market for coal*, London, HMSO.
- Heald, D. (1981), Economic and Financial Control of Nationalised Industries, *Energy Policy*, 9, 2, 99-112.
- Helm, D. (1991), Energy Policy Overview, *Oxford Review of Economic Policy*, 17, 1-15.
- Helm, D. (1993), Energy Policy and the Market Doctrine, *Political Quarterly*, 64, 4, 410-419.
- Hennessy, P. (1990), *Whitehall*, London, Fontana Press.
- Henney, A. (1994), Energy markets and energy policies after the White Paper, *Energy Policy*, 22, 1, 5-13.
- Hogwood, B. W. (1992), *Trends in British Public Policy*, Buckingham, Open University Press.
- Horner, A., (1960), *Incorrigible Rebel*, London, McGibbon and Kee.
- Howel, D. (1989), *The Politics of the NUM: A Lancashire View*, Manchester, Manchester University Press.
- Howell, D. (1987), Saying Goodbye to All of That? A Review of the Recent Literature on the Miners' Strike, *Work Employment and Society*, 1, 3, 388-404.
- Ingham, B. (1991), *Kill the Messenger*, London, Croom Helm.
- Jackson, P. M. (1974), *The Price of Coal*, London, Croom Helm.
- Jackson, P. M. (1982), *The political economy of bureaucracy*, Oxford, Philip Allan.
- Jessop, B., Kastendiek, H., Nielsen, K. and Pendersen, O. (1991), *Great Britain: State-Driven Liberalism*, Aldershot, Edward Elgar Publishing.
- John, P. and Cole, A. (1996), *Decision-making networks in Britain and France: a sociometric approach*, Paper presented to Political Studies Association, Annual Conference, University of Glasgow 10-12 April 1996.
- Jones, M. R. (1990), The Energy Debate in the 1980s: Ceasefire or new consensus?, *Energy Policy*, 18, 4, 381-388.
- Jordan, G. and Maloney, W. (1995), Policy networks expanded: a comment on Cavanagh, Marsh and Smith, *Public Administration* 73, 4, 627-630.
- Jordan, A. G. and Richardson, J.J. (1987), *Government and Pressure Groups in Britain*, Oxford, Clarendon Press.
- Jordan, G., Maloney, W., McLoughlin. (1994), Interest groups and public policy: the insider / outsider model revisited, *Journal of Public Policy*, 14, 1, 17-38.
- Kavanagh, D. (1990), *Thatcherism and British Politics: the end of consensus? 2nd edn.*, Oxford, Oxford University Press.
- Kelly, D. W. (1953), The Administration of The National Coal Board, *Public Administration*, 31, 1 1-11.
- Kirk, G. (1982), *Schumacher On Energy*, London, Johnathan Cape.

Koerner, B., Rutledge, I. and Wright, P. (1995), The impact of oil company investment on the world coal industry, *Energy Policy*, 23, 8, 659-667.

Labour Party (1945), *The Manifesto of the Labour Party: Let Us Face the Future*, London, The Labour Party.

Lawson, N. (1982), *Speech to the BIEE/IAEE Fourth International Conference*, Cambridge, 28th June 1982, cited in Tempest 1982.

Lawson, N. (1992), *The View From Number 11*, London, Corgi Edition.

Dunleavy, P. and Stayner, J., eds. (1994), *Contemporary Political Studies*, Belfast, Political Studies Association.

Ludlam, S. and Smith, M. J., eds. (1996), *Contemporary British Conservatism*, London, Macmillan Press.

MacGregor, I. (1986), *The Enemies Within: The Story of the Miners' Strike*, London, Collins.

Manners, G. (1981), *Coal in Britain: an uncertain future*, London, Allen & Unwin.

Marsh, D. (1995a), State Theory and the Policy Network Model, *Strathclyde Papers on Government and Politics*, No 102.

Marsh, D. (1995b), *The Convergence between Theories of the State*, in Marsh, D., Stoker, G. eds., *Theory and Methods in Political Science*, London, Macmillan Press Ltd.

Marsh, D. and Rhodes, R. A. W., eds. (1992a), *Policy Networks in British Government*, Oxford, Oxford University Press.

