

A STUDY OF SAFETY REPRESENTATION

IN MINING AND CONSTRUCTION

by

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ABSTRACT

This work examines the use made of statutory provisions for safety representation in the mining and construction industries. It provides an historical analysis of the genesis and use made of the legal rights miners have had in Britain since 1872 to appoint 'workmen's inspectors'; commentary on developments instrumental to the generalisation of similar provisions enabling trade union members to appoint safety representatives a century later under the Health and Safety at Work Act 1974; and a critical review of the premises of 'self-regulation' embodied in this Act which rely on developments in management organisation and worker involvement for securing improvements in occupational hazard control. On a case study basis, and drawing on 112 in-depth interviews conducted in the Scottish coalfields and a smaller complementary survey in construction, an exploratory analysis is made of contemporary arrangements for safety representation as established in coal-mining and the use being made of the new provisions for safety representation in the radically different organisational setting of private sector construction sites. Existing patterns of safety representative activity are described and the significance attached to statutory rights for specialist trade union representatives are discussed in each case against a backdrop analysis of the industry's health and safety record, the characteristics of regulation and supervision by the state, the institutional position of the trade unions and the traits of workplace industrial relations. The principal conclusions are : (1) that the statutory provisions for safety representation are of symbolic significance in recognising the right of workers to participate in the determination of conditions affecting their health and safety at work but that the use of these rights depends heavily on individual motivation and initiative, and that arrangements for safety representation are unlikely to be maintained or developed unless backed by the bureaucratic support structure of the larger union; (2) that the role adopted by safety representatives is tailored to perceptions of management interests in safety and that law and the state inspectorates act as a critical referent resource for effective action on the part of worker representatives.

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CHAPTER 1

INTRODUCTION

INTRODUCTION

The Subject Area

Each year in Britain about 2000 people die as a result of work-related accidents and diseases.¹ Injury accidents at work and incapacity through occupational ill-health cause the loss of about 23 million working days a year, approximately six times the number of days lost through strikes.² This represents a grim toll of human tragedy and suffering. And the economic costs to society are enormous - estimated at between £1,500m and £2,000m a year.³

Figures such as these are popularly cited indicators of the social and economic costs of employment exacted in terms of death, injury, and ill-health. But the upsurge of trade union activity and academic interest in the subject witnessed over the last decade does not stem from a sudden appreciation of the magnitude of the problem. Rather, the stimulus has been the major developments which have taken place in the British 'system' of occupational hazard control with the passage of the Health and Safety at Work etc. Act 1974 and (HSW Act). The universal applicability of this Act and its emphasis on organizational arrangements for implementing preventive measures distinguishes it from its predecessors, a long line of protective statutes enacted over the past 150 years which have detailed norms and technical standards for specific workplaces and processes. The most novel feature, however, was statutory backing for the involvement of workers' representatives in the making and monitoring of arrangements for safety and health at their workplaces. Provisions for the appointment of safety representatives by recognized trade unions, and regulations,⁴ operative since October

1978, specifying the statutory rights of these representatives have served to focus attention on the industrial relations dimensions of occupational health and safety.

This new legal framework is based largely on the recommendations of the Robens Committee (1972); the first government inquiry commissioned to review the entire 'system' of statutory and voluntary arrangements for occupational safety and health. Giving statutory weight to the philosophy propounded in this report, the HSW Act was designed to promote 'self-regulating' systems of accident prevention. The Robens Committee had advocated this approach on the grounds that the traditional 'system' of protective regulation 'encourages rather too much reliance on state regulation, and rather too little on personal responsibility and voluntary, self-generating effort' (para.28). Redressing this 'imbalance' was regarded as crucial, for the central tenet of the report was that -

The primary responsibility for doing something about the present levels of occupational accidents and disease lies with those who create the risks and those who work with them. (ibid).

The involvement of workers' representatives had been advocated on the grounds that 'real progress is impossible without the full co-operation and commitment of all employees' (para.59). Safety representatives were seen as having a key role in (a) 'stimulating more interest in accident prevention amongst their colleagues' (para.65) and (b) acting as 'a channel of communication with management on safety and health matters' (para.66). To this end the HSW Act placed general duties on employers akin to those in legislation governing the management of nationalized industries⁵: to consult safety representatives on matters affecting health, safety and welfare at work and, upon

request, to establish safety committees. In addition, commensurate with the Committees recommendations that the state inspectorates should abandon attempts to play an all-encompassing 'watchdog' role, safety representatives were seen as having specific regulatory 'functions' in monitoring working conditions. The Safety Representatives and Safety Committees (SRSC) Regulations 1977 entitled safety representatives to make regular inspections of the workplace, to investigate accidents, hazards, and members' complaints, and to obtain information pertinent to their members safety, health and welfare from employers, Health and Safety Executive (HSE) inspectors and other parties. The Regulations also conferred the right to time-off with pay during working hours for the purpose of performing these 'functions' and for training.⁶

These provisions for safety representation were heralded as 'add(ing) up to the closest involvement yet of trade unionists in their own working safety' (Financial Times 1.12.78). It was not an unprecedented development in the U.K., for coal miners have had similar statutory rights to appoint 'workmen's inspectors' since 1872; a provision which was subsequently extended to all types of mines and quarries covered by the Mines and Quarries (M&Q) Act 1954. Indeed, it was the reported success of this precedent in comparison with the traditional forum of worker participation through voluntary safety committees which prompted the Robens Committees statement that 'the concept of employees' safety representatives is more important than the concept of joint safety committees' (para.65).

The generalization of statutory rights concerning safety representation beyond the confines of mining, with the HSW Act 1974 and the SRSC Regulations, constitutes a major departure (a) from the traditionally paternalistic

orientation of health and safety legislation and (b) from the principles of abstentionism concerning schemes for workers participation in the regulation of conditions affecting their safety. Moreover, state sponsorship of safety representation stands in marked contrast to the spontaneous emergence of shop stewards as 'a channel of communication with management', the informal evolution of stewards' representative role, and the subsequent legitimation conferred by a plethora of labour laws on certain collective bargaining issues and procedures. In short, there has been no similar attempt to use legislation on such an ambitious scale as a means of engineering social change in workplace industrial relations.

Origins and Objectives of the Thesis

The innovatory character of the developments outlined above provided the stimulus for this research, the general aim being to assess the impact of the statutory provisions for safety representation in fostering 'self-regulating' systems of accident prevention at the workplace. The subject was approached from the position that consideration of the scope of a representatives role in accident prevention cannot be divorced from the industrial relations context in which it is to be exercised unless one assumes that safety measures operate in some kind of technical vacuum, isolated from the demands of production and the wider socio-economic system. Consequently, this study was to be concerned with examining the behavioural and organizational mechanisms operating which affect the use made of the provisions for safety representatives rather than with the somewhat narrower related issue of the technical basis of the representative's role in relation to various accident prevention strategies.⁷

Preliminary research was embarked upon in the midst of the flurry of preparatory activity which surrounded the introduction of the SRSC Regulations in October 1978. Acting as a tutor for the TUC, which had launched a massive educational programme to encourage trade unionists to take-up these new rights,⁸ provided the writer with valuable insight into the difficulties which newly appointed safety representatives from a cross-section of manufacturing industries were experiencing in attempting to define their role and to exercise the rights conferred by legislation. It also highlighted the fact that very little was known about the 'model' of these universal provisions : how the statutory rights enabling coal miners to appoint workmen's inspectors had evolved and how, a century after such rights had been lodged on the statute books, such provisions were being utilized in practice. The spate of articles, booklets and guides⁹ being published for and/or about safety representatives added little to our knowledge in this sense. Those which did refer to the long-standing arrangements for safety representation in mining (e.g. Howells, 1974; Atherley et al, 1975) relied heavily upon the seminal documentary study of the British system of occupational hazard control by Williams (1960): this devotes a chapter to reviewing statutory provisions for safety organization at the workplace including a description of those for workmen's inspectors. A review of the voluminous literature on labour relations in coal mining added little further insight.¹⁰ Given that it is precisely the miners' unique and hazardous conditions of work which capture the public imagination and distinguish them as 'a special case', the dearth of information concerning miners' involvement in the regulation of colliery safety was in itself somewhat paradoxical. In short, the assiduous reader was simply referred to the statistics on inspections made by miners' representatives as evidence that the statutory rights

were being utilized and offered assurances similar to those contained in the Robens Report viz:

We found evidence of very close co-operation between mine managers, the Mines Inspectorate, and the workmen's inspectors. These arrangements, as well as the extensive arrangements for joint committees at mine, area and national level, are obviously highly valued within the industry. (para.60).

What these arrangements actually were and the reasons they were 'highly valued' was largely a matter of conjecture. To all intents and purposes it appeared that the new provisions for safety representatives had been based on a 'model' about which, outside the mining industry, little was known.

Providing a descriptive analysis of this 'model' of safety representation crystallized as a significant means of meeting the objectives of the research. I thus set out (a) to examine what the organizational arrangements for safety regulation at collieries consisted of and how the provisions for workmen's inspectors were utilized in this context; and (b) to assess whether the apparent accommodation of this form of worker participation signified a consensus concerning safety, the scope of a safety representative's role, and their contribution to 'self-regulating' systems of accident prevention.

Accident prevention in the construction industry is a topical and contentious subject in view of the fact that the industry's safety record has yielded less readily than that of manufacturing to improvement through conventional methods of regulation and inspection by the Factory Inspectorate. A study of the impact of the new provisions for safety representation in the context of the private

sector of the construction industry was considered to be worthwhile in its own right and an interesting means of complementing the mining study. While miners and 'navvies' share in common the dubious distinction of working in particularly hazardous occupations, in all other respects the differences between their working environments are more readily apparent than any similarities. Indeed, collieries and construction sites are at either end of an organizational spectrum in that the highly structured corporate environment of mining contrasts dramatically with the fluid and fragmented structural and institutional characteristics of construction. These differences are an advantage rather than a limitation in looking at the influences affecting the use made of common statutory rights to safety representation and the mechanisms operating which facilitate or hinder the development of 'self-regulating' systems of accident prevention.

Scope and Contribution of the Research.

The study of safety representation in mining and construction presented in this work is based on a small scale research programme. An intensive, qualitative approach was favoured in view of the exploratory nature of the research and in-depth interviews constituted the primary means of data collection. Fieldwork was undertaken in the Scottish coalfields between September 1980 and November 1981, with comparative case studies being used as a basis for examining the form and nature of miners' representatives involvement in the regulation of colliery safety conditions. 112 interviews were conducted, 102 of which were with informants at three collieries. For the construction project a survey was undertaken between January and April 1982 to try and discover the extent to which the provisions for safety representatives were

being acted on and to assess the significant influences affecting their adoption on private sector construction sites. The survey was confined geographically to the boundaries of the HSE's East Scotland Area and involved in-depth interviews with 24 informants. For both projects maximum yield in terms of insight and consistency was thought to be derived from interviewing a representative cross-section of a limited number of parties rather than either focussing solely on safety representatives or attempting scattered coverage of the multitude of organizations and interest groups involved in workplace activities. The interviewing programme involved those identified as key actors: HSE inspectors, trade union full-time officials, workplace union representatives, management representatives and, in mining, supervisors and workmen. Given the complexity of the subject area and the study's interest in exploring behavioural and attitudinal variables, a flexible interviewing technique using a topic list and subsidiary list of probes as a guide was considered more suitable than a rigidly structured approach based on a fixed choice, pre-coded questionnaire format. The qualitative data acquired during the course of the interviews was supplemented by observational data obtained on underground and site visits, and by unpublished documentary and quantitative data elicited from a number of organizations.

The value of this study lies in the insight it provides into the existing arrangements for accident prevention in collieries and on construction sites, the attitudes and behavioural norms which appear to guide the actions of key participants to 'self-regulating' schemes of prevention based at these workplaces, and the motivation and ability of these actors to accommodate safety representatives and utilize the resources at their disposal accordingly. The typicality of the findings

are evidently subject to the limitations of the survey samples, although it is reasonable to assume that the particular events and themes highlighted in this study are significant and will find their counterparts in other industries as well as being of relevance to the situation in mining and construction more generally. In a broader context, the more general interest of this work lies in highlighting the limitations of legislation as a means of engineering social change.

Structure of the Thesis.

Chapter 2 provides an historical backdrop to the current provisions for occupational safety and health, focussing on how the anomalous precedent of safety representation in coal mining came into being and considering available documentary evidence concerning the extent to which these rights were utilized. With the benefit of this perspective Chapter 3 examines the immediate events which led up to the generalization of these rights with the HSW Act 1974 and the SRSC Regulations 1977, the premises underpinning the new 'self-regulating' approach to accident prevention as set out in the Robens Report, and the issues associated with safety representation. Chapter 4 details the research approach and methods used. Chapter 5 reviews the characteristics of the mining industry relevant to this research and Chapters 6 - 7 provide a descriptive analysis of existing arrangements for safety representation at Scottish collieries. Chapters 8 - 9 assess the impact of the universal provisions for safety representation in the anarchic context of the construction industry. Chapter 10 is the conclusion. It draws together the main themes and issues highlighted as affecting the

use made of the statutory rights to safety representation in mining and construction and considers the significance of the provisions in promoting workers involvement and the efficacy of 'self-regulatory' approaches to occupational hazard control in diverse work settings.

CHAPTER 2

THE LEGACY : PROTECTIVE REGULATION AND WORKMEN'S
INSPECTORS

THE LEGACY : PROTECTIVE REGULATION AND WORKMEN'S
INSPECTORS

Coal miners have had the statutory right to appoint workmen's inspectors since 1872, a unique provision which was elaborated in the Coal Mines Act 1911 (s.16) and subsequently extended to all those employed in workplaces covered by the Mines and Quarries Act 1954 (s.123). These arrangements provided, in effect, the model for the new provisions for trade union safety representatives embodied in the HSW Act 1974 and the SRSC Regulations 1977. How the anomalous precedent in coalmining came into being and why a century elapsed before similar statutory rights were made universally available are intriguing themes touched on in this and the next chapter, which examine the legacy of miners' inspectors and the background to the current provisions for safety representation. In attempting to gain an historical perspective we are confronted by a dearth of information, for with the exception of the work by Williams (1960) the issue of miners' statutory rights to safety representation merits at best passing reference in the literature which chronicles the context, evolution and changing content of protective legislation. This chapter therefore begins by considering the framework of protective regulation which took shape in this country during the 19th century, focusing on those features and influences in mining which appear to have been instrumental to the genesis of the provisions for workmen's inspectors. The available documentary evidence concerning the use made of these provisions is then reviewed and in the light of this the apparent consensus concerning the value of safety representation in mining is questioned.

THE FRAMEWORK OF PROTECTION.

Working conditions have been a traditional arena of state intervention, the beginnings of which can be traced back to the Regulation of Chimney Sweepers Act 1788 and the Health and Morals of Apprentices Act 1802.¹ In essence, this intervention has taken the form of successive prohibitory and regulatory enactments, enforceable by state inspectorates, which oblige employers to conduct their businesses in accordance with statutorily prescribed norms and standards. The object is commonly described somewhat glibly as being 'the protection of those at work from the consequences of the way in which work is done'.²

It should be noted at the outset that necessity - the toll of work-related death, injury and disease - appears to have been almost incidental to both the genesis and pattern of protective legislation. This point can be illustrated in relation to mining, for as Nef (1932:173-4) has noted 'conditions in the seventeenth century were already similar to those which so shocked social reformers at the beginning of the nineteenth'. Yet 'the deaths of hundreds, and the injury of thousands, of the early coalminers passed by almost unnoticed, without any outcry of any recorded demand on the part of the public that greater precautions be taken by the masters of the pit.' The 'visibility' as well as the scale of the problem clearly matches the rapid expansion of the industry from the late eighteenth century onwards : explosions were an increasingly frequent phenomenon and the horrendous death toll from the more spectacular disasters served to focus attention on the 'subterranean dangers' of mining.³ But although mining was undoubtedly more hazardous than the manufacturing industries which 'blossomed' with the Industrial Revolution, protective legislation was enacted

first in relation to the latter. Confined initially to the conditions and hours of child labour in textile factories, the principles of regulation and enforcement by a state inspectorate took shape in the Factories Act of 1833. The origins of protective regulation in mining with the Mines and Collieries Act of 1842 was in effect a by-product of this : the result of inquiries made by the early factory inspectors into the apprenticing of pauper children (prohibited from working in mills) to miners rather than a sequel to the public inquiries dating from 1813 into the nature and causes of underground explosions.⁴ The first statute dealing with safety matters per se was the Mines Inspection Act of 1850 which, modelled largely on existing practices in France, Belgium and Germany, provided for the appointment of mines inspectors and laid the basis for the establishment of a permanent inspectorate in 1860.⁵

The piecemeal extension of protective legislation in these and other industries and its patchy content has been amply documented.⁶ The fact that an estimated five million workers were still not covered by any form of safety statute prior to the comprehensive provisions of the HSW Act 1974 forcibly underlines the point that the evolution of protective regulation has been governed by 'neither logic nor consistency, neither the over-nice consideration of even-handed justice nor the Quixotic appeal of general humanitarianism'.⁷ Rather than being the product of a mechanistic recognition of the need for change on the part of 'some abstract rule-making force', health and safety legislation matches that general pattern described by Lewis (1976:1) wherein : 'the nature and extent of legal regulation has been determined....by the interplay of judicial innovations, public policy controversy, the relative power of management and labour interests, and party politics with a view to electoral advantage.'

Interpretations, Issues and Influences.

Various interpretations have been placed on this change process. These range from the naive and somewhat tautological humanitarian and functionalist perspectives, which attribute the genesis and development of protective legislation and other innovations in the realms of social policy to a sudden awakening of public conscience as to the human costs associated with industrialisation, through to those which view such legislation as the symbolic outcome of intra- and inter-class conflict.⁸ Similarly, there are considerable differences of opinion amongst social historians concerning the motives and influence exerted by the various parties involved in the shifting pressure group coalitions which advocated and opposed regulation : the 'philanthropic reformers', 'enlightened employers', factory inspectors and trade unions on the one hand and powerful groups of obstructionist employers and their acolytes on the other.⁹ Nonetheless, much of the descriptive literature on this subject is permeated with the populist tendency to regard the protective enactments as a series of 'victories' won by the unions and altruistic reformers v. 'Manglers'¹⁰ - callous employers bitterly opposed on economic grounds to successive encroachments on their prerogative. (see, e.g. Eva and Oswald, 1981; Kinnersly, 1973). Such accounts not only reduce the complex process of legislative change to a crude 'pressure - response' reaction, but also obscure the extent to which the protective enactments, while appearing to regulate the power of employers, were firmly based on - and in some senses served to reinforce - the concept of employers' control over the work process and all factors of production, including labour. These points can best be illustrated by reference to the issues and influences which shaped the form of protective regulation.

In nineteenth century Britain opposition to state intervention which imposed restrictions on the manner in which industrialists operated was couched in the rhetoric of the dominant laissez - faire ideology. (see Taylor, 1972). It was argued that such interference in the freely competitive use of capital was not only unwarranted but also misguided, for the 'enlightened self-interest' of entrepreneurs - associated with voluntary constraints concerning the use of labour - was equated with the best interests of operatives, as of the nation overall. The threads of such arguments were, for example, clearly voiced in the late 1840s on the issue of whether mines inspectors should be appointed and vested with powers to compel colliery owners to implement the best available means of ventilating underground workings. Tremenheere, the Mines Commissioner appointed under the first Mines Act of 1842, staunchly opposed the notion of compulsory requirements, asserting that such measures 'would materially interfere with the application of Capital and of individual skill and enterprise, and lead the Government altogether beyond its legitimate functions.' (Cited by Rosen, 1943:437). Advocating the appointment of inspectors with purely advisory functions, he argued that:

to confer upon an officer of the Government a power of causing the proprietors to conform to particular details in the management of the ventilation of their collieries, would be to transfer the responsibility for their safe and proper management from the proprietors to the Government. (ibid).

Beliefs such as these, which have been echoed over the years, underpinned assertions that protective legislation was actually counter-productive as a means of securing the safety, health and welfare of the labouring class.