Marsh, D. and Rhodes, R. A. W. (1992b), Implementing Thatcherism: Policy Change in the 1980s, *Parliamentary Affairs*, 45, 1, 33-50.

Marsh, D. and Smith, M. J. (1995), *The Role of Networks in an Understanding of Whitehall: Towards a Dialectical Approach*, Paper presented at Political Studies Association, Annual Conference, University of York, 18-20 April.

Marsh, D. and Stoker, G., eds. (1995), *Theory and Methods in Political Science*, London, Macmillan Press Ltd.

McCormick, B. J. (1979), *Industrial Relations in the British Coal Industry*, London, Macmillan.

McInnes, D. (1991), *Policy Networks Within the Department of Energy and Energy Policy*, Essex Papers in Politics and Government, No 82, Colchester, University of Essex.

Mills, M. and Seward, M. (1994), *All very well in practice but what about the theory?*, in Dunleavy, P. and Stayner, J., eds., *Contemporary Political Studies*, Belfast, Political Studies Association.

Milne, S. (1994), *The Enemy Within: The Secret War Against the Miners*, Basingstoke, Verso.

Monopolies and Mergers Commission (1983), *National Coal Board*, Cmnd 8920, London, HMSO.

Monopolies and Mergers Commission (1989), *British Coal Corporation*, Cm 550, London, HMSO.

Moore, D. (1990), Meeting the Challenges, *The Mining Engineer*, 149, 343, April. 369-373.

Moses, K. (1990), *Strategic decision making and investment in the British Coal Industry*, Nottingham, University of Nottingham, unpublished PhD Thesis.

National Coal Board, *Annual Report and Accounts*, various issues, London, NCB.

- National Coal Board (1950), *Plan For Coal: The National Coal Board's Proposals*, London, NCB.
- National Coal Board (1956), *Investing For Coal: Progress and Prospects Under the Plan For Coal*, London, NCB.
- National Coal Board (1959), *Revised Plan for Coal*, London, NCB.
- Niskanen, W. (1968), The Peculiar Economics of Bureaucracy, *American Economic Review* (papers and Proceedings) 57, 2, 293-321.
- Niskanen, W. (1973), *Bureaucracy: Servant or Master*, London, The Institute of Economic Affairs.
- Niskanen, W. (1993), The reflections of a grump, *Public Choice*, 77, 151-158.
- O'Donnell, K. (1986), Brought to Account: The NCB and the case for coal, *Capital and Class*, 26, 105-123.
- O'Donnell, K. (1988), Pit Closures in the British Coal Industry, *International Journal of Applied Economics*, 2, 1, 62-77.
- O'Donnell, K. (1991), *Industrial organisation, ownership and performance: a study of the British Coal Industry*, London, Birkbeck College PhD Thesis.
- Ormerod, P. (1994), *The Death of Economics*, London, Faber and Faber.
- Owen, G. (1995), *Policy Networks in a Changing World*, in Dunleavy, P. and Stayner, J., eds., *Contemporary Political Studies*, Belfast, Political Studies Association.
- P.E.P. (1966), *The Market for Coal*, London, Political and Economic Planning.
- Parker, M. and Surrey, J. (1993), The Coal Crisis and Energy Policy, *The Political Quarterly*, 64, 4, 396-409.
- Parker, M. and Surrey, J. (1995), Contrasting British policies for coal and nuclear power 1979-92, *Energy Policy*, 23, 9, 821-850.
- Parkinson, C. (1988), Closing Address to the Institute of Mining Engineers Annual Conference, Blackpool, 13th May 1988, *Mining Engineer*, Sept., 147-148.
- Parkinson, C. (1992), *Right at the Centre*, London, Weidenfeld and Nicolson.
- Pendleton, A. and Winterton, J. (1993), *Industrial relations in state and privatized corporations*, London, Routledge.
- Pimlott, B. (1992), *Harold Wilson*, London, HarperCollinsPublishers.
- Plan For Coal* (1974), London, NCB. See footnote 4.
- Posner, M. (1962), The National Coal Board, 1947-62, *Annals of Collective Economics*, 33, 4, 339-383.
- Posner, M. (1972), *Fuel Policy: A Study in Applied Economics*, London, Macmillan.
- Powell, D. (1993), *The Power Game: The Struggle for Coal*, London, Duckworth.
- Prior, M. (1987), *Institutional Factors In The Development Of Coal*, Rowntree Foundation Seesaw Conference Paper, The University of Nottingham, 30 April.
- Pryke, R. (1981), *The Nationalised Industries*, Oxford, Martin Robertson.