Controversy surrounding the passage of the early enactments was not, however, concerned solely - or even primarily - with such issues or the appropriate functions of the state. Carson (1974) has provided an interesting analysis of the furore preceeding the 1833 Factories Act which takes into account the intense power struggle being waged at that time between the established ruling class and the emergent bourgeoisie for social dominance and political legitimacy. In this he points to the bitter opposition which the symbolic connotations of regulation aroused, wherein the activities of reformers such as Sadler and Ashley were perceived as an attempt to denigrate the factory system and, by association, the rising class of industrialists. The question of enforcement and the moral stigma associated with the proposed criminal sanctions provided the trigger.¹¹ Fundamentally, however, the issue was one of whose version of reality was to be endorsed in framing legislation to regulate working conditions : that of the reform movement as depicted in the evidence presented by Sadler's Committee on the one hand, or that of the manufacturers as represented in the report of the Factory Commission of 1833 on the other.¹² In short, the subject of protective legislation was then 'a battleground in which reformers and obstructionists fought; and in which humanitarian causes, as often as not, were buried.' (Thompson, 1968:376). On this plane the 'obstructionists' were successful for in neutralizing the derogatory connotations of criminality associated with regulation the content of the 1833 Act, and its' successors, 'in no way impeached the legitimacy of the manufacturing system and its attendant ideology.' (Carson, 1974:135).¹³

It should also be noted that the instrumental effects of legislation were by no means abhorrent to all manufacturers. Then, as now, the norms and standards specified

were based on practices already being voluntarily implemented by the more innovatory, 'enlightened' employers. Moreover, the effective enforcement of restrictive and prohibitory legislation was seen by many such employers as a means not only of ensuring 'equality in competition', but also of curbing the threat (of overproduction) deemed to be posed by the small manufacturers and sweatshops. It was in this vein, for example, that 'several eminent manufacturers', in their evidence to the Factory Commission of 1833, advocated a system of efficient government inspection. As the Commissioners noted, this measure had been urged most strongly by those 'who have had chiefly in mind the restriction of the hours of labour in other factories to the level of their own'. (Cited by Carson, 1974:135). Nonetheless, suspicion and hostility concerning the powers of compulsion vested in inspectors and the manner in which they enforced the law was widespread. Moreover, the instrumental effects of legislation were, as they are today, a potent source of grievance amongst many employers who decried such measures - individually and collectively - as being 'economically ruinous'.

Social Control.

The fact that labour organizations in the first half on the 19th century were not in a position either to initiate proposals for protective regulation themselves or to influence the character of the early enactments does not negate the potentially progressive nature of these developments. It does, however, point to the dualistic functions of labour law for, as Lewis (1983:362-3) has noted,

At the very time when the basic pattern of workers' legislative protection on safety, health and welfare was emerging,

the other and no less important aim of both the judges and the legislature was the suppression of trade unions.¹⁴

We are touching here on the use of law as an instrument of social control. It is not, however, our purpose to become entangled in the academic debate over the use of this concept. Nor do we intend to enumerate the myriad political and ideological as well as legal institutions and strategies deployed in the 19th century which have been associated not only with repressing the threat posed by organized labour but also with forging a disciplined proletariat - accommodated to the changing social relations of production and amenable to the new demands of industrial capitalism. But it would obviously be naive to assume that protective legislation is or was immune, a contradictory rather than a complementary current. As such, two points remain to be made concerning the framework of protection.

The first is that the mechanisms of protective legislation can, at times, serve control functions which are unrelated to occupational safety, health and welfare. In 1839, for example, it came to light that the recently appointed factory inspectors had been requested by the Home Office to report on 'assemblages of workpeople, or Chartists, or circumstances calculated to disturb the public peace'. (cited by Djang, (1942:36). Whether or not the early factory inspectors did act as political spies,¹⁵ to reconcile such instructions with the welfare and 'best interests' of operatives certainly stretches the benevolent overtones commonly associated with descriptions of protective regulation as being 'paternalistic in concept and enforcement'. (Howells, 1974:89).

Secondly, the safety legislation itself embodies a two-edged concept of control. This is a description favoured by labour lawyers such as Lewis (1983:362) who refers to the object of protective legislation as being 'to mitigate and regulate the employee's subordination and the employer's domination'. This raises questions as to the relationship between safety and the restriction of a worker's autonomy, and suggests that the quid pro quo of protective regulation - in proscribing the behaviour of employees as well as employers - can be associated with greater managerial control over the labour process.

This theme, the two-edged nature of regulation and the benefits to be derived therefrom, appears to be particularly significant in the mining context. Associated with the peculiarities of underground conditions a feature of mines' legislation, which contrasts with the object specific focus of factory legislation, has been its emphasis on regulating systems and methods of working.¹⁶ The background to 'technical' obligations imposed on owners concerning such matters as the provision and maintenance of efficient ventilation systems has been documented in detail, with reference to the nature and causes of explosions, the mechanics of how noxious gases accumulate etc. (see e.g. Bryan, 1975). But, in contrast, the background to the associated and equally distinctive trait of mines' legislation - the organizational duties concerning managerial 'self-inspection' and safety supervision and the attendant emphasis on discipline - remains something of a grey area. We turn, then, to examine the context in which these provisions, as those for workmen's inspectors, came into being.

COAL, SAFETY AND CONTROL.Autonomous Work Patterns

The grim, cramped and dangerous conditions in which colliers laboured in the early decades of the 19th century have been amply and graphically documented. (see e.g. Nef, 1932; Report of the Children's Employment Commission, 1842). This environment and the physically arduous character of colliers' work has given rise to ambivalence among social historians as to whether the coal miner should be classed among the labour aristocracy of independent artisans, or seen as 'the archetypal proletarian' with aspirations to this aristocracy.¹⁷ Whatever the case, it is known that the hewers' skills and the scarcity of mine labour, a feature of the industry since the 17th century which persisted well into the 19th,¹⁸ enabled them to command a relatively high price for their labour.¹⁹ Moreover, the colliers' independent work patterns were such that they are frequently described as 'contractors' rather than 'wage labourers' per se. In some coalfields this is directly related to the practice of recruiting labour by means of sub-contracting, the butty system.²⁰ In others, such as Scotland, it is associated more with payment systems and the manner in which colliers organised their work. For example, in the early 19th century individual hewers, paid on a piecework basis, employed members of their own family or paid boys to act as drawers (hauling coal) in pits where they did not perform this task themselves. Moreover, as Campbell (1979:30-33) has documented, bargain-derived day wages were paid to hewers for performing a wide variety of tasks necessary both to develop a pit and to keep it functioning. Particular tasks, such as constructing new levels or cutting air-courses, were commonly contracted for by groups or 'companies' of skilled colliers for a lump sum.²¹

The practice of sub-contracting and the piecework payment system itself, which enabled a collier to vary the duration and intensity of his work as he pleased, have been described as supplying 'a self-acting stimulus which dispensed with the necessity of incessant supervision'. (Taylor, 1964:216). But the physical realities of underground working made such supervision wholly impracticable anyway for pillar and stall, or 'stoop and room' as it was known in Scotland, was the dominant mode of coal extraction in the first half of the 19th century.²² Under this system hewers were commonly scattered in ones and twos in 'stalls' throughout the pit, isolated and surrounded by the pitch darkness and reached only with difficulty through narrow roadways. As Trist and Bamforth (1951:336) have noted, under such conditions 'there is no possibility of continuous supervision, in the factory sense, from any individual external to the primary work group.' Consequently, colliers enjoyed 'a responsible autonomy' unknown to most other groups of workers. This freedom from management control also created conditions which were conducive to combination, and from the late 17th century onwards it is apparent that miners met together underground for this purpose. (see Nef, 1932:176 et seq.; also Campbell, 1979: Chs 1 and 3). Furthermore, it would seem that the divisive piecework payment system was the subject of such meetings, for one of the primary objects of colliers' organisations in the early 19th century was to minimize fluctuations in piece-rate earnings. These were related to the changing market price for coal, an accepted wage - price link which existed long before the introduction of formal sliding-scale agreements in the 1870s. The traditional means of combatting this were indirect, with colliers attempting to control the local market price and hence earnings through curbing 'overproduction' - i.e. through collective restrictions on output.²³

The Changing Pattern of Risks.

In terms of safety and health, it has been noted that colliers throughout the preceding centuries had suffered death, injury and debilitating diseases associated with their occupation. The rapid rise in the demand for coal which gathered pace in the early 19th century, the massive influx of labour into the pits, and the impact of large scale mining not only exacerbated traditional hazards and the numbers exposed to them, but also created new risks. Explosions of fire-damp, for example, were not a new phenomenon.²⁴ But from the 1850s onwards the scale and frequency of such disasters, associated with the greater depths and size of underground workings and the attendant technical problems concerning ventilation, increased dramatically.²⁵ The appalling catalogue of disasters involving huge loss of life served to focus attention on particular safety problems and major developments in legislation, such as the requirement for two shafts, followed the more spectacular events of this kind. Nonetheless, contrary to popular belief, in the mid-decades of the 19th century explosions were not the principal cause of death amongst miners. As Bryan (1975) has pointed out, the numbers killed by 'falls of roof and sides' and by accidents grouped in the mundane category of 'other causes' comprised a far higher proportion of the 1,000 - 1,500 miners killed annually.

The skill dilution which accompanied the industrial development of the coalfields and the expansion of the workforce undoubtedly contributed to this death toll. In Scotland, for example, the dangerous task of 'stooping', extracting the coal exposed in the pillars which served to support the roof, was being performed by unskilled contract labour at wages lower than the average rate, with disastrous results in terms of safety. (see Campbell,

1979:233). With the mining workforce in Scotland having increased from 16,152 to 32,971 in the decade 1841 to 1851 and to 46,190 by 1871 (ibid:101), these 'new miners'-drawn largely from the urban unemployed and Irish immigrants - rapidly outnumbered the traditional Scots colliers who had gained their skills as boy apprentices.

Managerial Control and Safety Regulation.

In terms of production, in contrast with the previously seasonal demand for domestic fuel, new industrial and export markets created a continuous (albeit fluctuating) demand for coal which in turn fostered general pressures to intensify the colliers' workplace and increase output. Much of this demand was created by the rapid expansion of the iron industry which in Scotland took off in the 1830s. With vertical integration becoming an increasingly profitable proposition many coal masters attempted to secure their markets by opening up foundries and, similarly, many iron companies moved into the mining of coal for their own consumption.²⁶ In Scotland, as Campbell (1979:105 et seq) records, the ironmasters (a) frequently owned larger concerns than the traditional mining lairds and other masters supplying 'sale' coal to the domestic and manufacturing markets, and (b) operated in a more competitive market environment. As a result these ironmasters were 'in the forefront of a campaign to maximize managerial control over the colliery labour forces' (ibid). Their efforts were directed not only at forging the new labour into a disciplined workforce,¹⁷ but also at destroying 'the Scots colliers' traditional, self-regulating work patterns'. (ibid). By the same token combination amongst colliers and the restrictive practices associated with such activity were also under attack. In this the masters were assisted by technological changes taking place in the industry and by the advent of longwall

methods of coal extraction which were being widely employed from the 1850s onwards.²⁸ Attempts were also made to incorporate job specifications in contracts and, through fines and other measures, to enforce work rules designed to create a more 'reliable' and maleable workforce.

Against this background it can be readily appreciated that safety rules formulated by the coal masters themselves were not designed purely for the protection of life and limb, or property. The 'Code of Special Rules' drawn up by Scottish colliery owners and introduced under the terms of the Mines Inspection Act 1855 provides a case in point. As Arnot (1955:42) notes, this measure evoked considerable hostility from the miners for while being ostensibly intended to improve mines' safety the rules, which specified in detail the duties of various groups of colliery workers, contained a number of clauses which served purely disciplinary purposes. For example, Rule 3 obliged all colliers 'to work at their appointed coal faces continuously, industriously and without unnecessary interruption while the shift continues', and Rule 41 prohibited all underground meetings of workmen.²⁹ The Act also contained General Rules relating to mines' safety which could be supplemented by special rules to meet local contingencies at particular pits. These included adequate means of ventilation; the fencing of shaft entrances; the security of strata in shafts; the provision of adequate brakes on winding machinery and, for every steam boiler, the provision of proper gauges and safety valves. (see Bryan, 1975:60). Yet, reflecting the interests of those who had drafted the statute,³⁰ the penalties for violation of any of the Acts' provisions were grossly inequitable. For 'neglectfully or wilfully' violating any of the 41 strictures contained in the Code of Special Rules, a collier was liable to a fine of £2 or imprisonment for up to 3

months 'with or without hard labour'. (ibid). But the breach of any of the Acts 7 General Rules and subordinate regulations by a colliery owner was treated as a civil offence, incurring a ridiculously modest liability to fines not exceeding £5. In terms of enforcement, it is worth noting that while action taken by inspectors against owners and their agents were newsworthy events, the fining of miners appears to have been routine.³¹

The masters themselves evidently had a vested interest in ensuring that miners observed such rules, which they sought to enforce both by means of fining colliers and through closer surveillance of their activities underground. Certainly, general managerial control structures appear to have evolved rapidly. In 1868 the Mines' Inspector for East Scotland estimated that every fifteenth person employed in the collieries was a manager, deputy overman, fireman or onlooker. (PP(1868-9)XIV:733). Underofficials at large collieries were frequently engaged almost full-time on supervisory duties, visiting workplaces in their charge two or three times per shift. This situation contrasts dramatically with that prevailing prior to the 1850s when small pits worked by pillar and stall methods were visited only occasionally by an itinerant overman or company agent. In light of these developments the 'self-inspection' and supervisory duties imposed on colliery management by the Mines' Acts of 1872 and 1887 hardly strike a discordant note. (The 1872 Act obliged mine managers to ensure that a pit was inspected throughout on a daily basis and certified as safe by 'competent person'. By the 1887 Act the underground workings were to be inspected both before and at least once during each shift by underofficials.) Rather than being innovatory these measures appear simply to formalize emerging managerial practices. Yet it would be a mistake to consider that all colliery owners were willing to comply with such requirements. To do so would be to ignore the market differences which divided masters and also the uneven

impact, in time and place, of large scale mining. Thus, for example, in pits worked by pillar-and-stall methods these 'self-inspection' duties will have been less easily accomodated. Similarly, complying with the more onerous obligations subsequently placed on owners by the Coal Mines Act 1911 concerning the appointment and duties of deputies as full-time safety supervisors will have had a differential impact.³²

This brief analysis has attempted to locate the beginnings of that distinctive feature of mines safety legislation, the emphasis on organizational machinery at the workplace designed to regulate systems and methods of work, within the context of the structural and organizational changes taking place in the coalfields and in colliers work patterns. Enacted against this background, the statutory right conferred on colliers in 1872 enabling them to participate in the regulation of mines' safety appears to be somewhat paradoxical. We turn to examine the origins of these provisions for workmen's inspectors in the context of trade union agitation for legal regulation, for this is commonly regarded as an important element shaping the form and content of mines' legislation from the late 1850s onwards. (see e.g. Pelling, 1976: 77-9).

WORKMEN'S INSPECTORS : A DEMAND CONCEDED ?

Parliamentary Agitation.

During the mid-decades of the 19th century the unions themselves, rather than simply supporting the measures of the reformers such as Ashley, initiated proposals for legislation and mounted political campaigns for their enactment. (see Lewis, 1976:6). The 'method of legal enactment' was actively pursued by the miners' unions as

a means of redressing colliers' grievances, crystalizing as a central strategy under the direction of MacDonald. Leader of the Scottish miners in the 1850s, MacDonald subsequently became leader of the (second) national miners' federation which was established in 1863, the Miners' National Association,³³ and by all accounts this vigorous and skilled lobbyist dominated the affairs of the federation. (see e.g. Arnot, 1955; Reid, 1978).

The Webbs (1926:301) describe MacDonald as having 'relied almost exclusively on Parliamentary agitation as a means for securing his ends', and comment on the tenacity with which he 'pressed for the legal regulation of the conditions of labour while the Junta were contenting themselves with securing political freedom for trade unionists.'³⁴ In line with the course he set for union policy, he and Burt (leader of the Northumberland miners) were elected as the first 'working men' Liberal MPs in 1872.

It is important to note that the campaigns for protective legislation were conducted at national level against a background of weak and fragmented organisation in the coalfields. Punctuated by hostile and frequently violent confrontations, organisation and industrial action followed 'the ebb and flow of trade'; a succession of local unions being formed to secure wage increases during upswings in the coal markets and breaking up in attempts to resist reductions when the price of coal fell.³⁵ With the revival of mining unionism in the buoyant conditions of the late 1850s, local and county unions re-emerged throughout the coalfields and gained in strength. However, the jealously guarded autonomy of the coalfield unions, associated with local market differences, was not conducive to the development of a common national policy on industrial matters such as wage determination. This, together with the experience of the first national

federation's failure to raise sufficient funds to withstand a series of long-drawn out strikes over wages, was instrumental to the emphasis placed on political campaigns for protective legislation on matters which would unite and retain the support of the unions affiliated to the Miners' National Association. (see McCormick, 1979:8-13). As such, a pattern emerges which appears to bear out Kahn Freund's generalization that 'regulatory legislation is apt to prevail over collective bargaining where and when the political pressure power of the workers exceeds their industrial pressure power'. (Kahn Freund, 1977:39).

Articulated Demands.

One focus for the miners' unions 'political pressure power' was the issue of colliers' rights to station a checkweighman at the pit-head to ensure that their output, and hence earnings, were being calculated correctly. The longstanding nature of this concern is indicated by Nef (1932:173) who notes that in Scottish pits in the 18th century a hewers' wife commonly acted as his principal bearer 'and tried to prevent the grieve from short-measuring her husband, who was paid on a piecework basis'. In the early 19th century, as Campbell's (1979) thoroughly documented account of local union organisations in the Lanarkshire coalfield indicates, attempts to appoint checkweighmen, or 'justicemen', were frequently the subject of disputes and lock-outs. Moreover, it would seem that at particular pits, in times of good trade, miners were able to impose their demands for a checkweighman. Such demands and actions were, however, resisted by masters who regarded them as being 'interference in the management of collieries'. (ibid:64). In the late 1850s MacDonald lobbied actively for legal rights on this matter and statutory provisions enabling

miners to appoint checkweighmen, at their own expense, were first contained in the Mines Act of 1860. (see Rosen, 1943:441). Passage onto the statute books does not, however, appear to have led to any dramatic changes in the coalfields. Arnot (1955:46) remarks on this by noting that MacDonald was 'bitterly disappointed in the meagre response to his work' and that 'his success in London in 1860 was shorn of its glory by the failure of his Scots miners to take advantage of the new Act.'³⁶ Nonetheless, while the practical impact of this Act may have been negligible the provisions for checkweighmen are significant in that (a) protective legislation on this issue was one of the primary demands articulated by the miners' unions at that time and (b) they constitute legal recognition of a form of workers representation which pre-dates the provisions for workmen's inspectors.

In relation to safety, the miners' unions advocated a number of measures including, for example, the limitation of the hours of boys employed underground, improvements in ventilation, and for mine managers and other officials to be required to obtain certificates of competency to qualify for their positions. (see Bryan, 1975:59). The primary demands, however, concerned the mines' inspectorate. On the eve of its demise in 1847 the first national federation, the Miners Association of GB and Ireland, had petitioned Parliament for inspectors to be appointed 'to visit all the mines, and that some of these inspectors should be men acquainted with colliery work.' (cited by Williams, 1960:117).³⁷ Agitation along these lines was resumed by the Miners National Association, which now called for improvements in the embryonic system of mines' inspection established under the 1850 Act. In 1865 the Commons appointed a Select Committee 'To inquire into the operation of the Acts for the regulation and inspection of mines and into the complaints contained in

petitions from miners of Great Britain with relation thereto....' (cited by Bryan, 1975:62). The miners had complained that inspectors did not visit a mine unless summonsed in response to a complaint or on having been notified of an accident; that they gave advance warning of these visits; and that no attempt was made to visit all pits in their districts. That inspectors had interpreted their duties in this restrictive manner is evidently related to the fact that by 1865 there were only 12 inspectors to cover 3,217 coal mines. (see Rosen, 1943: 444). The Committee, which reported in 1867, recommended an increase in the number of inspectors and noted that 'the duty of visiting mines spontaneously was to some extent imposed upon them by the Act of 1860 and might usefully be discharged by them'. (cited by Bryan, 1975: 62). The miners had not, however, petitioned only for an enlarged inspectorate. In order to 'render the inspection of mines efficient' they had also renewed the call for 'a sufficient body of sub-inspectors', recruited from amongst the ranks of working miners, to be appointed and paid by the state.