- Reid, G. L., Allen, K., and Harris, D. J. (1973), *The Nationalised Fuel Industries*, London, Heinemann.
- Rhodes, R. A. W. (1981), *Control and Power in Central-Local Government Relations*, Farnborough, Gower/SSRC.
- Rhodes, R. A. W. (1991), Theory and Methods in British Public Administration, *Political Studies*, xxxix, 533-54.
- Rhodes, R. A. W. (1995), *The Institutional Approach*, in Marsh, D., Stoker, G., eds., *Theory and Methods in Political Science*, London, Macmillan Press Ltd.
- Robbins, L. (1987), *Politics and Policy making in Britain*, London, Longman.
- Robens, A. (1965), *Proceedings of the Seventeenth British Electrical Power Convention*, Brighton, June 1st-June 24th, The British Electrical Power Convention, Northampton, Belmont Press Ltd.
- Robens, Lord (1972), *Ten Year Stint*, London, Cassell.
- Roberts, J., Elliott, D. and Houghton, T. (1991), *Privatising Electricity: The Politics of Power*, Chichester, John Wiley and Sons Ltd.
- Robinson, C. (1974), *The Energy Crisis and British Coal*, London, Institute of Economic Affairs Hobart Paper No 56.
- Robinson, C. (1989), Electricity Privatization: What future now for British Coal?, *Energy Policy*, 17, 1, 22-26.
- Robinson, C. and Sykes, A. (1987), *Privatise Coal*, London, Centre for Policy Studies.
- Robinson, C. and Marshall, E. (1985), *Can Coal Be Saved*, London, Institute of Economic Affairs Hobart Paper No 105.
- Robinson, C. and Marshall, E. (1981), *The Coal Industry and Coal Policy in Britain*, London, Institute of Economic Affairs Hobart Paper No 89.
- Rutledge, I. and Wright, P. (1985), Coal Worldwide: the international context of the British miners' strike, *Cambridge Journal of Economics*, 9, 303-326.
- Saville, J. (1986), An Open Conspiracy: Conservative Politics and the Miners' Strike 1984-5, *Socialist Register 1985/6*, Eds. Miliband, R. et al, 295-329 London.
- Saville, J. (1988), *The Labour Movement in Britain* (Historical handbook series), London, Faber and Faber.
- Saville, J. (1988), *The Labour Movement and the Miners' Strike* in Saville, J., *The Labour Movement in Britain* (Historical handbook series), London, Faber and Faber.
- Saward, M. (1992), *The Civil Nuclear Network In Britain* in Marsh, D. and Rhodes, R. A. W., eds., *Policy Networks in British Government*, Oxford, Oxford University Press.
- Sedgemore, B., *The Secret Constitution*, London, Hodder and Stoughton.
- Self, P. (1975), *Econocrats and the Policy Process*, London, Macmillan.
- Self, P. (1993), *Government by the Market?: the politics of public choice*, London, Macmillan.
- Smith, M. J. (1990), *The Politics of Agricultural Support*, Aldershot, Dartmouth.
- Smith, M. J. (1991), From policy community to issue network: Salmonella in eggs and the new politics of food, *Public Administration*, 69, 2, 235-55.

Smith, M. J. (1992), *The agricultural policy community*, in Marsh, D. and Rhodes, R. A. W., eds., *Policy Networks in British Government*, Oxford, Oxford University Press.

Smith, M. J. (1993), *Pressure Power & Policy*, Hemel Hempstead, Harvester Wheatsheaf.

Smith, M. J. (1996), *Reconceptualising British Government: The impact of Globalisation and Governance on the British State*, Paper presented to Sheffield/Pittsburgh Colloquium on Governance and Globalisation, University of Sheffield, 16-17 May.