It is worth digressing briefly here to note that legislation providing for a system such as this was enacted in relation to mines regulation in Belgium in 1897. (see Williams, 1960:153).³⁸ Worker-inspectors appointed and paid by the government agency were not attached to any particular pit but, like the professional inspectors, covered a particular district and operated in an itinerant manner. The significant difference between this system and that advocated by the British miners is that in Belgium candidates for the post of worker-inspectors were nominated by the miners' organisations rather than simply recruited from among the ranks of working colliers. It is also worth noting that the Trades Union Congress (TUC), apart from passing

perrenial resolutions since its formation in 1863 calling for an increase in the number of factory inspectors, also called for the appointment of worker-inspectors³⁹ and despatched delegations to the Home Office in 1878 and 1901 with petitions similar to that of the miners. (see Djang, 1942:55). Again, there is no evidence suggesting that unions wished to participate directly in such a scheme through the nomination of candidates. This action had led to the creation of a grade for 'a lower class of officials' in 1891. Called Inspectors' Assistants, the first such officials had been recruited from candidates with working class backgrounds in 1893. Supervized by Inspectors, these 'practical working men' were delegated secondary tasks such as the inspection of small workshops. According to Djang (ibid),

In practice these workmen-inspectors did not turn out to be particularly efficient. It was alleged that what was gained through their actual work experience in factories and workshops was largely offset by their rather inadequate preliminary education.

The fact that the TUC had again petitioned the Home Office on this matter in 1901 suggests that recruitment to this grade was not sustained. Resistance and ambivalence within the Inspectorate concerning the concept of worker-inspectors, documented by Hale (1978:170-81), undoubtedly contributed to the apparent failure and relatively short life-span of this scheme, with the grade itself having been quietly dropped in 1921.

It is possible, then, to regard the miners' petitions for sub-inspectors, 'men acquainted with colliery work', as being within the mainstream, if not the vanguard, of union policy on this issue. However, the crucial

points to note are that (a) agitation for workers representation was couched in terms of the composition of the inspectorate and (b) there appears to have been no demand for pit-based representation. There is scope for interpretive analysis on both counts.

In relation to the composition of the inspectorate, the evidence presented to the Select Committee of 1865 suggests that miners were neither enamoured with the manner in which mines' inspectors discharged their enforcement duties nor convinced as to their independence.⁴⁰ Certainly, apart altogether from their class backgrounds the patronage system of appointing inspectors, whereby inspectors were appointed by the Home Secretary on the recommendation of influential colliery owners, is unlikely to have fostered beliefs that these men were either acting objectively or in the miners' best interests.⁴¹ The demand for worker-inspectors should also be seen in relation to miners hostility to the disciplinary connotations of safety legislation. 'Men acquainted with colliery work' would undoubtedly be more sympathetic to the colliers' traditional work patterns and customs than to the 'new discipline' which the Mines' Inspectors were instrumental in enforcing.

The absence of a demand for pit-based worker inspectors could well be related to beliefs, borne out in relation to checkweighmen, that the existence of statutory rights would be an insufficient safeguard against victimization or obstruction by the masters. As it stood, miners in their evidence to the Select Committee of 1865 reported a reluctance to call in an inspector in view of the fact that men who had done so were known to have been victimized and blacklisted. (Rosen, 1943:442-4). It is equally plausible that rights to representation were not sought for fear that the workman-inspector would thereby also

have to accept statutory obligations or assume some degree of liability for the safety of the pit.⁴² It is, however, more probable that the absence of demands for pit-based safety representation reflects that 'spirit of laissez-faire which pervaded even trade unionism for much of the last century'. (Lewis, 1983:368). MacDonald himself has been described as a staunch adherent of the traditional colliers' 'ethos of manly self-reliance' and its associated conservatism (see Campbell, 1979:300), a perspective which limited the scope of measures he framed as being suitable for state support.⁴³ In the same vein, demands confined to the composition of the inspectorate would be wholly consistent with the ideology then dominant of political action via the Liberal Party.

Concession or Palliative

The above interpretations of the miners' motives and the meaning of the demand for sub-inspectors are by no means exhaustive, and a study could be profitably directed to the question of why the miners do not seem to have sought a protected post to assist in the self-regulation of safety conditions in the same way as they sought legislative provisions for checkweighmen. Nonetheless, as it stood, the Select Committee of 1865 rejected the idea of workmen acting as sub-inspectors, asserting that 'it is not desirable that men of a lower standard than those at present selected should be employed in the discharge of this important duty,' (cited by Rosen, 1943:445). However, the Committee did consider that the mines inspectors would be 'materially assisted' by a body of subordinates. Whether as a concession or palliative to the miners' demands for sub-inspectors, or the expression of a rational cost - saving preference to payment by the state, the outcome was the provision in the Coal Mines Regulation Act of 1872 (General Rule 30)

for workmen's inspectors.⁴⁴

The 1872 Act enabled workmen regularly employed at a colliery to appoint two of their number to inspect the underground workings throughout once per month, at their own expense. These rights were amended and amplified in the Coal Mines' Act 1911 (s.16). Bringing the provisions in line with those governing the appointment of checkweighmen, one of the workmen's inspectors need not be regularly employed at the pit. This clause opened the way for full-time union officials to become involved. Reporting procedures, which provided a link between the activities of workmen's inspectors and the Mines Inspectorate, were also clarified, with the workmen's inspector being obliged to make and sign a written report following an inspection. A copy of this was to be sent to the relevant District Mines Inspector and another to be posted at the pit-head. Additional rights, such as to investigate the scene of an accident, were also added.⁴⁵

WORKMEN'S INSPECTORS : PROMOTION AND ACTIVITY

Official Promotion

Use of these new provisions for workmen's inspectors was promoted by official government bodies, notably by various Safety Commissions and by the Mines' Inspectorate. (see Williams, 1960:153-60). In 1886, for example, the report of the Royal Commission on Accidents in Mines attached 'great importance to the systematic inspection of each mine by the workmen and ...(recommended) that this provision should be generally and regularly acted upon.' (ibid:153). The most explicit exposition of the rationale for such promotion is contained in the Report of the Royal Commission on Safety in Mines 1938.⁴⁶ The primary value of workmen's inspectors activities lay, as

the Commissioners saw it, in 'securing the workmen's co-operation in safety matters.' (p.142). As such :

We believe that systematic, general and effective inspection on behalf of workmen will provide one of the best possible means for promoting the spirit of co-operation and mutual confidence between the workmen, HM Inspectors and the managing officials which it is desirable to foster in the interests of greater safety.

(p.144).

The essence of workmen's inspectors role in contributing to this 'spirit of co-operation and mutual confidence' is further clarified :

As regards co-operation between the workmen's inspectors and the management, we have already expressed the expectation that general and regular inspection by workmen's representatives should play an important part in helping to secure a high standard of discipline among the workers themselves. The workmen's inspectors can do a great deal to help the management and the mines officials by taking steps where necessary to instil into the workmen respect for and obedience to the law and any necessary and proper safety rules.

(p.146).

The role advocated for workmen's inspectors as one of complementing managerial efforts to 'instil' discipline into the miners carries distinct 'Uncle Tom' connotations. In short, the framework of participation outlined and supported, with its overweening emphasis on the association between safety and discipline and the common interests of all parties in ensuring the latter, clearly reflects and promotes a unitary frame of reference.

Promotion and role prescriptions of this character express intention rather than reality. As such, it is worth noting here Ramsay's (1977:485) observations concerning schemes for workers' participation generally, for he notes that participation 'was offered to give a feeling of involvement whilst actually intended to provide a means for management to get its definition of the situation accepted ... (but) If workers attempt to promote their own interests and definitions through the scheme, management tend quickly to scrap it and to condemn the participants ...' as being irresponsible or insufficiently educated to appreciate the system. The distinction between such participative schemes as were promulgated by 'progressive' employers during the 19th century (the subject of Ramsay's comments) and the provisions for workmen's inspectors is, of course, that the latter were 'imposed' by the legislature and came into effect as a result of worker rather than management initiative: i.e. once workers at a mine had exercised their discretionary right to appoint workmen's inspectors, the employer was obliged to provide appropriate facilities enabling them to inspect the underground workings, investigate accidents, and so on. But, just as miners could utilize these provisions in a manner which was either contrary to or compatible with the intentions of those who drafted them and the Commissions which subsequently promoted them, so too the owners could accept and encourage or obstruct and condemn those who attempted to act as workmen's inspectors.

The Early Pattern of Use

Unfortunately, there is very little accessible historical information which would provide some insight into how miners regarded the provisions and the role of workmen's inspectors. In looking at the early pattern of

use reliance is therefore placed on the scattered documentary evidence available concerning the extent to which the inspection rights were acted upon.⁴⁷ In this sense the absence of references to miners having appointed workmen's inspectors or to inspections conducted under the provisions of the 1872 Act is noteworthy, in that it suggests that negligible use was made of these new statutory rights. Even after the amended provisions of the 1911 Act became operative (in 1913), enabling non-employees to be appointed, it would seem that the pits where the provisions were even partially or sporadically acted upon were the exception rather than the rule.

Arnot, the prolific 'official' historian of the miners' unions, provides some limited but somewhat contradictory information on this point in relation to the activities of the United Mineworkers of Scotland (UMS). He notes (1955:214 et seq) that the UMS mounted a campaign shortly after its formation in 1929 to promote the appointment of workmen's inspectors and observes that

In most pits no inspections had taken place for a period of 15 or 20 years; while those carried out were incomplete, only part of the pit being inspected.

The inference that quite extensive use had been made of the provisions in Scotland during the early years of this century (and that such activity had lapsed during the 1920s) does not appear to fit well with the evidence then cited to indicate the impact of the UMS campaign on activity levels, for this seems to refer only to inspections carried out 'under UMS auspices' - possibly by lay officials or UMS organizers. Thus, reference is made to the 1932 report of a (District ?) Mines Inspector which 'mentioned the value of these inspections carried out by the UMS. For the first time he had to report that 29 full

and detailed inspections had been carried out at four pits that year'. (ibid). While this may have represented 'considerable progress', as Arnot asserts, it can only be in terms of the UMS sphere of influence for there were more than 400 mines operative in the Scottish coalfield at that time. Nonetheless, other sources⁴⁸ indicate that the total level of activity in this coalfield was at best partial, for by 1937 there were 295 inspections recorded as having taken place at 42 pits - 10% of the 426 collieries operative in Scotland in that year.

Scotland cannot be regarded as a-typical in that during the inter-war years, with the notable exception of the South Wales and the Northumberland and Durham (Nothern) coalfields, pits where workmen's inspectors had been appointed were overall a distinct minority. The Royal Commission on the Coal Industry (1925) noted, for example, that about 5,000 inspections were carried out 'on behalf of workmen' in 1924.⁴⁹ In the abstract this worked out at a national average of two per mine, but in fact almost all had taken place in South Wales and Northumberland and Durham. A similar pattern is evident from the figures cited by the Royal Commission on Safety in Mines (1938:139) for 1937. In that year 4,653 inspections were recorded as having been conducted at 495 mines, 22% of the overall total (2,236 mines). Yet, again, the vast majority of these inspections (3,798/82%) were carried out at (332) mines in South Wales and the Northern coalfields. Even here, however, coverage was far from complete, for this represents activity at 32 - 45% of the pits operative in these two most active districts respectively. Moreover, there is some evidence to suggest that most of the inspections were conducted by men acting in an itinerant fashion, possibly union organizers, rather than by men regularly employed at the mines inspected.⁵⁰

Some Influences

Williams (1960:154) has attributed the limited use initially made of the provisions for workmen's inspectors to 'violent opposition from the employers';

They regarded such arrangements as giving opportunities to the miners' unions to strengthen their organisation and to the miners to interfere in the management of pits.

Opposition on these grounds is commonly cited in relation to the post of checkweighman, with the incumbent being a known target for employer victimization and blacklisting.⁵¹ It is certainly plausible that workmen's inspectors also met with this reaction given that the post offered organising opportunities at least as significant as those customarily associated with the checkweighman. Similarly, men who had called in a Mines Inspector or simply complained about safety matters were known to have been victimized, and fear of such retribution has been recorded by Mines Commissions from 1865 to 1938 as inhibiting miners from taking such action. Ample derivative evidence therefore exists to indicate that employer opposition was a deterrent to using the provisions. However, a simple deterrent interpretation of this nature rests on a number of inter-related assumptions : (a) that miners were aware of their new rights to appoint workmen's inspectors; (b) that they did attempt to act on them rather than relying on alternative or spontaneously evolved means of expressing concerns and demands on safety, health and welfare issues as and when the felt need to do so arose; and (c) that the activities of workmen's inspectors were invariably and by definition anathema to all employers. As the tenability of these assumptions is questionable, employers' reactions can be regarded as but one of a number of variables affecting the extent to which the provisions were acted upon.

Although the miners' unions do not appear to have campaigned for the rights initially, subsequent union activity in promoting and backing the appointment of workmen's inspectors seems to have been a significant variable affecting the use made of the provisions. The pattern of use cannot, however, be regarded as simply the product of local and regional variations in union strength and militancy. Northumberland and Durham and South Wales, the two most active districts, were not the only areas where relatively strong county federations existed. But both areas were unusual in that full-time inspectors were being employed during the inter-war years whereas in Scotland, for example, the first full-time workmen's inspector was appointed in 1944.⁵² It is possible that the variations between unions, in the extent to which they devoted resources to promoting use of the provisions, is related to local and regional differences in the safety problems afflicting particular mines - notably the risk of explosions.⁵³ Even so, safety per se is obviously but one variable, for it would seem that the appointment of workmen's inspectors was the subject of inter - union rivalry. Arnot's observations about the attempts of the UMS to promote use of the provisions are intriguing in this context, for he notes that the campaign was bitterly opposed not only by the coal-owners, but also 'not infrequently at the early stages by leaders of the county unions' (op cit). Such reactions, which suggest that the activities of a federation in sponsoring the appointment of workmen's inspectors was viewed as a threat to the autonomy of its potential constituents, in this case county unions, are likely to have been met with elsewhere. It is however evident that in considering the pattern of limited and patchy use made of the provisions, and the significance of this and the other variables discussed so far, due consideration must be given to the broader context of changes taking place in the industry

and the repercussions in terms of industrial relations.

The economic and labour history of mining for the period 1870 - 1940 has been well documented. We therefore simply note that the era of rapid expansion which had dawned in the mid-19th century continued, despite periodic trade recessions, and reached its peak at the turn of the century.⁵⁴ After 1913 the market for coal declined and the industry started to contract rapidly with the onset of economic recession in the late 1920s. The pace of this contraction accelerated until the re-armament programme with the advent of World War II sponsored an abrupt revival in the demand for coal. The private owners' incapacity to meet this dramatic market reversal led to state intervention. The government took over control of coal production in 1941 for the duration of the war and the industry was subsequently nationalised in 1947.

As for industrial relations, both the National Miners Association and the 'laissez-faire' influence of MacDonald had withered away by the end of the 1870s.⁵⁵ The fractured pattern of union organisation (whereby strong county federations existed in some areas and small local and district unions were the only form of organisation in others) persisted, although some consolidation did occur following the formation of the Miners Federation of Great Britain (MFGB) in 1898. The new generation of miners' leaders which had emerged, such as Hardie and Smillie, posed radical demands for direct state intervention in the regulation of wages and conditions, and in 1912 there was a national strike for a minimum wage. The experience of government direction during World War I and the influence of Syndicalism led to demands for nationalisation and self-management.⁵⁶ However, proposals and demands to this end were shelved during the inter-war years which, as is

well known, was a period marked by bitter and violent confrontations between the colliery owners and miners on all fronts. The most notable features were the national strikes of 1920 and 1921, the Great Lock-Out and General Strike of 1926 and its aftermath : the victimization and blacklisting of active trade unionists, the weakened and fragmented state of the unions affiliated to the MFGB, and the attempts of employers to further undermine them by promoting the breakaway 'non-political' Miners Industrial Union, founded in Nottingham under the leadership of George Spencer, and fostering company unionism elsewhere. These experiences, together with the traumatic impact of pit closures and mass unemployment which characterized the inter-war years, were followed in the late 1930s by a renewal of strength and militancy. Opposition to Spencerism gained momentum and this phenomenon of company unionism collapsed in the wake of disputes over recognition, with employers throughout the coalfields according recognition to MFGB affiliated unions.⁵⁷ The MFGB was drawn into negotiations with the government during the war years, and reflecting the latter's preference for negotiating with a single representative body, increasingly acted as a national union rather than a loose federation. Anticipating the industry's nationalisation the MFGB, with its 36 county union affiliates, was reconstituted as the National Union of Mineworkers (NUM) in 1945.

Against this background the fact that the issue of workmen's inspectors was not altogether swamped by competing concerns seems more surprising than that limited and patchy use was made of the provisions. It should be noted that the contraction during the inter-war years and the attendant cut-throat competition between colliery owners which this generated meant that miners at work were subjected to the pressures of wage reductions, longer

hours, and attempts to intensify the work pace.⁵⁸ Thus in the straightened circumstances of the depression, apart from the constant threat of victimization, black-listing and unemployment, the fact that workmen's inspectors wages had to be made up through a levy on the workmen themselves or from union funds undoubtedly also acted as a deterrent to using the provisions. This question of payment was raised by the Mines Commission of 1938, interestingly linked with the Commission's recommendation that there should be a compulsory obligation for quarterly workmen's inspections to augment the existing discretionary arrangements.⁵⁹ This recommendation, made on the grounds that the Commission (1938:142) attached 'so much importance to periodic workmen's inspections that we are not prepared to leave it for a further period to the uncertainty of choice', was not implemented. But the issue of payment was subsequently the subject of a national voluntary agreement between the MFGB and the employers' Mining Association of G.B. in 1941, whereby half the cost of quarterly workmen's inspections was to be borne by the mine-owners. Agreement was also reached concerning inspections by the unions' full-time workmen's inspectors. These arrangements continued after nationalisation.

A Relative Success

Before considering the effect of these more recent developments it is worth briefly commenting on the provisions for workmen's inspectors in relation to other schemes put forward over the years for miners' involvement in safety. Among these were the provisions of the 1911 Act (s.86) which enabled workmen at a mine to propose special regulations; i.e. to participate in the rule making process. There is, however, no recorded instance of workmen themselves having directly made such proposals.⁶⁰ The establishment of safety committees at colliery,

district, area and national level was another mechanism promoted, and the Mining Industry Acts of 1920 and 1926 contained clauses for the establishment of such joint consultative machinery. However, as the Mines Commission of 1938 (p.19) noted, these provisions 'proved entirely abortive' and lapsed without any recorded use having been made of them. Given the history of labour relations at this point in time, and the fate of the miners' campaign for nationalisation, it is hardly surprising that the MFGB as well as the employers' federations expressed vacillating degrees of interest in co-operating in these schemes, which specifically excluded discussion on matters affecting the control and management of mines. Safety committees subsequently established on a voluntary basis at colliery level were reportedly rare. (ibid:403). In contrast with the response to these schemes the provisions for workmen's inspectors appear to have been a relatively successful vehicle for worker involvement. But the pattern of limited and patchy use outlined thus far, together with the notion put forward by the Mines Commission of 1938 that some form of compulsion was required, underlines an apparently wide divergence of interests and expectations concerning this form of involvement.

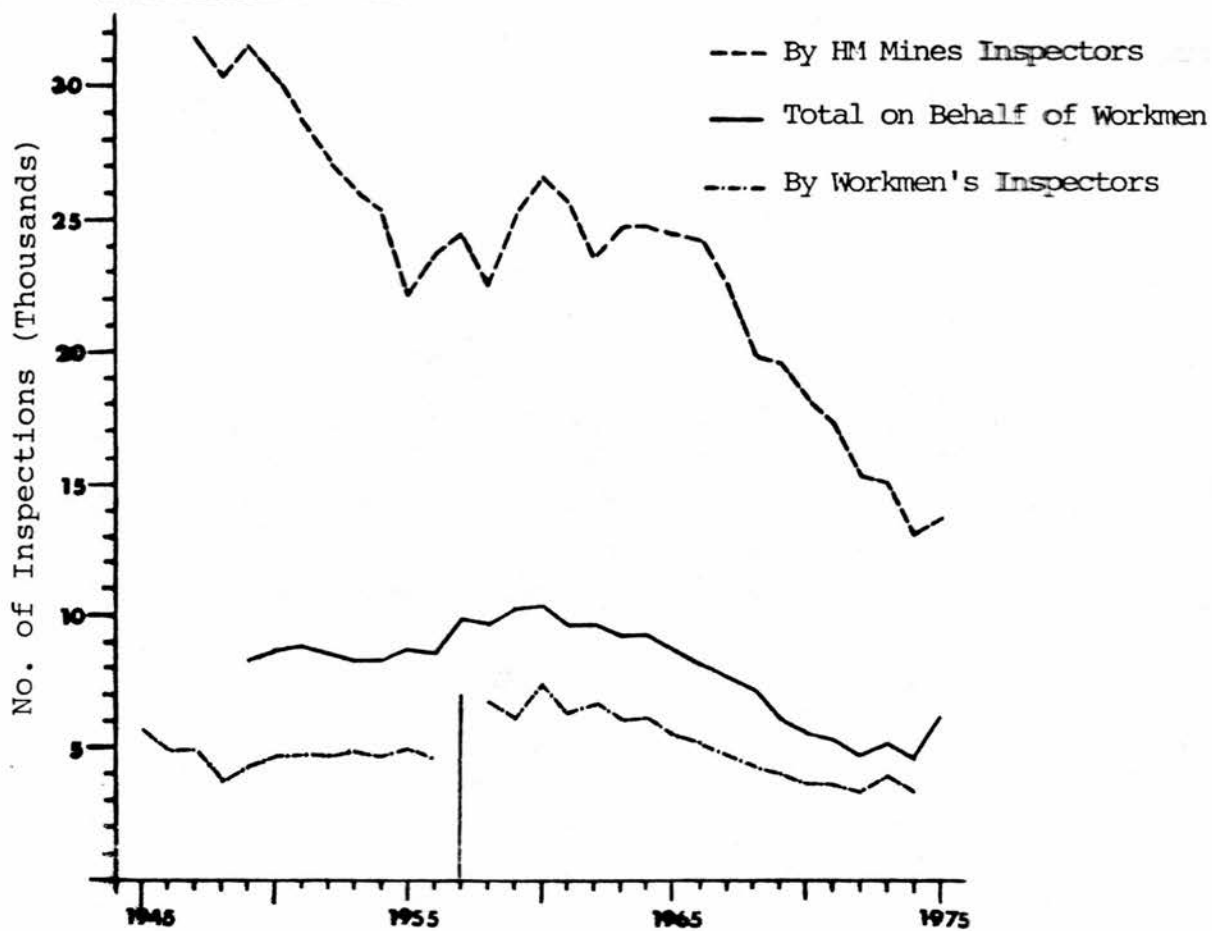
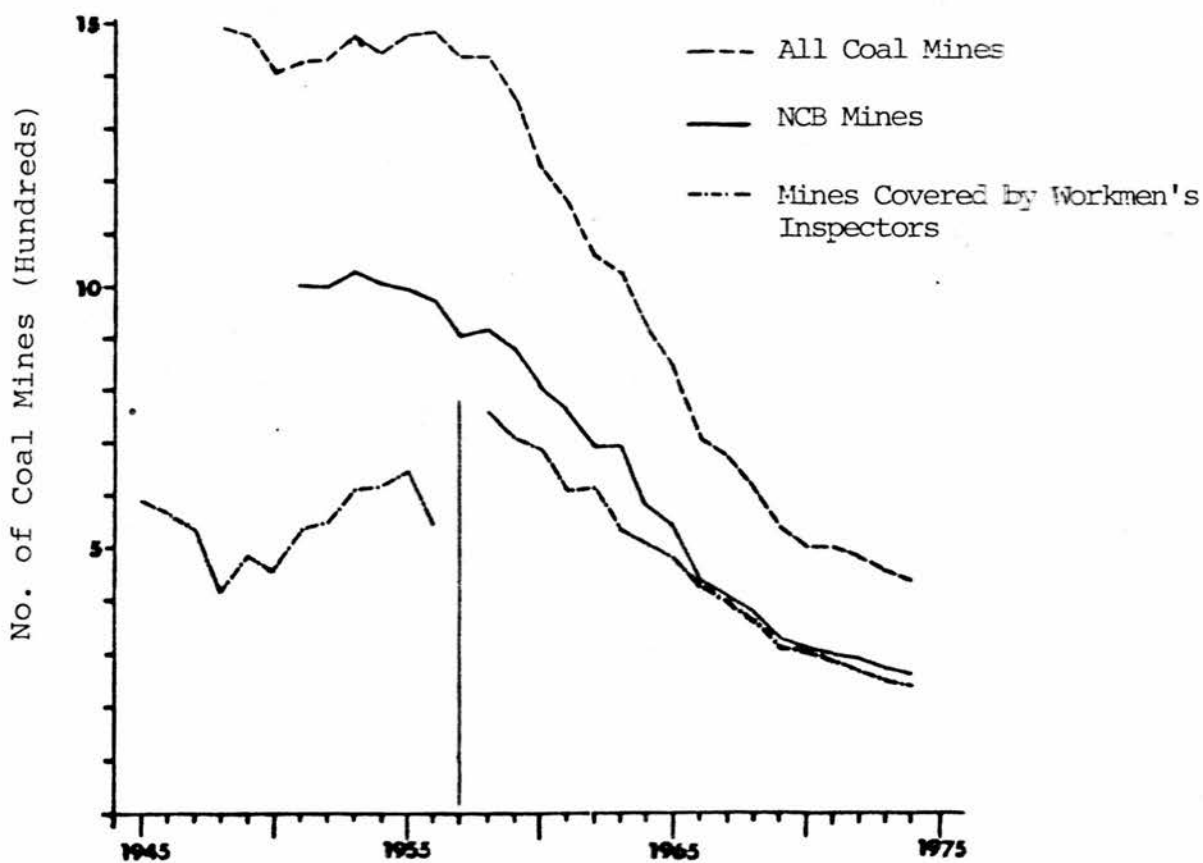
Recent Developments

After 1940 there were significant developments facilitating use of the provisions. The cost burden had been alleviated and increasing back-up in the form of full-time union inspectors was being made available. Most significantly, of course, after 1947 the vast majority of miners were employed by a publicly owned corporation and, for the first time, organized in a national union. Reflecting these changed circumstances the amended provisions of the Mines and Quarries Act 1954

recognized the appointment of workmen's inspectors as being a union concern, with s.123(1) specifying that a panel of workmen's inspectors could be appointed by the union representing the majority of those employed at any workplace covered by the Act.⁶¹ But the interesting point is that it was only in the late 1950s that there appears to have been any significant change in the take-up rate of these rights to safety representation.

Figures 2.1. and 2.2., based on statistics extracted from the Mines Inspectorate's annual reports, illustrate the pattern of activity between 1945 and 1974. Figure 2.1. shows activity rates in terms of the number of inspections conducted and distinguishes between activity on the part of full-time officials, now operating primarily under the aegis of District Safety Boards, and activity on the part of workmen's inspectors appointed under the legislative provisions.⁶² The considerably greater number of (surface and underground) inspections conducted by H.M. Mines Inspectors have also been illustrated to provide a relative indicator of activity. Figure 2.2. shows the number of mines where workmen's inspectors appointed under the legislative provisions were active in relation to the total number of mines and those operated by the National Coal Board (NCB).

Given that the large number of small mines which remained in private hands, operated under licence to the NCB, employed only a tiny proportion of the mining workforce, it seems reasonable to assume that workmen's inspectors were concentrated in the collieries operated by the NCB.⁶³ Even so, it would seem that in the decade following nationalisation, in an organizational environment now dominated by the relations between a single employer and a single union, the pattern of limited and patchy use which characterized the inter-war years persisted.

Figure 2.1. Inspections at Coal Mines, 1945-74Figure 2.2. Mines Covered by Workmen's Inspectors, 1945-74

Source: Annual Reports of H.M. Chief Inspector of Mines, 1939/46-1956; Annual Reports...Mines and Quarries, 1957-74.

The apparent upsurge of interest in these rights after 1957 may well reflect the stimulus-effect of policy developments, for 1957 was the year in which the amended provisions of the 1954 Act became operative.⁶⁴ But it is clear that this upsurge in activity was sustained and gradually improved upon in a period when, as the reduction in the number of mines and activity on the part of H.M. Inspectors indicates, the industry was contracting dramatically. In this context it would seem that pit-based inspectors were responsible for an increasing proportion of all those inspections conducted on behalf of workmen and that most NCB mines were covered by these arrangements, although near total coverage does not appear to have been achieved until the mid-1960s.

In 1972 the Robens Committee was declaring that the arrangements for safety representation in mining 'are obviously highly valued within the industry.' (para.60). Moreover, the Department of Trade and Industry in its evidence to the Committee (1972:398) was asserting that 'in the mining industry there is little margin for further participation by the trade unions' in safety regulation at the workplace. But whereas the provisions for workmen's inspectors have been 'highly valued' by Commissioners more or less since their inception a century ago the use made of these rights, as indicated by the number of mines covered by workmen's inspectors activities, suggests that in practice the common regard held for such arrangements at colliery level is a relatively recent phenomenon.

CONCLUSIONS

Statutory provisions specifying workers' rights to participate in the regulation of conditions affecting their safety, health and welfare at work were, until recently, an anomaly within the general framework of protective regulation in this country. This anomalous precedent, the provisions enabling miners to appoint workmen's inspectors, originated in an era when the current elaborate managerial system of safety supervision and self-inspection peculiar to the mining industry was just emerging. It does not appear to have been a right campaigned for by the miners themselves through their unions but rather, possibly in pragmatic recognition of the relative autonomy of the mineworker, a measure drafted and promoted to complement the activities of mine management and the Inspectorate. But the premises of common concerns appear to have been at odds with reality, for in practice the use made of the provisions varied considerably within and between coalfield districts. This pattern persisted after nationalisation, and it was not until the late 1950s that the provisions for workmen's inspectors appear to have been acted on at most collieries. Whether the apparent accommodation of this form of workers' participation in mining represents a consensus over safety and the role of workmen's inspectors are questions which the research presented in Chapters 5-8 attempts to answer. As it stands, the 'model' for the universal provisions embodied in the HSW Act 1974 and the SRSC Regulations provides us with a legacy whereby for decades after the potentially progressive rights to safety representation had been lodged on the statute books, limited and patchy use was made of them. In the next chapter, with the benefit of this perspective, the premises and expectations concerning the new provisions for safety representation are considered.

CHAPTER 3

SELF-REGULATION AND SAFETY REPRESENTATION : PREMISES
AND ISSUES.

SELF-REGULATION AND SAFETY REPRESENTATION : PREMISES
AND ISSUES

Based largely on the recommendations of the Robens Report (1972), the new legal and administrative framework for occupational health and safety which came into being with the HSW Act 1974 was designed to foster a 'self-regulating' system of accident prevention. Provisions for the involvement of workers' safety representatives, detailed in the SRSC Regulations 1977, formed an integral part of this design. The object of this chapter is to briefly review the background to these developments and to examine the issues associated with workers' participation in the regulation of conditions affecting their safety and health at work.¹

The first part of this chapter sketches the influences and events which led to these recent changes in the traditional framework of protective regulation and to the generalization of statutory rights to safety representation beyond the confines of mining. Secondly, the premises underlying the new self-regulatory approach, as set out in the Robens Report, and the attendant expectations concerning workers' involvement are examined. Based on a literature review, these premises are challenged as being at odds with behavioural and organizational factors affecting safety and health at work, and the implications for safety representation are considered.

TOWARDS THE PRESENT SYSTEM

Changing Pressures for Reform

It was noted in the previous chapter that the general framework of protective regulation existing prior to the HSW Act 1974 developed along the lines established in the mid-decades of the 19th century. The history of this body of labour law is thus characterized by the piecemeal elaboration and amendment of technically specific norms and standards, periodic consolidation, and the occasional extension of similar coverage to defined groups of employees and particular processes.² But during the 1960s there were growing pressures for wide-ranging reform from various quarters, the TUC and HMFI in particular, which were increasingly articulated as a need for fundamental changes in the scope, form and content of protective legislation.

Disenchantment with the existing corpus of law and its enforcement by multiple state agencies did not stem simply from the continuing inequities and anomalies of partial coverage. Concern also focussed on the fact that traditional approaches appeared to have reached some kind of 'plateau' in terms of reducing the toll of work-related death, injury and disease.³ It was widely recognized that the administrative fragmentation and limited resources of the inspectorates, the patchy scope of existing legislation, and the ad hoc process of promulgating minimum standards which had characterized previous developments were incapable of coping with the changing nature and ever-increasing number of hazards created by the introduction of new technologies and the increased scale and complexity of modern industry.⁴ Moreover, it was apparent that traditional approaches had failed to control the known hazards of long-established industrial

processes.⁵ The Robens Committee (1970-72) was commissioned in the wake of a growing consensus that improvement in occupational safety and health depended not only upon rationalizing the existing apparatus of state regulation but on measures which would ensure 'a greater degree of real participation in the decision making process at all levels' on the part of those involved in industry. (Robens Report, para.114). In particular, improvement was seen as being dependent upon organisation at the workplace and the active involvement of workpeople.⁶

Traditionally, as far as safety arrangements at the workplace were concerned, outside the mining industry there were only a few prescribed cases where compulsory organisational duties existed: statutory obligations placed on certain employers to appoint a safety officer, or to appoint 'competent persons' to inspect specified pieces of equipment.⁷ Consistent with the emphasis placed on physical safeguards in factory legislation, the dominant philosophy was one whereby such administrative arrangements were seen as being the province of voluntary action. Similarly, in contrast with mining, workers had no positive statutory rights to information or representation on matters affecting their safety and health at work. Safety statutes simply obliged employees to take 'reasonable care' and not to interfere with measures and arrangements designed for safety.⁸ While it is possible to trace official promotion for some form of (indirect) worker representation on safety matters back to the mid-19th century,⁹ the popularly advocated medium for workers' involvement in this sphere was joint consultative committees, established on a voluntary basis. The interest expressed in such participative machinery, as indicated by available evidence concerning the establishment of safety committees, appears to have waxed and waned



periodically since the earliest known examples of schemes established by certain 'progressive employers' in the late 19th century.¹⁰

The first attempt to introduce statutory measures which would enable workers to appoint 'safety delegates' and oblige managements to establish safety committees at their request was a Private Members' Bill in 1954. That the Bill was defeated is scarcely surprising for, apart from the major employers' federations, the Factory Inspectorate and the vast majority of unions affiliated to the TUC adhered to the traditional preference for voluntary rather than statutory arrangements.¹¹ During the 1960s, however, alongside mounting pressures for reform in the structure and content of protective legislation, there was a discernible shift of opinion within trade union circles in favour of the concept of statutory rights concerning workers' representation on safety matters. The Amalgamated Union of Foundry Workers (AUFW) was particularly vociferous in lobbying for statutory provisions akin to those available to miners under the Mines and Quarries Act 1954. In 1964, against the advice of its General Executive, the TUC endorsed a resolution proposed by the AUFW which committed it to the objective of obtaining statutory provisions for safety representatives and safety committees.

The shift in interest from an almost exclusive concern with safety committees to support for the concept of safety representation was undoubtedly influenced by the emergence and formal recognition of shop stewards, as key lay negotiators at the workplace, which was taking place in various industries during the late 1950s and early 1960s.¹² The growth of shop-floor bargaining power, highlighted by the Donovan Commission (1968), shaded into a revival of interest in workers' participation in

employment matters generally. Gathering momentum in the late 1960s, 'participation' was the fashionable panacea for all manner of industrial 'ills'; a means of improving productivity as well as reducing unofficial strikes and other individual and collective manifestations of conflict. Related to these developments, safety representation can be seen as one of the many 'new' forms of workers' involvement advocated; a list which includes schemes for 'job enrichment', profit-sharing, share-owning, information disclosure, works councils, the radical extension of collective bargaining machinery and negotiating rights, and - as the momentum in terms of the national level policy debate on 'industrial democracy' peaked in the mid-1970s - worker directors.¹³ Given this context, it seems overly-parochial to associate the shift in favour of statutory rights concerning employees' involvement in workplace safety matters to dissatisfaction with existing arrangements alone; for example, as being 'due to the evidence of the limited and uneven development of joint safety committees on a voluntary basis'. (Beaumont, 1979:10). Support within the labour movement for legal rights on this matter should also be seen in terms of the general shift away from the tradition of legal abstentionism in industrial relations occurring at that time, which materialized in the plethora of labour laws enacted in the 1970s. (see Lewis, 1983). The pending question of Britain's entry to the EEC and associated pressures to harmonize employment legislation, together with the advent of the 'social contract' between the TUC and the Labour Party were influential developments in this respect, and instrumental in shaping the new legislative framework for occupational safety and health.¹⁴

An Enabling Framework

The HSW Act 1974 has been likened to the Factories Act of 1833¹⁵ in that it is said to provide the legal framework for future developments in occupational hazard control in much the same way as the 1833 Act set the pattern for traditional approaches. As writers such as Barrett (1977) and Hepple (1983) have pointed out, the new Act continues in the 19th century tradition of placing overriding responsibility for occupational safety on employers, and in providing for enforcement by state inspectors. Major reforms were instituted along these lines, the most notable being that the different inspectorates and various complementary advisory services were brought together under the auspices and direction of a single agency, the Health and Safety Executive (HSE). But beyond reform, the Act departs from the tradition of protective legislation in being, as the Chief Inspector of Factories has eulogistically described it, "the most comprehensive yet in concept and coverage, the most realistic in eschewing detail and the most perceptive in finding the key to occupational health and safety in management policies and in the participation of trade unions and workpeople."¹⁶

Essentially the 1974 Act is an enabling statute, which superimposes a code of general duties for affirmative action to secure occupational safety, health and welfare over the existing conglomeration of prohibitory and prescriptive legislation. The kernel of the new Act lies in s.2, which contains employers' general duties and the provisions for workers' safety representation. As regards the former, the Act effectively represents a codification of common law principles, with an employer being obliged 'to ensure, so far as is reasonably practicable, the safety, health and welfare at work of all his employees'.¹⁷

Thus, beyond compliance with such regulative provisions as may exist each firm, 'in order to fulfill the spirit of s.2', is expected to develop a system of safe working appropriate to its own particular circumstances.¹⁸ An employer is obliged (s.2(3)) to set out his arrangements to this end in the form of a written safety policy, and to consult with safety representatives (s.2(6)) in the making and maintenance of such measures.

These new provisions, designed to provide a stimulus and legal basis for self-regulation of the workplace, were matched by analogous changes in the institutional infrastructure of protective regulation at national level. Thus, a new tripartite body responsible for overseeing and co-ordinating occupational health and safety policy was created in the Health and Safety Commission (HSC). Similarly, the consultative procedures pursued by the HSE inspectorates in amending or framing new regulations and codes, and counselling the HSC accordingly, have taken on bureaucratic dimensions with the creation of various national advisory committees. Employers, trade unions and other interested parties are represented on these standing committees, each of which deals with a particular industry or hazard.¹⁹

To conclude this section; the new legal and administrative framework for occupational safety and health, particularly the generalisation of statutory rights to safety representation beyond the confines of mining, constitute a departure from the tradition of protective regulation in both symbolic and instrumental terms. With the SRSC Regulations,²⁰ workers' rights to exert some direct influence in the regulation of conditions affecting their safety and health at work was formally recognized. On an instrumental plane, the provisions for safety representation are seen, as the HSC put it, as 'essential to the full and effective implementation of the 1974 Act and crucial to the health and safety of people at work'.²¹ In the following section the 'philosophy' of self-regulation underlying these new provisions, as set out in the Robens Report, is reviewed.