Smith, M. J., Marsh, D. and Richards, D. (1993), Central Government Departments and the policy process, *Public Administration*, 71, 4, 567-594.

Supple, B. (1987), *The History of the British Coal Industry Volume 4 The Political Economy of Decline*, Oxford, Clarendon Press.

Taylor, G. (1991), *The Miners' Strike: The final chapter in the Plan For Coal*, Essex, University of Essex PhD Thesis D94636.

Taylor, A. J. (1988), Consultation, conciliation and politics in the British Coal Industry, *Industrial Relations Journal*, 19, 3, 222-33.

Taylor, A. J. (1990), The CEEGB and the restructuring of British Coal, *Royal Bank of Scotland Review* 165, March, 26-35.

Taylor, A. J. (1992), Issue Networks and the restructuring of the British and West German Coal Industries, *Public Administration*, 70, 1, 47-65.

Taylor, A. J. (1996), The Politics of Energy Policy in the United Kingdom, *Politics*, 16, 3, 133-141.

Tempest, P. ed. (1982), *Energy Economics in Britain*, London, Graham and Trotman.

Thatcher, M. (1995), *The Path to Power*, London, HarperCollinsPublishers.

Thatcher, M. (1995), *The Downing Street Years*, London, HarperCollinsPublishers.

Thornhill, W. (1968), *The Nationalised Industries: An Introduction*, London, Nelson.

Tivey, L. (1973), *Nationalization in British Industry*, London, Johnathan Cape.

Tivey, L. (1982), Nationalised Industries as Organised Interests, *Public Administration*, 60, 1, 42-55.

Tugendhat, G. (1963), *Freedom for Fuel*, London, Institute of Economic Affairs.

Tullock, G. (1993), Book Review, *Public Choice*, 75, 180-181.

Turner, R. L. (1993), *Regenerating The Coalfields: Policy and Politics in the 1980s and Early 1990s*, Aldershot, Avebury.

Vickers, J. and Yarrow, G. (1988), *Privatisation: an economic analysis*, London MIT Press.

Vickers, J. and Yarrow, G. (1991), Reform of the Electricity supply Industry in Britain, *European Economic Review*, 35, 485-95.

Walker, P. (1991), *Staying Power*, London, Bloomsbury.

Welsh, I. (1994), A Rejoinder [to Parker and Surrey 1993], *The Political Quarterly*, 65, 2, 348-351.

Wilks, S. and Wright, M. (1987), *Comparative Government-Industry Relations*, Oxford, Oxford University Press.

Whitehall Interviews, Interviews conducted under the ESRC Funded Whitehall Project, see note on interview sources below.

Williams, P. M. ed. (1983), *Hugh Gaitskell Diaries*, Oxford, Oxford University Press.

Williams, R. (1980), *The Nuclear Power Decisions*, London, Croom Helm.

Wilson, H. (1945), *A New Deal for Coal*, London, Contact.

Winterton, J. (1985), The Crisis in British Coalmining, *Insurgent Sociologist*, 13, 1-2, 53-62.

Winterton, J. and Winterton, R. (1989), *Coal, Crisis and Conflict: The 1984-85 miners' strike in Yorkshire*, Manchester, Manchester University Press.

Winterton, J. and Winterton, R. (1993) *Coal*, in Pendleton, A. and Winterton, J., *Public enterprise in transition: Industrial relations in state and privatized corporations*, London, Routledge.

Winterton, J. and Winterton, R. (1995), Industrial relations in a declining coal industry, *Review of Policy Issues*, 1, 3, 61-74.

Wright, M. (1988), Policy Community, Policy Network and Comparative Industrial Policies, *Political Studies*, 36, 593-612.

### Note on Interview Sources.

Three interviews were conducted with senior NCB/BC directors. Details of the two named in the bibliography can be found below.

The third interviewee was extremely anxious to avoid identification, the interview was not taped nor were notes taken at the time. The only record, therefore, are my notes made immediately after the 2 hour meeting. I would be happy to discuss the material on request.