THE PREMISES OF SELF-REGULATION

The Robens Report

The starting point of the Robens Committee's Report was its critique of traditional approaches to occupational hazard control. In many respects, the Committee's observations and recommendations for reform in the existing corpus of law, and its' administration, mirror those articulated by labour lawyers in the early 1960s.²² But the distinctive theme of the report was that the failure of traditional approaches to bring about progressive improvements in occupational safety and health went beyond the practical limitations associated with the anachronistic and piecemeal framework of protective legislation; that the traditional form of state intervention 'far from advancing the cause of safety and health may well have reached the point where

it becomes counter-productive' (para.29). According to the Committee, the fundamental reason for this situation was that a proliferation of 'detailed rules imposed by external agencies' had 'the unfortunate and all-pervading psychological effect' of encouraging reliance on state regulation rather than on 'personal responsibility and voluntary, self-generating effort' (ibid). As such it could not but fail, for it contributed to the 'apathy' over safety and health which the Committee considered to be 'the most important single reason for accidents at work' (para.13). Since the Committee considered safety to be 'mainly a matter of the day-to-day attitudes and reactions of the individual' and because, in the normal experience of individuals, accidents are rare events, the principal means of dispelling this apathy were seen to lie in the mobilization of influences which operated continuously on the daily routine of the workplace; to foster greater 'safety awareness' and thereby 'raise the status...of the subject of health and safety at work in the minds of individuals' (ibid). Thus, scope for improvement lay in (i) a reduction in the unhealthy reliance on state regulation through reducing the amount or prescriptive law, and (ii) management and workpeople accepting their responsibilities (as 'those who create the risks and those who work with them') and 'playing their full part' in a more effectively self-regulating system making and monitoring arrangements for safety and health at work.

Having interpreted its' remit in broad terms as being concerned fundamentally with 'the relationship, balance and interaction between...regulation and supervision by the state and industrial self-regulation and self-help' (para.15), it is perhaps inevitable that the Robens Committee should echo concerns voiced since the inception of protective regulation as to the extent

to which government intervention is desirable. For example, the Committee's thesis that detailed statutory standards had the psychological effect of encouraging reliance on state regulation, and that this was counter-productive in terms of safety, are remarkably akin to the arguments put forward by Tremenheere in the mid-19th century against compulsion in detailed matters of mine regulation. (Cited at p.15). The Chief Inspector of Factories has staunchly denied that the current preoccupation with the instrumental effects of health and safety requirements, notably their financial impact in a time of recession, and the emphasis on advisory codes of a non-statutory origin can be taken to mean that we are 'witnessing a creeping return to laissez-faire'.²³ But it is clear that this approach rests on a similarly optimistic view of employers' willingness to act on such advice. The same is true of the promotional role which the Committee advocated for the inspectorates, whereby the 'leading edge' of their activities should not be the prohibitive functions of 'enforcement', but 'the provision of skilled and impartial advice and assistance', to stimulate the enhance the effectiveness of industry's own self-regulatory efforts.²⁴ Adhering to the view that the concepts of criminal law and the traditional sanctions of criminal proceedings are 'largely and irrelevancy' (para 261), the Report elaborates upon the long-established notion that economic self - interest and humanitarian considerations will ensure a favourable response from the vast majority of employers - viewing accident prevention in this sense as being a normal function of efficient management.²⁵ Safety representatives were expected to meet with a similarly favourable reaction. For example, the Committee did not believe 'that any responsible employer would ignore a genuine problem revealed by...inspections' on the part of safety representatives (para.65).

On the theme of workers' involvement, the Committee echoes previous Commissions of inquiry in its' view that the co-operation of workpeople is essential to the effectiveness of preventive measures since, in a pragmatic rather than a legal sense, safety is the joint responsibility of both employers and workpeople. Consultation was regarded as the appropriate medium for such co-operation on the grounds that 'there is a greater natural identity of interests between the "two sides" in relation to safety and health problems than in most other matters' (para.66). As such, the Committee considered there to be 'no legitimate scope for "bargaining" on safety and health issues, but much scope for constructive discussion, joint inspection, and participation in working out solutions' (ibid). To this, employees' safety representatives were seen as being able to contribute 'expertise of a special kind - the intimate knowledge of working habits and attitudes on the shop floor'.

In many respects, then, the 'philosophy' of self-regulation can be said to represent a re-assertion of voluntaristic principles. But even before this was embodied in legislative form, both the spirit and detail of the Robens Report's recommendations attracted critical commentary. A great deal of debate, primarily from a socio-legal perspective and often polemical in nature, has centred on a number of issues : why traditional approaches had become ineffective; the role of law and its' enforcement as a tool in accident prevention; and the economics of regulation. Implicitly or explicitly, much of this debate has touched on and challenged the various underlying premises of the self-regulatory approach. As the provisions for safety representation have been prescribed within this framework, it is important for the purposes of the thesis to examine the basic inter-dependent assumptions upon which this

conceptual edifice rests. These are (a) that accidents are primarily caused by 'apathy', and (b) that a 'natural identity of interests between the "two sides"' exists which is conducive to effective self-regulation.

Apathy and Accidents : Cause or Symptom?

The attitudes and reactions of individuals, normally those of accident victims, have long been popularly implicated in accident causation. But the extent to which accidents are directly preventable by fostering safety awareness, encouraging individuals to discard the apathy attributed to them over safety and health, would seem to depend on how close a connection there is between attitudes and accident causation. Certainly, a large part of the voluminous research literature on causation produced by industrial psychologists has concentrated on the relationship between attitudes and injury accidents, but this has produced both conflicting evidence and inconclusive results.²⁶ All that can be unambiguously derived from these studies is that attitudes directly affect the number of accidents actually reported and the length of associated absences, not their actual causation. The fact that the Robens Committee failed to take such distinctions into account prompted Nichols and Armstrong (1973) to characterise its view of accident causation as being derived from 'purely homespun psychology'.

The Committee's notion of 'apathy' as the primary reason for accidents has more credibility if interpreted in a less literal fashion; in relation to the motivation to adopt preventive measures, rather than in relation to causation per se. As such, the Committee's concern with 'influencing attitudes' can be linked with that authoritative body of research on preventive strategies which

is concerned as much with the organisational machinery necessary to ensure that the risk of accident occurrences are identified, and suitable control strategies implemented, as with the technical 'hardware' of prevention.²⁷ Even so, the concept of 'apathy' holds little more explanatory value than the corresponding folklore that if measures are available for controlling hazards, then only ignorance will limit their use. Banal conclusions of this nature ignore the complex interplay of motivational and behavioural variables affecting attitudes to safety which are associated, in the first instance, with hazard identification and perceptions as to the need for risk evasive or preventive action. Moreover, such views gloss over the fact that for any identifiable hazard there are a variety of control measures available - ranging from eliminating the hazard at source through to measures designed to mitigate the consequences of an accident, such as providing the operative with personal protection. In short, choices have to be made as to which control measures, if any, are appropriate precautions in any particular workplace.²⁸ No matter how high the level of 'safety awareness' or how knowledgeable the decision-makers, there is little ground for assuming that 'appropriateness' will be primarily determined by health and safety considerations for, as Lantier and Pin observe : 'The lasting conflict between safety and production in industry and between safety and remuneration in personal motivation relegates safety to a vague marginal role'.²⁹ Evidence from a study of over 2,000 accidents conducted by the N.I.I.P. (1971) supports the view that conflict between safe working practices and other interests pursued by the various parties to workplaces activity is endemic, concluding that accidents were structured by and arose out of continuous pressures associated with production.

The process by which priorities are assigned between safety and other work objectives clearly has implications for the efficacy of 'self-regulatory' measures and the use made of the provisions for safety representation. Consideration is thus given next to the belief that common interests in accident prevention, notably employers economic self-interests, should act as a positive incentive towards the joint resolution of health and safety problems on a voluntary, co-operative basis.

Common Interests and Competing Concerns

It is widely recognized that, apart from unnecessary suffering, work-related accidents and ill-health entail substantial costs not only for the individuals involved, but also for firms, for the state, and for the community as a whole. Pointing to this fact and to its corollary - that accident prevention represents a form of cost control - the Robens Report expresses the confident expectation that once employers are aware of the costs of accidents to the firm then the 'message' will be apparent : 'that the economic return from accident prevention is one that employers cannot afford to overlook'.³⁰ From this standpoint it was asserted that

The promotion of safety and health is not only a function of good management but it is, or ought to be, a normal management function - just as production or marketing is a normal function. (para.47).

Thus, according to the Committee, safety should be seen as serving, rather than simply being compatible with, the firm's raison d'etre of profitable production.³¹

In its enthusiasm for highlighting the economic benefits associated with accident prevention, the Robens Committee omitted to mention the resource costs involved in implementing preventive measures. This puzzling oversight critically affects the thrust of the argument that employers' interests in efficiency and general cost control does, or should, naturally give rise to hazard control. Evidently, the logic of economic self-interests as an incentive towards safety provision holds true in so far as the hazards of the work environment or process are deemed to jeopardize a firm's operational objectives. For example, large mining corporations such as the NCB make considerable long-term capital investments in sinking and working deep-mines, the operation of which depends upon controlling the underground atmospheric and geological environment so as to obviate the risks of fire, flood and explosion. Preventing such accidents, which threaten not only the capital and labour resources employed underground but the continued existence of a mine as a productive unit, is thus an integral part of the design and planning process.³² However, the imperatives of hazard control are rarely clearcut. Certainly, the 'economic returns' from implementing a wide range of preventive measures can be shown in, for example, reductions in machine down-times, less accident absenteeism, or fewer compensation claims.³³ But the plain fact is that no management decision will be based solely (or even primarily) on information or estimates as to the costs of accidents to the firm,³⁴ no matter how large the potential 'savings' that might accrue. As various writers have pointed out, the costs of ensuring safe systems of work - whether this entails actual changes in the production process or simply better planning, supervision and training - can make substantial demands on the firm's available financial and personnel resources. (See, e.g. Sinclair, 1972; Dawson et al, 1983). Moreover, as a

number of recent studies concerned with the use of cost-benefit analysis to determine 'optimal' levels of safety provision³⁵ have clearly demonstrated, there is no direct link or automatic 'feedback' between the firm's objective of profitable production and its expenditure on hazard control. The basic point is that not only are the costs of accidents and the benefits of prevention widely diffused throughout society but, succinctly put, 'the cost and benefit elements of the equation are rarely borne by the same persons or groups'.³⁶ Thus, if firms neither incur the full costs of failing to provide safe systems or work, nor gain direct financial or operational benefits commensurate with expenditure on safety provision, then the economic advantages of ignoring safety considerations will be paramount. Consequently, in a competitive market system dominated by the profit motive, firms cannot necessarily be expected to provide the type or level of hazard control on a voluntary basis which is deemed necessary to reduce the toll of work-related death, injury and disease to 'acceptable' levels.³⁷

Unwillingness to implement available preventive measures does not imply some sort of calculating and callous indifference on the part of employers, for there is most certainly a 'natural identity of interests between the two sides' in so far as no one wants workers to be injured or killed. But it is clearly naive to ignore the fact that the management decision as to whether to implement appropriate preventive measures will ultimately be governed by consideration of the costs of such provisions and how far these can be borne without conflicting with the priorities of profitable production. The extent to which such costs can be absorbed and/or passed on (e.g. through price increases) without being deemed to threaten the viability of the enterprise - and hence the scope for co-operation between management and

workers in deciding on the most appropriate solutions to health and safety hazards - will obviously vary between firms.

The point that safety considerations may be subordinated to competing economic and operational priorities does not apply solely to the managerial decision-making process. Reflecting the dominant control relationship inherent in the contract of employment, the (statutory) onus of responsibility for ensuring safe systems of work rests unequivocally with employers. Yet it is axiomatic that managerial control of the work process is not absolute, tempered by the degree of task autonomy exercised by the individual of workgroup. Consequently, while management provisions are an essential pre-requisite, the worker has a responsibility commensurate with the control he has over his immediate environment to protect himself and those around him from harm resulting from his own acts or omissions. There are, however, no grounds for assuming that a natural interest in self-preservation will ensure that workers never take risks which jeopardize their own or their workmates safety; that they will always use the preventive measures available and comply with 'the discipline which is implied by the formal establishment of safe ways of working'.³⁸ Individuals and workgroups pursue different objectives at various times so that concerns for personal safety may well be subordinated, even on a regular basis, in pursuit of a higher priority. For example, evidence suggests that where bonus-incentive schemes are the norm, achieving the level of earnings deemed satisfactory by the individual or group leads workers to trade off safe working practices against speed and higher output.³⁹ More generally, studies by Nichols (1975) and Hale and Perusse (1977) have pointed to this basic contradiction between, on the one hand, the desire for safety arising from a natural aversion to

harm and, on the other, the social and economic pressures structured into systems and traditions of work which actively encourage risk-taking. The HSE Inspectorates 'causative analysis' classifications of accidents according to whether preventive measures were mainly under the control of 'management', 'workpeople' or 'jointly' suggests a similar theme: that the 'co-operation' between management and workpeople on a day-to-day basis which arises through the pursuit of their respective and mutual interests is likely to perpetuate unsafe systems of work as much as heightened safety awareness.⁴⁰

IMPLICATIONS FOR SAFETY REPRESENTATIVES

The premises of 'self-regulation', which underlie the provisions for workers' involvement in occupational hazard control, lack firm foundation. Put bluntly, accident prevention is not immune from the 'inter penetration of collaboration and conflict' which Hyman (1975) describes as being characteristic of industrial relations. Rather than 'apathy or indifference', present levels of occupational accidents and disease originate from the subordination of safety considerations to competing priorities; as Phillips (1977) has succinctly put it, 'from the interplay of conflicting interests and positively-reached decisions'. Nichols and Armstrong (1973:30) would argue that any fundamental and solidly based improvement in safety and health at work must depend on 'a shift of the power to control production to those who are now getting hurt, the men and women on the shop-floor'. Such utopianism is unrelated to the current realities of workplace industrial relations into which the provisions for safety representation are being grafted. More immediately, it would seem that the use made of the safety representative provisions will depend critically on the beliefs held by the various parties within

an organisation - management, trade union representatives and members - concerning hazard control generally and the representative's functions in particular, which in turn will affect the role for safety representatives which they are prepared to promote and support.

The sources of support and influence which safety representatives are able to mobilize seems a crucial point, for there are few a priori grounds for assuming that employers will invariably be receptive to attempts by trade union representatives to exercise rights conferred by legislation which (a) encroach on traditional spheres of managerial prerogative, and (b) are likely to entail costs of one form or another. As might be expected, there were early indications that such additional costs as are generated by the activities of safety representatives are not being borne willingly, in the 'spirit' of self-regulation.⁴¹ Indeed, the state in its capacity as employer of the public sector (wholly covered for the first time by the 1974 Act) gave the costs involved as the primary reason for the initial delay in implementing the regulations for safety representatives.⁴² As regards the construction industry, there was evidence to suggest that some companies were making arrangements to keep the number of representatives on sites to a minimum and instructing site management to resist representatives' claims for time-off for training and for performing their functions, particularly in relation to inspections, precisely on cost grounds.⁴³ Such a reaction is unsurprising in view of the fact that employers in the construction industry were among the most vociferous in opposing the provisions for safety representation proposed in the various Bills which preceded the 1974 Act. The grounds for this opposition were spelt out in a statement attributed to the President of the National Federation of Building Trades Employers (NFBTE) as being that such provisions would

offer 'increased opportunities for disruptive elements to exploit new areas of industrial life'.⁴⁴

If 'co-operation' and 'voluntary self-generating effort' cannot be relied upon by safety representatives attempting to exercise their statutory rights, then it would seem that the use made of the statutory provisions (i.e. whether they are used at all and if so to what ends) will reflect the relative power and influence of the different parties involved to advance their own interests and definitions as to the appropriate arrangements for workplace safety and forms of worker involvement. Safety representatives have access to two readily identifiable sources of authority and leverage ; (a) the law and the inspectorates and (b) trade union organisation. As such, and as part of the 'organisational context' of self-regulatory activities at the workplace, the final sections of this chapter consider the dominant forms of activity in these spheres and developments related to safety representation.

Legislation and the State Inspectorates

It has long been argued, in trade union and certain legal circles, that the effectiveness of law as a tool in accident prevention has been undermined not so much by the inadequate scope of such law as by its inadequate enforcement.⁴⁵ The solution put forward to the problem of non-compliance with statutory standards is to penalise heavily breaches in the criminal courts, thereby making it unattractive and unprofitable. As the law stands at present, the power to institute prosecution proceedings rests in the hands of the state inspectorates.⁴⁶ Although recourse to the courts has varied over time, as well as varying considerably within and between the different inspectorates,⁴⁷ the criminal sanction of prosecution has

always been rarely invoked relative to the number of known contraventions.⁴⁸ In part, of course, this policy rests on a pragmatic recognition of the limitations of the sanctions at their disposal as enforcement agencies, with shortages of manpower and the limited deterrent effect of the miniscule fines customarily dealt out to convicted' employers discouraging frequent recourse to the courts.⁴⁹ However, in part it also reflects the inspectorates' long standing adherence to a reformist ideology of improving health and safety through ensuring voluntary compliance with statutory norms and standards rather than acting as an industrial police force concerned with the apprehension and subsequent punishment of offenders.⁵⁰ To this end persuasion is viewed as more effective than prosecution on the grounds that most employers are willing to conform with standards once they know what these are and how to do so. In short, the inspectorates' activities have been governed by the tenet that -

...better compliance for most of the time can be secured in most premises if one persuades the occupier of the need for compliance as a matter of good practice, rather than to avoid conflict with the law.⁵¹

With the passage of the 1974 Act the Factory Inspectorate, the largest of the HSE's agencies, has abandoned the traditional inspection policy whereby inspectors attempted to visit periodically every workplace within their constituency. The more selective 'problem-oriented' approach currently operating had been specifically advocated by the Robens Committee as the most effective and useful means of exploiting the professional expertise of inspectors. But the speed with which these recommendations appear to have been implemented is undoubtedly related to the fact that, simply in terms of manning levels, the resources

of the Inspectorate are even more thinly stretched than previously.⁵² Another change introduced with the 1974 Act is that the inspector's battery of 'persuasive pressures' short of prosecution has been augmented by the power to issue formal administrative sanctions : improvement and prohibition notices.⁵³ The Factory Inspectorate has been the most active of the HSE's agencies in utilizing these new notice procedures.⁵⁴ The issuing of such notices should not, however be regarded as a radical policy shift: as with the traditional sanction of criminal prosecution, it appears that the use of notice procedures is considered appropriate only in cases where an employer does not respond voluntarily to advice rather than for the violation of statutory duties per se. In short, the use of notices is reserved for 'employers who are so stubborn, so literal minded, so unimaginative and so ill-organised that they will only act if specific requirements are enforced upon them'.⁵⁵

The provisions for safety representation were drafted with a view to the 'practical contribution that workpeople themselves can make towards safety monitoring', with the related expectation being that safety representatives 'can be valuable channels of communications between industry and the inspection services'.⁵⁶ As regards the latter, it is worth noting here that although the 1974 Act entitled safety representatives to receive information from inspectors,⁵⁷ neither the Act nor the SRSC Regulations provide for a formal link between the activities of safety representatives and the relevant Inspectorate akin to the reporting procedures specified under the Mines and Quarries Act 1954. (The significance attached to this link by workmen's inspectors and by the other parties to colliery safety regulation is discussed later.) As regards safety representatives' activities at the

workplace, it seems somewhat ironical that the legislative provisions on this matter are the least subject to inspectors' enforcement activities. In a directive to all enforcement authorities, the H.S.C. has explicitly stated that 'inspectors should not normally need to enquire into the carrying out of employers' obligations (in relation to the SRSC Regulations) unless trade unions or safety representatives ask them to do so'.⁵⁸ This cautious, reactive stance points clearly to the fact that the HSC is unwilling for inspectors to become even remotely involved in industrial relations issues.⁵⁹ Indeed, the HSC makes this abundantly clear by warning inspectors who have been asked for advice on interpretation of the regulations to 'be conscious of the danger of recommending particular solutions on issues which may later become a matter of dispute between the parties'.