Where use of this material has been made in the thesis it has been cited as Interview Evidence.

Derek Ezra now Lord: NCB Chairman 1971-81. The *Ezra Interview* was conducted by myself on 14, 1, 1997 and lasted approximately one hour. The interview was taped and copies can be made available on request.

Robert Haslam now Lord, Non Executive Deputy Chairman of NCB 1985-86; Deputy Chairman NCB 1986; Chairman 1986-1990. The *Haslam Interview*, conducted by myself on 7, 1, 1997. The interview was recorded and copies can be made available on request.

I was also fortunate to inform the questioning and have access to interviews conducted under the ESRC funded Whitehall Project. These are an extensive collection of interviews with high ranking retired and working civil servants, and former government ministers. Where use of this material has been made in this thesis it has been cited as the *Whitehall Interviews*. Access to this material can be sought through Professor M. J. Smith, Department of Politics, The University of Sheffield.

## Appendix 1 Classifications of Coal, Uses and Sources of Supply.

Type	Main Classes of Use according to size			Current Production as a % of total output	Source of Supply
	Large	Graded	Small		
1 Anthracite	Special industrial uses, e.g. making and brewing	Domestic heating	Steam raising	1.5%	South Wales: much smaller amount from Scotland
2 Dry steam Coal	Steam raising	Domestic heating	Steam raising	2%	South Wales
3 Caking Steam Coal	Steam raising, including locomotive		Steam raising and Carbonisation	5%	South Wales: very small amount from Kent
4 Special Scottish Coals	Special Industrial Uses	Domestic heating	Steam raising		
	(a) Low Volatile				
	(b) High Volatile	Steam raising	Steam raising	0.5%	Scotland
5 Medium Volatile Special Caking Coals	Carbonisation and Steam raising	Carbonisation	Carbonisation	7.5%	West Durham and South Wales: very small amounts from Bristol and Somerset, Kent and the Burnley area of Lancashire. There may be large reserves in North Staffordshire
6 High Volatile Very Strongly Caking Coals	House and Carbonisation	Carbonisation	Carbonisation	6.5%	East Durham, West Durham, South Wales, Yorkshire, North Staffordshire: much smaller amounts from Bristol Somerset and Kent
7 High Volatile Strongly Caking Coals	House and Carbonisation	Carbonisation	Carbonisation	17.5%	East Durham, Yorkshire, Cumberland, North Wales, Northumberland, West Durham, North Derbyshire, Lancashire and North Staffordshire: small amounts from Scotland and South Wales
8 High Volatile Medium Caking Coals	House, Carbonisation and Locomotive	Carbonisation, steam raising and 'producer'	Carbonisation and steam raising	1.4%	Northumberland, Lancashire, Nottinghamshire North Derbyshire, North Staffordshire: small amounts from other coal fields
9 High Volatile Weakly Caking Coals	House and Locomotive	Steam raising	Steam raising	1.7%	Northumberland, Lancashire Yorkshire, Nottinghamshire and North Derbyshire, North Staffordshire, Carmock Chase, Scotland
10 High Volatile Very Weakly or non-Caking Coals	House and steam raising	Steam raising	Steam raising	28.5%	Northumberland, Lancashire Yorkshire, Nottinghamshire and North Derbyshire, North Staffordshire, Carmock Chase, Scotland South Derbyshire, Warwickshire, South Staffordshire and Shropshire