This cautious approach is most pronounced in relation to both representational and consultative arrangements, which the HSC considers as being the province of ACAS rather than that of the HSE. It therefore strongly recommends that any requests for advice or assistance on these matters should be referred to ACAS rather than be dealt with by inspectors themselves. In relation to representative arrangements this recommendation is partly the product of statutory limitations, in that the right to appoint safety representatives and the provisions of the SRSC Regulations are restricted to members of recognised trade unions (as defined in s.30(1) of the Trade Union and Labour Relations Act 1974). Consequently, HSE inspectors are not in a position to even contemplate enforcement action in support of a representative whose employer is refusing to deal with him unless the representative's union is already sufficiently organised at the workplace to have achieved employer recognition. The HSC's concern that requests for advice in relation to

consultative arrangements should similarly be referred to ACAS in hardly surprising, for such action removes inspectors from the potential arena of contention over alleged breaches of an employer's statutory duty to consult safety representatives (s.2(6)). Indeed, the Robens Committee itself acknowledged that this 'is not the sort of duty that would be capable of enforcement in any strict sense, since absence of adequate consultation and participatory arrangements would be a difficult matter to prove' (para.71).⁶⁰ None the less, even in relation to the specifically defined regulations, such as those governing inspections and investigations, the representative who is obstructed in carrying out his functions cannot unequivocally rely on legal redress. This depends on the discretion of the individual inspector and whether or not he considers enforcement appropriate in the particular circumstances. Should he do so, the HSC recommends that he choose 'the method which gives most scope for reflection by the employer' - an improvement notice. However, whether he chooses this or any other method, support for safety representatives should be viewed within the context of the HSC's advice that 'inspectors should not consider enforcement action until they are satisfied that all voluntary means of resolving the dispute have been tried'.⁶¹ 'All voluntary means' refer to the exhaustion of relevant industrial relations procedures.

Given the inspectorates' longstanding preference for a professional and advisory role, it is to be expected that inspectors will be reluctant to act as arbiters in disputes, particularly where they see the matter as being 'essentially one of industrial relations' rather than health and safety, or if workers have already taken industrial action on an issue.⁶² An arbitrational or conciliatory role is, however, implicit in the acceptance

that there will be 'legitimate differences of view' between management and trade unions as to what constitutes 'reasonably practicable' precautions in any particular situation; that⁶³ -

The severity or extent of a potential hazard, the costs and benefits of particular, perhaps alternative preventive measures and the allocation of priorities are all matters of legitimate discussion between managers, safety representatives and inspectors.

Less ambiguously, inspectors can be the source of varying degrees of pressure in relation to an employer's contravention of specific statutory standards (such as those regulating the shoring of trenches or machine guarding). In this sense, however the safety representative who is able to act without fear of victimisation simply replaces the anonymous phonecaller in bringing contraventions to the notice of inspectors. Where he cannot do so, or is obstructed from carrying out his functions in accordance with the SRSC Regulations, the available evidence suggests that HSE inspectors represent a limited source of leverage.

Trade Unions and Shop-floor Organisation

Trade unions have traditionally pursued a number of different avenues in the interests of occupational safety and health.⁶⁴ Since the late 19th century, however, the overwhelming emphasis in most unions has been on compensation rather than prevention; seeking legislative improvements in the accident compensation system and winning damages for their injured members.⁶⁵ The rationale commonly advanced for such 'collateral strategies', as Atherley (1975) calls them, is that injury claims act as

an indirect economic sanction and therefore a source of pressure on employers to eliminate the hazards which give rise to them. Studies on this subject have not, however, supported such beliefs.⁶⁶

The growing interest amongst trade unions from the late 1950s onwards for a more actively preventive role based on representative arrangements at the workplace has been commented on earlier. The level of this interest should not be exaggerated; voting for a resolution at TUC conferences in favour of statutory provisions for safety representatives is not, obviously, synonymous with promotional activity. The fact that, apart from the TUC, only a dozen unions bothered to give evidence to the Robens Committee is probably a more accurate indicator of the level of union interest at that time. The passage of the 1974 Act and the SRSC Regulations provided both a focus and stimulus for more active commitment. This was evidenced, for example, in the educational programme launched by the TUC to promote use of the safety representative provisions and the unprecedented scale of the response by way of demands for training courses, and in the production of guides and handbooks by numerous unions for their members' safety representatives. The changing level of interest has also been reflected in new organisational arrangements. GEMBAT (then the G & MWU) for example, established a network of regional full-time officials whose special concern is with health and safety, and by 1980 thirty unions - as compared with three in 1972 - had national health and safety officers with broad functions distinct from the traditional industrial welfare departments processing members' compensation claims.

Although these changes suggest movement in a more positive direction it is evident that union health and

safety strategies are still at an embryonic stage of development. Consequently, the ability of unions to service their members' representatives with health and safety information, advice and technical support alternative or supplementary to that offered by the HSE is still limited. Given this situation, the relationship between safety representatives and full-time officials is likely to be important in supporting accident prevention activities on the shop-floor. The form and nature of this relationship - a matter which goes beyond rule-book alterations - may be crucial where there is a dispute or where full-time officials are involved in negotiating health and safety agreements.⁶⁷

It is evident that the power representatives may acquire to act in the workplace will depend essentially on the mobilisation of the interests of the workforce exposed to risk.⁶⁸ These interests have traditionally been represented by shop stewards, with various studies on the range of subjects negotiated by stewards indicating that safety matters are 'discussed and settled as standard practice' in most workplaces.⁶⁹ Reflecting this, and the historical preference of unions for a single channel of representation consistent both with prevailing authority structures within unions and with stable bargaining relationships with employers and the state (see Hyman, 1975), many unions have adopted a policy of nominating shop stewards as safety representatives.⁷⁰ It is, however, widely recognised that much of the steward's representational activity on the subject of safety has been of a compensatory nature, in the form of negotiating additional payments for particularly dangerous or 'dirty' work. As David Lewis (1974:103) has pointed out,

'Safety cannot be promoted in such circumstances since the work and risks remain the same and a special

rate for the job merely condones the acceptance of unsafe conditions'.

There is little evidence to date on how the form and nature of the relationship between workplace representatives and their membership constituencies affects the use made of the provisions for safety representation,⁷¹ or - in those situations where the representational functions are divorced - on how the demarcation of 'spheres of influence' between stewards and safety representatives might affect such matters. But it would seem that the use made of the provisions is governed by a 'Catch 22' conundrum: although the regulations were instituted to encourage workers involvement in the regulation of conditions affecting their safety at work, only those union members in already well organised workplaces - arguably the least likely to need or rely on legislative provisions - are likely to be in a sufficiently strong bargaining position to avail themselves fully of the provisions.

As might be expected from the legacy in mining, there were early indications that the use made of the new provisions for safety representation varied considerably within and between industries. A survey conducted by the HSE a year after the SRSC Regulations came into effect indicated that workplaces where safety representatives had been appointed were in a minority overall (17%) and that appointments were concentrated in large workplaces.⁷² In the construction industry the take-up rate in the appointment of safety representatives was reported as having been negligible, lower than in any other major industry apart from agriculture. The preponderance of small firms in construction, associated with low levels of union recognition, was noted by the HSE as being 'one likely factor' accounting for this low take-up rate.

Apart from this, and general statements to the effect that improvement depends upon 'a fundamental change of attitudes' and the unions playing 'a more positive role',⁷³ there has been little analysis concerned with examining the myriad influences affecting the use made of the new provisions on construction sites. Effective action designed to promote the development of safety representation would appear to depend upon a realistic appreciation of such factors.

CONCLUSIONS.

The generalization of statutory rights to safety representation beyond the confines of mining with the HSW Act 1974 and the SRSC Regulations was no more the product of a mechanistic recognition of the need of change on the part of 'some abstract rule-making force' (Lewis, 1976) than the genesis of the traditional framework of protective legislation had been more than a century earlier. Rather, the motive force for these recent policy innovations, as with an interest in participative schemes relating to various aspects of workplace regulation, stemmed from the changing social and economic conditions of the late 1960s and its offshoot in terms of the trend away from the tradition of legal abstentionism in British industrial relations which was gathering pace at the time.

It has been noted in this chapter that the philosophy of self-regulation embodied in the new legal and administrative framework for occupational hazard control represents, in many respects, a re-assertion of voluntaristic principles. Yet there appear to be few a priori grounds for assuming that 'self-regulation' will produce significantly more in the way of occupational hazard control than the voluntary component of traditional

approaches to accident prevention. If present levels of occupational accidents and disease owe less to 'apathy' than to the routine subordination of safety considerations to competing priorities, then appropriate preventive strategies cannot be expected to emerge out of a 'natural identity of interests' on the part of all concerned to avoid work-related deaths, injuries and ill-health. As such, the use made of the provisions for safety representation would appear to depend on the beliefs held by the various parties in an organisation - management, workpeople and shopfloor representatives - concerning hazard control and appropriate forms of worker's involvement in this sphere, and the relative power and influence each is able to mobilize in promoting these definitions. In both this and the preceding chapter the issue of support has thus emerged as a key theme to be explored. In general terms it has been argued that the use made of the statutory rights to safety representation will be affected in the first instance by employers' reactions and managerial receptivity to the concept of worker representation on safety matters. The law and the inspectorates, and trade union organisation have also been commented upon as readily identifiable sources of legitimacy and leverage to which safety representatives have access in attempting to act on their statutory rights. Although particular sections of the trade union movement were active in campaigning for such rights to safety representation it appears that, as with the miners' unions in the previous century, trade union activity in this sphere has followed - rather than pre-dates - the passage of the 1974 Act. To date this activity has been evident at national level, particularly in the new national consultative safety committees, but at shopfloor level the apparently limited take-up rate of the new provisions for safety representatives would seem to mirror the early use of such rights in mining in being patchy

and uneven.

Having sketched the historical background, premises, and general 'organisational context' of the provisions for safety representation, the following chapter sets out the research approach and methods adopted to study the use made of such provisions in practice in mining and construction.

CHAPTER 4

RESEARCH APPROACH AND METHODS

RESEARCH APPROACH AND METHODS

This study of safety representatives was planned amid the debate and activity which surrounded the implementation of the SRSC Regulations in October 1978. The focus of the research emerged with the realization that although the new, universal rights to safety representation were modelled largely on the only precedent in the U.K., the arrangements for workmen's inspectors in mining, little is known about existing practices at collieries and virtually nothing of the opinions of those directly involved at local level as to the value of these representational arrangements. Moreover, early evidence concerning the appointment of trade union safety representatives under the provisions of the SRSC Regulations suggested that the impact of the national level policy debate on the symbolic and instrumental significance of these rights has been negligible in industries like construction. Fieldwork was undertaken with the object of providing a descriptive analysis of established arrangements for safety representation in coal mining and the factors impeding use of the new provisions for safety representation in the radically different organisational setting of the construction industry's private sector.

Following preliminary research, the first and main phase of the fieldwork was conducted in the Scottish coalfields between September 1980 and November 1981, with the smaller, complementary survey for the construction project being conducted in early 1982. In-depth interviews constituted the primary means of data collection and the projects involved those identified as key actors : HSE inspectors, trade union full-time officials, workplace union representatives, management representatives and, in mining, supervisors and workmen. 112 interviews were conducted for the mining study, 102 of which were with

informants drawn from three collieries, and the construction survey involved interviews with 24 informants. This chapter reviews these main stages of the research and details the characteristics of the sample frames, the cases and informants selected, and the data collection techniques employed.

PRELIMINARY RESEARCH AND THE GUIDELINES

The basic guidelines employed in planning this research were that the use made of discretionary statutory rights to safety representation and the contribution of these representatives to the making and monitoring of self-regulating systems of occupational hazard control cannot readily be divorced from the organisational and regulatory environments within which the provisions are being grafted. Indeed, in reviewing the large and growing body of research on participative schemes, Loveridge (1980) has pointed to the importance of a conceptual framework which takes into account 'the interaction between structure and belief' in affecting the willingness and ability of actors to participate in management decision-making.¹ An influential body of literature on industrial relations research has highlighted similar themes and pointed to the significance of structural changes in product and labour markets, the impact of changes in corporate strategy and the importance of employment policies in shaping the forms and nature of workplace industrial relations (see, for example, Hyman, 1975; Purcell, 1983). Stemming essentially from the broadening scope and increasingly fragmented subject matter of industrial relations research, the complex conceptual and theoretical problems of linkages and the associated critique of methods and tools of data collection have been the subject of a number of analytic reviews (see Bain and Clegg, 1974; cf. Winchester, 1983). While it is important

to be aware of developments in theory and the tensions engendered by questions of appropriate levels of analysis, this study is concerned specifically with questions of descriptive discovery, and the methods and techniques have been selected accordingly.

Preparatory work undertaken for this study drew on a range of data sources. Desk research was an important component, mainly as a means of familiarization with established bodies of theory and research evidence relating to occupational health and safety in disciplines as disparate as industrial psychology and labour law. It was also an essential preliminary in understanding the form and character of existing organisational arrangements for safety regulation in mining and construction. Yet the nature of published information on safety provides a somewhat lopsided picture. On the one hand, volumes of statistical and technical data on the health and safety risks of mining produced by the Mines Inspectorate provide source material on the changing magnitude and dimensions of the problem of occupational hazard control since nationalisation. On the other, in contrast with the more recent publications by the HMF, the Mines Inspectorate's reports have persisted with traditional reticence to discuss the Inspectorate's policy and, written largely for the initiated within the industry, provide scant information on organisational matters.

The most detailed study of developments in safety regulation in mining per se is that produced by Bryan (1975). However, this is essentially a chronological description of changes in mining legislation and in the structure and composition of the Inspectorate, written from the fairly uncritical perspective of a former Chief Inspector of Mines. This work makes only passing reference - in a single paragraph - to the existence of statutory rights to safety representation under the M&Q Act 1954. A review of the volumes written on the economic and labour history of mining since nationalisation and the literature on industrial relations did not reveal a great deal more. References to safety tend to focus on flash-points; a cataloguing of disasters and the details of confrontations between the NUM and the NCB over questions of liability and compensation (see, for example, Moffat, 1965; Allen, 1981). Alternatively, as in McCormick's analysis of industrial relations in mining, the attention given to safety focusses on accident rates and associated absenteeism as an index of individual conflict, much on the lines of the 'work retreatism' theories of causation favoured by the Tavistock school of industrial psychologists.² Although much less acute than in mining, similar problems arising from the 'accidental' character of research interest in occupational health and safety were experienced in collating information about safety regulation in construction.³

Given the academic time-lag between policy developments and the publication of research literature, considerable reliance was placed on more direct means of obtaining information on existing regulatory practices and recent developments in the arrangements for occupational hazard control in mining and construction. Internally distributed publications and unpublished documentary data were obtained from a number of organisations, notably the HSE's policy

branches, the NUM and other unions. Much useful oral evidence was also obtained through 'fact-finding' interviews and informal discussions with specialists and experts employed in a wide range of organisations. This preparatory fieldwork included interviews with :

- National health and safety officers, research officers and other full-time officials from various unions.
- TUC staff and health and safety tutors involved in the design, administration and teaching of courses for safety representatives.
- Academics responsible for the design and teaching of induction courses for HMEI inspectors.
- Researchers who have published and/or are currently working on projects in the field of health and safety (see particularly W.G. Carson, A.R. Hale, and P.B. Beaumont).⁴
- In addition, either as an observer or contributor, numerous meetings held by various professional and voluntary organisations were attended, a number of disparate workplaces were visited in the company of trade union or managerial informants contacted, as well as exhibitions - notably the Chatterly - Whitfield Mining Museum.⁵

Decisions concerning the selection of informants and methods were made on the basis of this preliminary research. The exploratory nature of the study and the limited resources available meant that the approach adopted had to be highly selective. Maximum yield in terms of insight and consistency was thought to be derived from interviewing a representative cross-section of a limited number of parties rather than either focussing solely on safety representatives or attempting scattered coverage of the multitude of organisations and interest groups involved in safety regulation at mines and on private sector

construction sites. Previous analysis had identified HSE inspectors and trade union full-time officials as key actors to be included in the survey in that, by virtue of their respective positions and functions, these parties represent sources of authority - legitimacy and leverage - external to the worksite to whom safety representatives have access. These informants also represent valuable sources of information concerning existing arrangements and the impact of the provisions for safety representation. The other main target groups were (a) trade union appointed safety representatives and, where the roles were divided, shop stewards; (b) management representatives drawn primarily from those employed at establishment level as safety specialists and line managers.

The objective of the interviews was to systematically explore informants attitudes and perceptions concerning safety and the role of union safety representatives. A flexible loosely structured interviewing method, using a composite topic list and subsidiary list of probes, was more suited to the exploratory nature of the project than a pre-coded questionnaire format. The topic list was developed on the basis of preliminary research, through the experience of the preparatory fieldwork and that gained through teaching on TUC general and sector courses for safety representatives.⁶ Topics covered included informants personal histories, the nature of their jobs, their relations with key parties, and the themes of accident causation, the appropriateness of various hazard control strategies, and their views as to the requirements for effective action on the part of safety representatives. While the same basic questions would be asked in each interview, the wording and the sequence in which topics were covered would vary. The point was to begin each topic with general questions and to follow up the informant's initial response with more specific questions and probes

for examples which would get beyond generalisations and surface rationalisations. Supervision of an undergraduate's final year project offered the opportunity for a pilot study, and the composite topic list and subsidiary checklist of probes was used in the 21 interviews conducted for this case study of safety representation at a small Scottish colliery.⁷

The sampling procedures used differed between mining and construction. As regards the former, the corporate structure and institutionalised nature of trade union organisation and representational arrangements provides a defined frame for drawing both managerial informants at Area level and a representative sample of the target groups at colliery level. Accordingly, a comparative case study approach was considered the most useful means of studying established arrangements for safety representation at NCB mines in Scotland. Apart from the inherent problems of selecting 'representative' companies and sites in the fluid and fragmented context of the construction industry's private sector, it was decided that considerably less was to be gained from an establishment based approach in a study of the impact of the new provisions for safety representation. Informants were therefore selected according to their association with a particular union (UCATT) and employers' federation (the Scottish Building Employers' Federation, SBEF).

These procedures and the profiles of informants are briefly outlined next, first in relation to the mining study and then for the construction project.

MINING : THE CASES AND THE INFORMANTS

The Collieries.

Coal mines operated by the NCB in Scotland are commonly grouped as 'high-cost - low productivity' units and the Scottish miners are characterized collectively as being amongst the most militant in the U.K. Yet considerable heterogeneity exists within as well as between the NCBs 12 Areas. There are, for example, significant variations between Scottish pits in terms of geological conditions, technology, age, manning levels, output, productivity and prospects. Moreover, the reverberations of local variations in the development of mining and union organisation persist to date. Such structural and organisational variables affect not only safety performance, but also 'pit culture' and workplace industrial relations.⁸ It is therefore reasonable to assume that although detailed provisions governing the appointment and functions of workmen's inspectors are set out in uniform statutory provisions and covered by national agreement, possibly the arrangements themselves and probably the manner in which they are acted on will vary at local level. For these reasons, maximum yield in terms of insight into how mineworkers' representatives participate in the regulation of safety and health at their workplaces was thought to be derived from studying a cross-section of collieries rather than focussing on a single mine, or mines with similar structural characteristics.⁹

When the study was initiated in September 1980 there were 19 NCB mines producing coal in the central belt which comprises the Scottish Area. Since four of these were scheduled to close within a matter of months, the sample frame was effectively reduced to 15 collieries.¹⁰

These were classified into broad categories according to size, age, and production capabilities. After a lengthy period of discussion with key persons at Area level three collieries were finally selected for detailed study. The basic characteristics of these units, henceforth referred to as High-Tech, Mid - Colliery and Village Pit, are illustrated in Table 4.1.

Table 4.1 : Colliery Profiles

	Operational date*	Manpower	Output ('000 tonnes)
High-Tech	c.1960	Over 1,500	600 - 900
Mid-Colliery	c.1940	500-1,500	300 - 600
Village Pit	c.1900	Less than 500	Under 300

* This excludes the 5-6 year period involved in transforming a green field site into a producing colliery.

It should be noted that access to much of the statistical and other information utilised throughout the research process and clearance to proceed with the study at unit level had been granted on condition of confidentiality. Moreover, the informants interviewed at colliery level were assured anonymity. Consistent with these commitments, and given that detailed statistics relating to individual named units have since been published by the Monopolies and Mergers Commission (Report, 1983), certain descriptive details relating to the selected units have been omitted to avoid identification and colliery profiles outlined here are intentionally general.

Colliery Profiles

High-Tech is one of the most modern and technically sophisticated units in the Area. The depth and incline of the coal measures being worked present unique difficulties in mine engineering. Nonetheless, the location of the mine, access to large workable reserves, and the capital currently being invested in major development projects were seen as guaranteeing the colliery a more secure future than most in the Area. At Mid-Colliery major re-construction work has been carried out since nationalisation. Mining operations are relatively straightforward at this unit and the power-loading equipment used at the coal faces conforms with the norm for the Area. The colliery was well placed in terms of local industrial markets for the quality of coal produced, which is of a lower grade than that mined at either High-Tech or Village Pit, but the recent closure of local manufacturing plants with the recession was seriously affecting this mines's market position. Although designated as a 'long-life' colliery on the basis of known reserves, the economic viability of the pit was in doubt and on this basis future prospects were thought to be rather bleak. Village Pits' prospects were less debatable, for it was generally accepted to be approaching the end of its working life. Sunk in the late 19th century, easily accessible high quality reserves of coal for the domestic (household) market had long since been all but exhausted. As with High-Tech Pit, the bulk of current output goes primarily to power stations for electricity generation. In contrast with the larger pits, however, coal is sent to a nearby colliery to be washed and graded rather than being prepared for despatch on the surface. Investment since vesting date in pit layout and mechanisation has not been as extensive as in larger units. The original wood-lined shaft has been retained and this is too narrow

to accept much of the heavy capital equipment, such as powered supports, now used in mining. The colliery is thus one of the few in the U.K. where prop-and-bar support methods are still being used at the coalface. Both the coal-getting process and the haulage and transport systems at this small pit are, consequently, more labour intensive than the norm.

Previous analysis had identified economic viability as a key factor affecting managerial attitudes to safety and receptivity to safety representation. It is therefore worth noting that in common with the majority of pits in the Area these 3 collieries were, at the time of the survey, operating at a loss. Economic returns, commonly expressed in terms of operating surplus/loss per tonne, can vary quite substantially from year to year according to changes in geological conditions and the quality of seams being mined, the amount of development work being undertaken, and the state of the market. Mid-Colliery exhibited the most marked variations in recent years, fluctuating between surplus and loss, and at the time of the survey was operating at a greater loss per tonne than either of the other two collieries. By contrast, High-Tech and Village Pit had both been making losses for a number of years, with those at High Tech being consistently greater than the borderline losses of the small unit. Nonetheless, despite their diverse structural features, prospects and operating results, it is interesting to note that all 3 collieries are broadly similar in terms of productivity (expressed as saleable output per manshift) and operating costs per tonne.¹¹

In short, the sample of Scottish collieries was selected in such a way as to include units which covered the range in terms of age, size, and production capabilities.

An effort was also made to include units with varying prospects. Although the selection process was not immune from political considerations,¹² High-Tech, Mid - Colliery and Village Pit were generally held to be roughly representative of the various types of colliery in the Area.¹³

The Informants

Virtually all employees at NCB mines are members of recognised trade unions. These are the British Association of Colliery Managers (BACM), the National Association of Colliery Overmen, Deputies and Shotfirers (NACODS), the National Union of Mineworkers (NUM) and organisations affiliated to the latter; the Scottish Colliery Enginemen, Boilermen and Tradesmen's Association (SCEBTA) and the Colliery Officials and Staffs Association (COSA). Under the M&Q Act 1954 only the NUM were eligible to appoint workmen's inspectors, but following a national agreement in 1978 similar rights were extended to the other main colliery unions (NACODS, BACM, and SCEBTA). Those appointed according to the provisions of this agreement as well as the NUM's workmen's inspectors were interviewed. In total, 102 interviews were conducted at the three selected collieries with the following informants :

- 9 line managers, including the colliery managers (CMs) and the BACM members designated as safety representatives (4)
- 2 Safety Engineers (BACM), 5 safety officers and 6 other weekly paid industrial staff (COSA / NACODS) employed as specialists on safety matters.
- 31 branch officials, safety representatives and delegates, appointed by the NUM (13) SCEBTA (10) and NACODS (8).
- A 10% sample of under-officials (32)
- Workmen at Mid-Colliery and Village Pit (17)

To complement this colliery based data interviews were also conducted with the following key actors :

- The NCB's Area Safety Engineers (2);
- The NUM's (Scottish Area) full-time Safety Inspectors (2);
- 6 of the 11 inspectors who constitute the Scottish District of the Mines and Quarries Inspectorate.

With the exception of two specialist inspectors and those concerned solely with quarries (3), all the inspectors in post at the time of the survey were interviewed. That is, the Senior District Inspector, the two principal inspectors and the three basic grade inspectors for mines and quarries.

The colliery studies were conducted on a sequential basis. At each of the selected units preliminary discussions were held with the CM and others concerning the object of the research, access to informants and scheduling of the interview programme. While the arrangements and facilities varied, in all cases the researcher was afforded cordial co-operation and assistance. Interviews with the NCB Area safety engineers and the NUM full-time inspectors were conducted prior to the colliery studies and those with the MQI inspectors once the colliery programme was near completion. With one exception, where an MQI inspector was interviewed on colliery premises, interviews with these parties were conducted at their respective Area Offices and lasted between $1\frac{1}{2}$ - 4 hours. A large number of informal interviews were also conducted with other parties both at Area and colliery level.

In terms of the selection of informants at collieries, given the small number of safety representatives and the convention in mining of appointing one branch official as the principal negotiator it was feasible to interview

all members of this group. At Village Pit the NUM delegate doubled as one of the workmen's inspectors and the SCEBTA delegates at both Village Pit and Mid-Colliery were also safety representatives. These arrangements are discussed in detail in Chapter 6.

The specific nature of statutory requirements concerning the appointment of colliery personnel and the management of productive operations are unique to the industry. (These are examined in Chapter 5.) Interviewing senior management representatives and the safety staff provided a detailed overview of how these requirements are acted on at the three collieries and useful insight into how the arrangements for safety representatives are accommodated within this framework. However, in order to gain a fuller picture of current practices and the relative role and impact of safety representatives, it was decided that the views of those at the base of the elaborate managerial system of safety regulation should also be sought - notably those of under-officials and workmen.

Underofficials, overmen and deputies, are the first line managerial grades with immediate day-to-day supervisory responsibilities for ensuring the safety of men underground and overseeing productive operations. Recruited from amongst the ranks of face-trained miners these officials, represented by NACODS, constitute between 10-12% of the workforce employed underground. Given their functions and their pivotal position between workmen and the higher echelons of colliery management, officials were a readily identifiable group. At all three collieries it was agreed that a 10% sample of underofficials, other than the appointed branch officials, should be included in the survey. Table 4.2 details the composition of those interviewed.

Table 4.2. Under-Officials Interviewed

	High-Tech	Mid-Colliery	Village Pit	Total
Overmen	3 (4)*	- (2)	- (2)	3 (8)
Deputies	17 (18)	9 (10)	3 (4)	29 (32)
	20 (22)	9 (12)	3 (6)	32 (40)

* Bracketted figures indicate cumulative total when NACODS delegates and safety representatives are included.

In order to achieve the greatest possible coverage, every effort was made to ensure that the deputies included in the study were drawn from districts throughout the mines. 30% of those interviewed were responsible for face districts and 70% for districts elsewhere below ground (EBG). The latter covers operations as diverse as roadway drivages/development and salvage through to support services such as haulage and conveyor maintenance. Given that the supervisory ratio is higher in face districts, which account for approximately 50% of all deputies deployed underground, the district criteria used means that the sample drawn is only roughly representative.¹⁴

While it was reasonable to assume that the interviews with under-officials would provide a realistic reflection of 'pit wisdom' concerning safety and safety representation, it was also considered desirable to explore the views of rank-and-file miners. Difficulties on this score were anticipated in view of the complicated arrangements involved in scheduling interviews and the cumulative loss of manhours. In the event it was not possible to schedule interviews with mineworkers at High-Tech, and arrangements were made for only 13 interviews at Mid-Colliery and 4 at Village Pit. Of these, six were employed at production faces, nine EBG, and two on the surface. While the sample

is obviously too small to be regarded as 'representative' in any strict sense, the data obtained systematically through interviews with these informants was a useful supplement to the numerous informal interviews conducted with mineworkers in providing an indication of the opinions of the NUM workmen's inspectors' rank-and-file constituency members.

The interviewing programme at each colliery spanned a period of six to twelve weeks, with the interviews being conducted on surface locations. As the vast majority of those to be included in the survey were normally employed underground, scheduling these interviews was subject to the constraints and logistics of underground operations. It was, for example, wholly impracticable to call a man 'off the job' mid-shift, for in terms of travel time alone it could take a man working on more distant faces as much as an hour and a half to reach the pit bottom - let alone the surface.¹⁵ In order to minimise the loss of manhours most interviews were therefore arranged within a 3 - 4 hour period spanning the change-over of shifts; informants on the day shift were given an 'early line' to come to the surface before the end of their shift and those on the backshift and pieceshift were delayed before they went underground. Apart from being impracticable it was considered unnecessary to interview those working solely on night shifts for, as with the vast majority of employees, most of the informants included in the study worked on all the main shifts by rota.¹⁶ Commensurate with these conditions there were certain time restrictions placed on the duration of interviews, particularly those with underofficials and workmen. With the former the length of interviews varied between 50-90 minutes, and with the latter between 30-45 minutes. In the case of other informants, such as delegates and safety representatives, it was sometimes necessary to arrange two or more meetings to

complete a single interview. These varied between $1\frac{1}{4}$ - $2\frac{1}{2}$ hours.

Observational and informal interviewing methods were used to complement the data obtained through the interviewing programme. The period of time spent at each colliery enabled the researcher to observe the form and content of day-to-day interactions between the various key actors at meetings and elsewhere, as well as providing the opportunity for frequent informal interviews with these people and others. In addition, at all three collieries the safety representatives were accompanied on a routine underground inspection (each lasting a full shift), and managerial representatives were accompanied on inspections of surface installations. At Mid-Colliery arrangements were made to visit a small privately owned mine licensed by the Board, where the 8 men employed came within the constituency of the branch officials based at the NCB mine. Also, as an observer, the researcher was able to attend a day-school organised by the NUM which was attended by approximately 100 branch officials and workmen's inspectors (from NACODS and SCEBTA as well as the NUM) based at units in the Fife, Central and Lothian regions.

CONSTRUCTION : THE SURVEY AND THE INFORMANTS

The survey for the smaller, complementary study of safety representation in construction was confined geographically within the boundaries of the HSE's East Scotland Area. A total of 24 in-depth interviews were conducted with the following informants :

- 5 of the 6 HSE inspectors who constitute the Factory Inspectorate's Construction Group team in the Area;
- 7 UCATT full-time officials, including the Scottish Regional Secretary and 6 of the 8 Regional Organisers

- allocated 'patches' in East Scotland;
- 8 UCATT site representatives normally employed in the private sector;
 - 1 of the 3 Assistant Secretaries employed by the Scottish Building Employers Federation (SBEF);
 - 3 of the 5 safety officers employed by small employers' Safety Groups in the Area.

UCATT was selected in preference to the other unions recruiting in the industry¹⁷ because its membership is comprised solely of construction workers, the vast majority of whom are building trades workers employed in the private sector. As regards the HSE inspectors and UCATT full-time officials, the small numbers involved made it feasible to achieve as near as possible total coverage of these key actors.

Identifying, locating and selecting a cross-section of site-representatives - either safety representatives or those most likely to act as safety representatives (shop stewards) - was evidently problematic. After lengthy consultation with UCATT Regional Organisers (RO's) a pragmatic form of sampling was adopted. Rather than attempting coverage of the entire Area it was decided to focus on two of the RO's constituencies and to use their records of branch officers as the initial sample frame. Since the primary interest was in ascertaining the views of those 'at the sharp end' - i.e. men normally employed on private sector sites - the sample frame was narrowed down to those branches where at least one of the officials matched this criteria. This left 5 of the original total of 22 branches from which all but one of the site representatives were drawn. The exception was a convenor, in stable employment with a private contractor, who acted as secretary to two 'industrial' branches. Although one of these was based in East Scotland both branches were

administered from the Regional Office in Glasgow and had thus fallen outside the original sample frame. However, since the ROs had all referred to this convenor during interviews, commenting on the uniqueness of organisational arrangements in this particular company, it was considered desirable to include him in the survey.

Using the branch as a means of access to site representatives recommended itself on a number of grounds. Firstly, the transience of site activities, the casual nature of employment and the mobility of construction workers rendered the compilation of a site-based sample frame a futile exercise. By contrast the branch represents a stable and readily identifiable unit of union organization which, moreover, has traditionally been regarded as the geographic focus for uniting and dispersed and fragmented labour force. (Postgate (1923), Terry (1982)). Secondly, the characteristics of employment relationships on private sector sites and the low density of union membership casts the committed union member in a key role for, as England has observed, "where it does exist site organisation is often the result of determined militancy on the part of a few". (England, 1979:3). Shop steward studies have documented the fact that such individuals not only tend to identify closely with the larger union rather than with narrow sectional interests, but also tend to be well integrated into their unions' formal organisational structures.¹⁸ Given the documented dependence of members on full-time officials in construction and the relative isolation of stewards on sites (England op cit), it seemed reasonable to assume that site representatives would rely heavily on formal and informal networks of support and information exchange external to the workplace. It was thus considered probable that the rank-and-file individuals most likely to participate actively in site organization and to initiate the provisions for safety representatives would also hold branch office or be regular

attenders at branch meetings and thus known to branch officials. The intention had been to interview any safety representatives I became aware of in this manner as well as the branch officials. However, except for the lone case of a safety representative operating on a private contractors' building site, this anticipated 'snowball-effect' did not occur.¹⁹

The validity of this sampling procedure was borne out by the personal profiles of the branch officials surveyed, for five out of six had acted as shop stewards on sites within the six month period preceding the interviews.²⁰ Moreover, during the course of the interviews it was discovered that of those currently or recently active as stewards four were scheduled to attend a week-end course for safety representatives organized by UCATT although none had been appointed as safety representatives. Thus, while the numbers are small, the site representatives included in this survey constitute a cross-section of active union members; the key figures on private sector sites most likely to utilize the provisions for safety representatives.

As regards the employers' perspective, following correspondence with a number of employers' association and federations, the SBEF (the Scottish counterpart of the National Federation of Building Trades' Employers) was selected as the most suitable employers' equivalent to UCATT. Interviewing the Federations' Assistant Secretary for Industrial Relations provided an interesting general overview of contractors' response to the new provisions, but pursuing this line by interviewing officers of the various federated employers associations was not considered to be particularly productive. Given the predominance of small firms in construction and their relatively poor reputation for safety, greater

insight was thought to be derived from focusing on the Safety Group organizations formed by some of these employers associations for their smaller member firms. Five of the seven groups based in East Scotland were operative at the time of the survey, and three of these safety officers agreed to be interviewed.

The informants interviewed were guaranteed anonymity but in the specific cases of the UCATT Regional Secretary and the SBEF official interviewed, both supplied at their request with transcripts of their own interviews, the offer of anonymity was waived. Disguise is therefore dispensed with in the text when the views of these informants are being cited. The length of interviews varied between $1\frac{1}{4}$ - $5\frac{1}{2}$ hours, with the majority being 2 - 3 hours in duration. As with the mining study, the qualitative data obtained during these interviews was complemented by informal interviews with other parties, site inspection visits (in the company of an HSE inspector), attending a course organised by UCATT for safety representatives, and quantitative and documentary data obtained for a number of organisations.

SUMMARY

This chapter has outlined the approach and methods adopted to study the use made of statutory provisions for safety representation at Scottish collieries and on private sector construction sites. In concluding, a number of points concerning the research findings and the 'generality' of the study should be made. First, although a systematic approach has been attempted, the descriptive analysis presented in the following chapters should not be seen as necessarily applicable to NCB mines in other parts of the country or to the situation in construction generally. Second, exploratory

research of this character is not designed to produce definitive conclusions'. Rather, the significance of this work lies in providing some insight into current practices and arrangements for safety regulation in mining and construction. The findings are of relevance in highlighting particular themes and events of significance within certain political-organisational environments concerning the value of discretionary rights to safety representation and their contribution to self-regulating systems of occupational hazard control. The typicality is thus that of the case.

It should also be appreciated that as with virtually all research of a qualitative character it is, as Batstone et al (1979:16) have pointed out, 'impossible to be totally sure of the "validity" of one's interpretations - although checking with the actors themselves can partially overcome this problem". The flexible, open-ended methods employed in this inquiry enabled the men interviewed to speak their own 'language' and to voice opinions meaningful in their own terms. Conscious effort was made to minimise the researcher's own bias through seeking clarification and checking interpretations with the informants themselves.

Finally, a number of studies have pointed to the changeable nature of 'consciousness' (e.g. Mann, 1973) and to the instability of particular arrangements and forms of organisational behaviour with the turnover of particular role incumbents (see e.g. Parker, 1973; Batstone et al, 1979) and with the 'shocks' or 'crises' stemming from structural and 'environmental' changes, notably in corporate strategy (see, e.g. Ramsay, 1977; Purcell, 1983). The research in mining was undertaken amid the 'shocks' engendered by the NCB's announcement of an accelerated programme of colliery closures in 1981 and the NUM's strike action to block implementation of this plan. It is axiomatic that subsequent developments, particularly the national strike of 1984-5,

have had profound repercussions on industrial relations at all levels within the industry. These recent events together with earlier developments in the mining industry's corporate environment are reviewed in Appendix A (Coal Mining in Britain, 1947-84). Thus, by definition, this study provides a 'snapshot' of arrangements and norms prevalent at a particular point of time.

The research is presented on a case by case basis, first mining (Chapters 5-7) and then construction (Chapters 8-9). The themes and issues to emerge as significant in affecting the use made of discretionary statutory rights to safety representation in diverse political-organisational environments are discussed in Chapter 10.

CHAPTER 5

OCCUPATIONAL HAZARD CONTROL IN MINING : AN OVERVIEW

OCCUPATIONAL HAZARD CONTROL IN MINING : AN OVERVIEW

References to the conditions and hazards peculiar to its underground environment are almost obligatory in the varied literature on coalmining. Indeed, it is this feature of the industry which captures the public imagination and distinguishes the mineworkers as 'a special case' for, as the Court of Inquiry investigating the wage dispute which prompted the national miners' strike in 1972 put it,

Other occupations have their dangers and inconveniences, but we know of none in which there is such a combination of dangers, health hazards, (and) discomfort in working conditions.

Prior to the HSW Act 1974 and the SRSC Regulations, mineworkers were similarly 'a special case' in terms of their long-standing statutory rights to safety representation. Interestingly, although the arrangements for workers' involvement in mine safety regulation formed the 'model' for those contained in the new, universal legislation, it was on similar 'special case' grounds that the mining industry's impressive parliamentary lobby was being mobilized in the early 1970s to gain exemption from the HSW Bills then being discussed. These moves appear to have been prompted in the main by a perceived threat to the Mines Inspectorate's autonomy and anxieties as to the attendant disruption in regulatory practices posed by the creation of a central authority responsible for the drafting of all standards and for the activities of all inspectorates. In the event the MQI came under the jurisdiction of the HSE, and by most accounts the anticipated disruption has yet to materialize.¹ But the industry sought and gained exemption from the SRSC Regulations, with (essentially marginal) adjustments to bring

established arrangements in line with the new law on matters of representation, payment and training having been the subject of voluntary agreement within the industry. The point is that these instances of concerted opposition to a perceived threat of disruption clearly demonstrate the interests of those within the higher echelons of the principal organisations involved - the NCB, the NUM and the Mines Inspectorate - in maintaining the *modus operandi* of the industry's established machinery for safety regulation. This chapter is the first of three which aim to provide a descriptive analysis of this organisational machinery in terms of the use made of the statutory rights to safety representation at Scottish collieries, and the contribution of miners' safety representatives to 'self-regulating' systems of occupational hazard control.