Source: Plan for Coal 1950, 32

Appendix 2: NCB/BC Statistical Tables

	Year ended December															
	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Output (million tonnes)																
NCB/Deep-mined	187.4	197.7	203.9	205.5	212.8	214.0	213.2	214.8	211.1	210.6	210.7	202.0	195.6	188.7	182.5	190.6
Opencast	10.4	11.9	12.6	12.4	11.2	12.3	11.9	10.3	11.6	12.3	13.8	14.5	11.0	7.7	8.6	7.3
Licensed & other	2.2	1.9	1.7	1.6	1.6	2.1	2.0	2.2	2.4	2.7	2.7	2.7	2.8	2.3	2.3	2.6
Total	200	211.5	218.2	219.6	225.6	228.4	227.1	227.2	225.2	225.6	227.20	219.3	209.4	198.7	193.60	200.6
Imports	0.7	0.1			1.2	0.3	0.8	3.0	11.8	5.3	2.9	0.8	0.1			
Consumption (million Tonnes)																
Power Stations	27.5	29.3	30.5	33.5	36.0	36.1	37.3	40.2	43.6	46.3	47.2	46.9	46.7	51.9	56.3	62.1
Gasworks and coke ovens	43.2	47.7	48.7	49.6	51.6	53.6	53.9	54.8	55.8	58.0	58.0	53.4	49.0	51.6	50.3	46.8
Domestic	37.2	37.7	37.1	38.4	38.6	38.2	38.5	38.6	37.6	38.6	36.7	37.4	34.5	36.1	33.8	34.3
Other inland	79.6	82.4	82.7	84.3	84.9	82.2	81.5	83.6	81.7	78.0	74.4	67.9	62.2	60.3	54.5	51.0
Total Inland	187.5	197.0	198.9	205.9	211.1	210.1	211.1	217.2	218.7	221.0	216.3	205.6	192.4	199.9	194.9	194.3
Exports	5.3	16.4	19.5	17.2	11.6	15.1	16.9	16.3	14.1	9.9	8.0	5.0	4.4	5.6	5.8	4.9
Total stocks, distributed and undistributed (million Tonnes)	18.1	17.5	17.6	14.3	18.0	21.0	19.6	17.0	14.9	15.6	22.6	33.1	46.8	39.6	33.1	37.4
Collieries and Manpower																
NCB/BC Collieries at year end (no.)	958	940	912	901	896	880	875	867	850	840	822	793	737	698	669	616
NCB/BC manpower (thousands)	703.9	716.5	712.5	690.8	692.6	709.7	711.5	701.8	698.7	697.4	703.8	692.7	658.2	602.1	570.5	550.9
Productivity																
Overall Output per manshift (tonnes)	1.09	1.13	1.19	1.23	1.24	1.23	1.25	1.26	1.25	1.26	1.26	1.30	1.37	1.42	1.47	1.59

Sources: *Statistical Tables 1978/9*, London National Coal Board 1979, *Annual Report and Accounts* - Various issues, London, National Coal Board.

British Coal Annual Report and Accounts - Various issues.

Note:- Vertical lines indicate a change in definitions. For details see National Coal Board / British Coal Annual Report and Accounts, various issues.



Appendix 2: NCB/BC Statistical Tables

	Year ended March																	1979 52wk
	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978		
Output (million tonnes)																		
NCB/Deep-mined	191.5	190.2	188.6	178.9	167.2	165.3	155.5	142.0	135.4	111.0	129.0	98.7	116.8	114.4	108.4	106.2	105.4	
Opencast	8.6	5.6	8.5	6.9	6.8	6.8	6.4	6.3	8.0	10.1	10.1	9.0	9.2	10.4	11.4	13.6	13.5	
Licensed & other	2.8	2.6	2.4	1.9	1.7	1.4	1.3	1.4	1.2	1.2	1.3	1.1	1.1	1.0	1.0	1.1	1.0	
Total	200.9	198.3	195.60	185.7	175.8	173.6	163.2	149.8	144.7	122.3	140.5	108.8	127.2	125.8	120.8	120.9	119.9	
Imports									1.2	5.3	3.4	2.0	4.0	4.8	2.4	2.7	2.1	
Consumption (million Tonnes)																		
Power Stations	64.8	68.0	70.3	69.9	68.5	71.0	76.4	77.1	74.7	68.8	70.0	70.9	72.5	75.8	78.9	78.9	83.3	
Gasworks and coke ovens	46.6	47.1	46.7	44.5	41.2	37.9	35.2	32.0	28.6	21.7	23.4	19.7	20.5	18.5	19.6	16.3	14.6	
Domestic	34.5	31.2	29.1	28.2	26.1	24.6	23.2	21.3	18.7	15.3	15.3	12.8	14.5	11.4	10.6	10.8	10.1	
Other inland	50.5	46.5	44.2	41.4	36.9	34.6	32.9	31.2	28.7	22.6	21.4	17.8	19.6	16.5	15.5	15.5	14.4	
Total Inland	196.5	192.8	190.3	184.0	172.6	168.2	167.6	161.7	150.7	128.4	130.2	121.2	127.2	122.2	124.6	121.6	122.4	
Exports	5.1	8.0	5.4	3.7	2.5	2.0	3.1	3.6	3.0	2.1	2.3	2.1	2.1	1.4	1.4	1.8	2.1	
Total stocks, distributed and undistributed (million Tonnes)	30.1	28.2	360.3	29.7	33.0	39.6	35.2	23.1	18.0	17.7	31.0	19.1	21.6	29.9	28.1	29.8	28.8	
Collieries and Manpower																		
NCB/BC Collieries at year end (no.)	611	576	534	483	438	376	317	299	292	289	281	259	246	241	238	231	223	
NCB/BC manpower (thousands)	544.3	517.0	491.0	455.7	419.4	391.9	336.3	305.1	287.2	281.5	268.0	252.0	246.0	247.1	242.0	240.5	234.9	
Productivity																		
Overall Output per manshift (tonnes)	1.61	1.70	1.77	1.83	1.86	1.98	2.16	2.20	2.24	2.13	2.33	2.15	2.29	2.28	2.21	2.19	2.24	

Appendix 2: NCB/BC Statistical Tables

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Dec-94
Output (million tonnes)																
NCB/Deep-mined	109.3	110.3	108.9	104.9	90.1	27.6	88.4	88.0	82.4	85.0	75.6	72.3	71.0	61.8	42.7	21.5
Opencast	13.0	15.3	14.3	14.7	13.8	13.6	14.1	13.3	15.1	16.8	17.5	17.0	16.7	15.0	13.5	10.6
Licensed & other	1.0	1.1	1.1	1.2	1.4	1.5	2.0	2.0	2.1	2.1	2.1	2.3	3.4	4.0	3.8	na
Total	123.3	126.6	124.3	120.9	105.3	42.7	104.5	103.3	99.6	103.9	95.2	91.6	91.1	80.8	60	na
Imports	5.1	7.3	4.2	3.4	5.1	10.9	12.1	9.9	9.8	12.0	12.4	16.9	20.0	19.4		
Consumption (million Tonnes)																
Power Stations	89.1	87.7	85.3	80.8	82.3	42.8	86.0	82.4	86.2	80.7	82.2	81.9	80.5	76.4	48.1	27.3
Gasworks and coke ovens	14.4	11.3	11.2	10.0	10.4	8.3	11.5	10.9	10.8	10.9	10.8	10.7	9.9	8.7	0.3	0.3
Domestic	10.3	8.5	8.6	8.0	7.7	6.4	8.9	8.1	7.0	6.3	5.5	5.7	5.3	6.1	2.3	1.2
Other Inland	14.6	12.7	11.9	11.6	11.3	9.2	12.0	11.0	11.5	11.1	10.4	10.4	9.3	6.5	6.5	4.5
Total Inland	128.4	120.3	117.0	110.4	111.7	66.7	118.4	112.4	115.5	109.0	108.9	108.7	105.0	97.7	55.2	33.4
Exports	2.5	4.7	9.4	7.1	6.8	3.5	3.3	2.2	2.2	1.8	2.6	2.1	1.4	0.6	0.9	0.7
Total stocks, distributed and undistributed (million Tonnes)	27.8	38.4	43.5	53.3	45.8	32.7	31.2	34.5	29.8	37.4	34.6	36.3	42.2	47.2	13.1	11.1
Collieries and Manpower																
NCB/BC Collieries at year end (no.)	219	211	200	191	170	169	133	110	94	86	73	65	50	50	17	16
NCB/BC manpower (thousands)	232.5	229.8	218.5	207.6	191.5	175.4	179.6	141.5	117.3	105.0	85.1	74.3	58.1	44.2	18.9	13.1
Productivity																
Overall Output per manshift (tonnes)	2.31	2.32	2.40	2.44	2.43	2.08	2.72	3.29	3.62	4.14	4.32	4.70	5.31	6.34	8.76	13.15