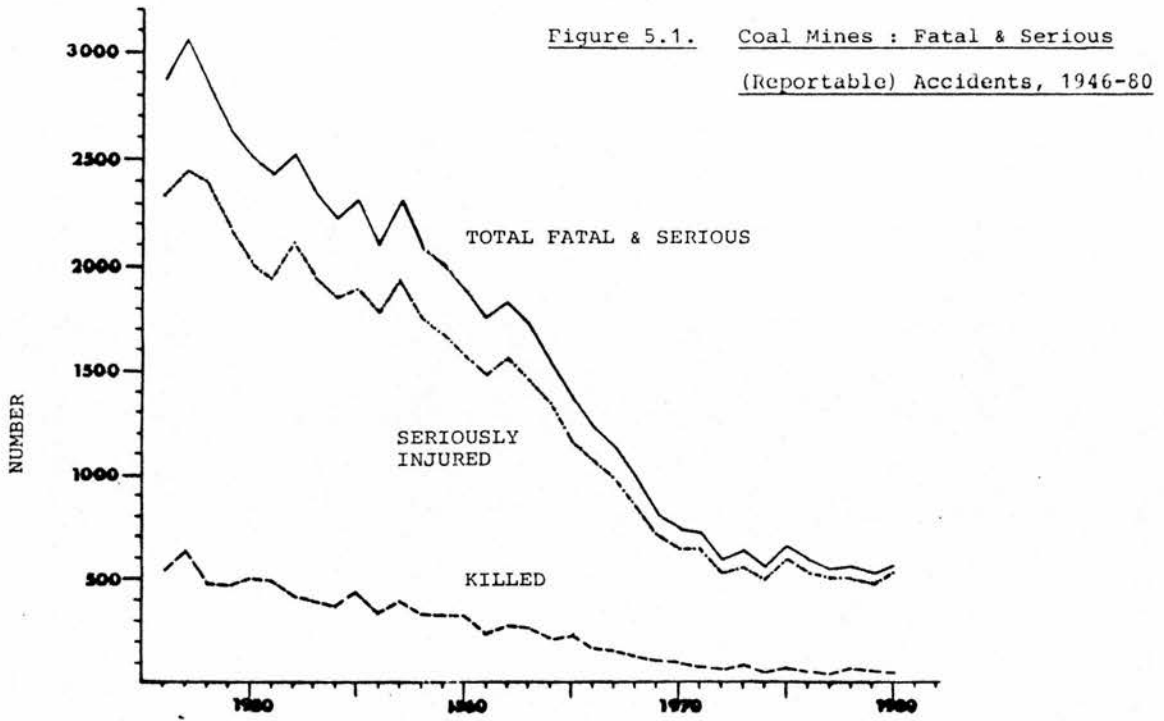
It was pointed out in Chapter 2 that the statutory rights to safety representation in mining were not widely utilized until after the industry's transition to public ownership. It is therefore appropriate to begin this chapter by reviewing the industry's 'performance' in terms of changes in its health and safety record since nationalisation. Attention is then given to the organisational framework of the reputedly 'very close co-operation between mine managers, the Mines' Inspectorate, and workmen's inspectors' (Robens, 1972:para.60). Drawing on the survey data collected for this study the distinctive traits of mine regulation are examined, with particular reference to the manner in which the Inspectorate operates and the characteristics of the managerial control structure. Consideration is then given to the changing features of the industrial relations environment which appear to have been instrumental to the successful accommodation of arrangements for workers involvement in mine safety regulation.

THE RECORD

Safety Performance

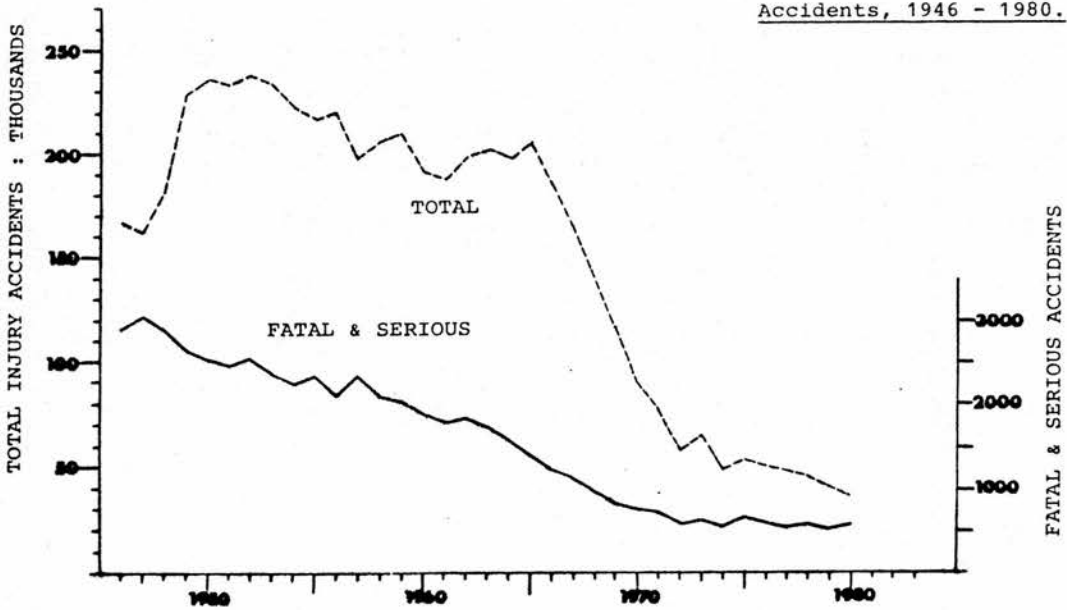
Figures 5.1 to 5.3 illustrate the changing magnitude and trends in the mining industry's accident record since nationalisation. Figures 5.1 and 5.2 indicate the changes which have taken place in absolute terms : a dramatic reduction in the number of fatal and serious injury accidents, levelling off in the 1970s, compared with a marked rise and subsequent fall in the total number of injury accidents over the last 30 years. But although the reduction in the overall toll of occupational accidents has been dramatic, the risk of sudden death or injury to those employed in coal mining has not diminished as radically or with the same consistency. This is illustrated in Figure 5.3, which charts the industry's safety record in terms of accidents per 100,000 manshifts. These incidence rates, by taking into account changes in the size of the workforce and in the number of manhours worked, provide a more realistic basis than the number of accidents for assessing relative changes in risk exposure and the industry's safety performance. Accordingly, these rates show an apparent hiatus between 1957-67 in an otherwise fluctuating, but discernible downward trend since nationalisation in the frequency of fatal and serious injury accidents. This hiatus in fatal and serious accident rates is paralleled by a more marked and prolonged upswing in the frequency of all injury accidents. Indeed, changes in the incidence of all injury accidents show a remarkably symmetrical pattern - rising rapidly after 1957, peaking in 1965, and only regaining the level of the first decade of nationalisation in the 1970s.

The emphasis placed upon accident statistics as a measure of safety performance is conventionally related to the severity of any resulting injury.² Thus, accidents



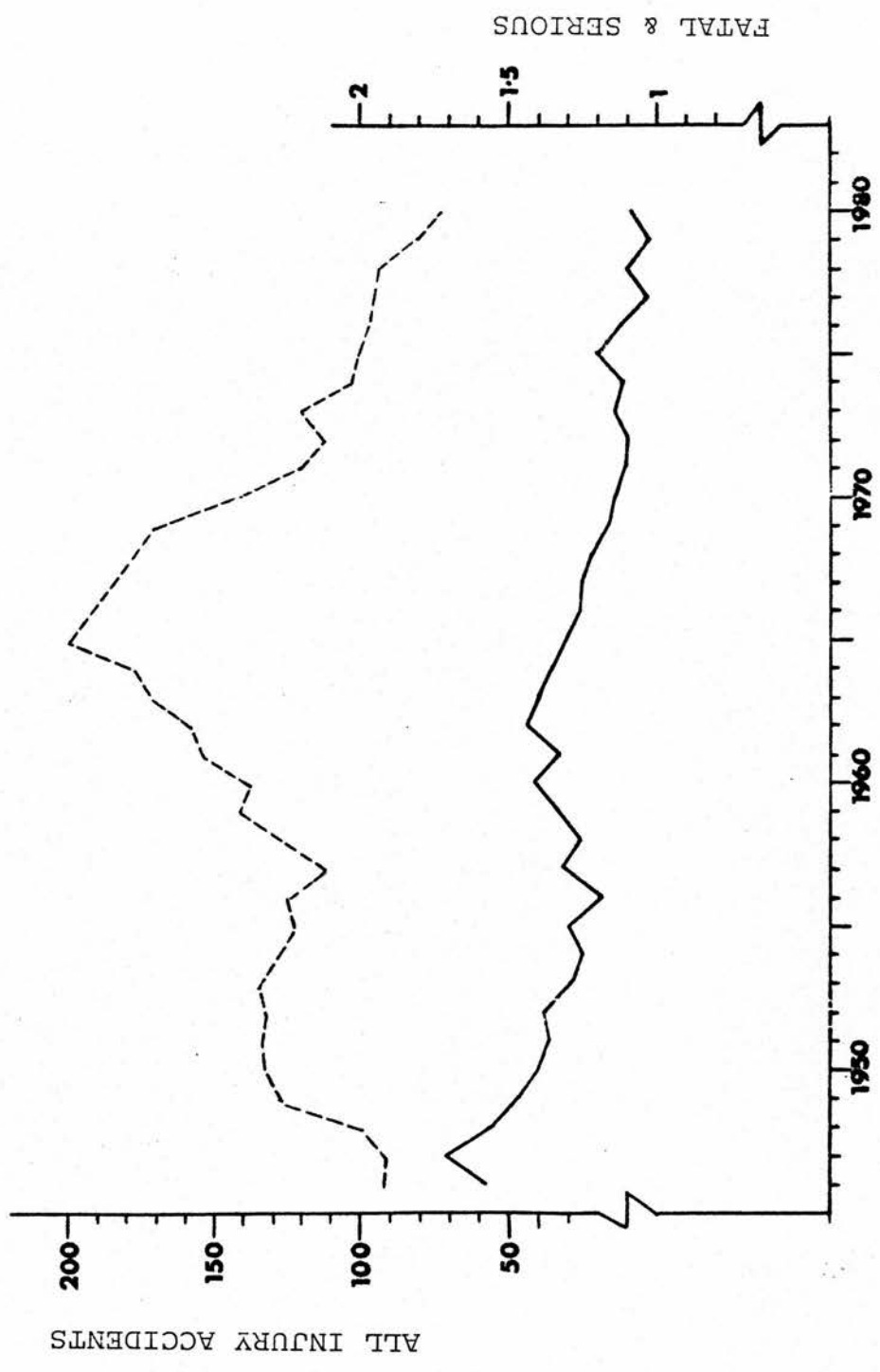
Source : Annual Reports of H.M. Chief Inspector of Mines.

Figure 5.2. Coal Mines : All Recorded Injury Accidents, 1946 - 1980.



Source : Annual Reports, of H.M. Chief Inspector of Mines,

Figure 5.3. Coal Mines : Accident Rates Per 100,000 Manshifts, 1946 - 1980.



Source : Annual Reports of H.M. Chief Inspector of Mines.

which result in fatal and/or serious injuries are regarded as reliable indicators and the Mines Inspectorate devotes its annual reports to a detailed analysis of such occurrences. These accidents are reportable under the mines safety legislation.³ The term 'serious injury' has been strictly defined by the Mines Inspectorate as involving - fracture to the skull, spine or limbs; dislocations of a similar level of severity; amputations of a hand or foot, or 'substantial part thereof'; the loss of an eye; and other severe injuries, such as burns, which are 'likely to endanger life, cause permanent incapacity for work or substantially impair efficiency'.⁴ It is apparent that accidents which may not be reportable under this restrictive definition (e.g. the loss of a finger or a head injury which does not involve a skull fracture, as well as less severe injuries such as cuts and sprains) may nonetheless involve bodily injury and/or disfigurement which result in extended or repeated periods of incapacity and affect a man's working and social life. Records of 'over 3 day injuries' indicate as much, in that the average period of incapacity associated with this catch-all category of 'non-reportable' accidents in mining during the 1950s and 1960s was about four weeks. (see Williams, 1960:32-3; Harper et al, 1971). Yet these accidents merit no more than passing reference in the Mines Inspectorate's reports; an omission which reflects the established tendency to attribute changes in the statistics of over 3-day, or 'minor', accidents to factors unrelated to safety per se, notably to variables associated with reporting behaviour.⁵ However, even allowing for the intervention of such social variables, the convergence of trends in fatal and serious accidents and in 'non-reportable' accidents during the 1970s reinforces this writers' view that the toll of 'minor' accidents does provide a fairly good indication of changes in safety conditions in the mining industry.⁶

Changing Patterns of Activity and Accidents

Williams (1960:164) expressed the conviction that the use made of the provisions for workmen's inspectors demonstrated 'the influence which workers themselves can have in stopping unsafe working conditions'. In practice, the impact of workmen's inspectors activities on the industry's accident record is not readily discernible. Any possible effects are masked by the fact that the apparent upsurge of interest in utilizing the provisions for workmen's inspectors, which occurred in collieries throughout the coalfields during the late 1950s and early 1960s (see Figures 2.1 and 2.2), took place at a time when the industry was undergoing fundamental structural and organisational changes at a pace unprecedented since the emergence of large-scale mining in the mid-decades of the last century.⁷ The effects of these developments on the take-up rate of the provisions for workmen's inspectors are considered subsequently. For the purposes of this section it is clear that explanation for the industry's safety record lies primarily with these 'intervening variables' - the changes which have occurred since nationalisation in the mining 'environment' and in the extractive process itself.

The primary developments affecting the NCB's corporate strategy are set out in some detail in Part 1 of Appendix A. (Coal Mining in Britain, 1947-84). In brief, the industry can be seen to have passed through three distinct phases since Vesting Day in 1947. The first coincides with the first decade of nationalisation, when the NCB embarked on a programme of rationalisation and re-construction to meet the buoyant post-war market for coal. The second phase, associated with the displacement of coal's traditional monopoly of the energy market by oil and other competing fuels, dates from 1957 to 1972-3. Notable features of this

period are the rapid contraction of the industry, beginning in the late 1950s, and - as the benefits of investment in the previous decade were coming to fruition - the rapid mechanisation of the mining process with the introduction of power-loading equipment. The third phase is associated with changes in the world energy market triggered by the Middle East wars and rising oil prices. These developments re-vitalised coal's future prospects and its share of the inland energy market stabilized in the early 1970s at around 35%. But while the industry embarked on a reconstruction programme, the underlying trend of falling sales continued with the onset of general economic recession. Recent changes in government policy towards the industry has exacerbated market and financial problems, and created powerful pressures for further contraction.

In effect, albeit varying in pace over different periods, the post-nationalisation history of mining is one of almost uninterrupted contraction; in the interests of rationalization and modernisation, in response to coal's declining market share, and in response to the shrinking market of a recession-ridden economy. In broad terms, the extent of the industry's transformation can be illustrated by the fact that between Vesting Day in 1947 and mid-1982 there have been 815 colliery closures, resulting in a net drop in the number of mines operated by the NCB from 980 to 200. Job losses due to closures, the rundown of production at continuing collieries, the effects of mechanisation and other labour-saving productivity improvements resulted in a net reduction in the size of the industrial workforce from 696,700 to 212,800 over the same period.⁸

In light of the above, it is evident that the absolute reduction in the industry's fatal and serious accident

record can largely be explained in terms of the industry's declining economic activity levels - and the attendant absolute reduction in the numbers exposed to risk. In terms of risk exposure per se, illustrated in terms of accident incidence rates, the rapid transformation of the work process through mechanisation during the late 1950s and the 1960s would appear to be the single most significant variable accounting for the deterioration and subsequent improvement of the industry's safety record over this period.

From the late 1950s onwards, new hazards were being introduced into the mining environment with mechanisation - notably those associated with manhandling heavy, bulky power-loading equipment along the confined spaces of underground roadways for installation at faces, and those associated with the actual use of such machinery in cramped face conditions. In addition, the accelerating rate at which coal was being worked exacerbated the traditional strata stability hazards at the face. The need to handle the increasing volume of coal being produced, frequently on antiquated haulage and transport systems, also exacerbated the risks of employment elsewhere below ground (EBG). The industry's worsening accident record began to change with the introduction of hydraulically powered, self-advancing roof supports - an innovation which not only transformed the primary cycle of coal-getting operations into a continuous, integrated process, but also provided faceworkers with a protective canopy of steel. First introduced in 1963, powered supports were being used in most pits by 1971-2. The effect was almost immediate in that the escalating rate of accidents from falls of ground at the face, traditionally the largest of all the major causal categories, halted and thereafter diminished radically. As a result, since 1966 'haulage and transport'

has displaced 'falls of ground' as the largest single causal category.⁹ It is generally acknowledged within the industry that no single technical innovation before or since has had a similarly dramatic spin-off in terms of safety.¹⁰ Yet it is worth noting that although there have been significant changes in the risks associated with face work, and in the proportion of the workforce exposed to such risks, this is still the site of the majority of all fatal and serious injury accidents in mines.¹¹

Other changes taking place in the mining environment during this period are likely to have had an affect on accident rates. For example, with the contraction of the industry men were being transferred from pit to pit under redeployment schemes throughout the 1960s. Thus, a significant proportion of miners were having to adapt to unfamiliar surroundings as well as to changes in methods of work. In addition, the profile of the labour force was ageing, for it was the younger more mobile men - in the prime age group (25-40) of experienced, face-trained miners - who left the pits in the massive unplanned exodus of the 1960s.¹² Factors such as these have frequently been linked with high accident rates in what Nichols (1975) refers to as 'forensic studies' of causation; those which focus on the personal attributes and specific behavioural traits of accident victims. On the other hand, changes in 'environmental' variables such as the eradication of piecework payment systems - a process which began in earnest for ancillary workers with the Day Wage Agreement of 1955 and culminated with the transition to time-rates for faceworkers with the National Power-Loading Agreement of 1966 - have conventionally been linked with a reduction in accidents. (See Eldridge and Kaye, 1973; Wrench, 1972). The fact that all the changes mentioned spanned the rise and fall in accident

rates or coincided with major technical innovations (e.g. the NPLA took effect alongside the introduction of powered supports) suggests that any affects which such factors had was supplementary to those wrought by technical change.

The magnitude and severity of the accident toll together with the character of the safety hazards associated with mining have changed significantly with the introduction of new technologies. Yet it is the persistence of the traditional risks of major disasters together with the folk memories of such occurrences - underground fires, explosions and inrushes - which is the political kernel of mine safety. Both the incidence of such disasters and the toll of death and injury associated with those which do occur has diminished radically over the last two decades. In part this is obviously due to the absolute reduction in risk exposure associated with the contraction of the industry. In part it is also due to the implementation of 'remedial' or 'post-accident' measures as well as preventive measures generally : (a) those designed to contain the damage of any occurrence,¹³ and (b) improvements in the means of getting trapped and injured men out of the pits.¹⁴ The impact of disasters in terms of the industry's safety record clearly varies from year to year. In 1979, for example, 10 of the 42 men killed in coal mines died in an explosion at Golborne colliery in Lancashire, whereas in 1973, for example, there were three disasters which between them killed 30 of the 80 men who died in mine accidents that year : eighteen at Markham in Derbyshire when a pit cage plunged to the bottom of a 1,400 foot shaft; seven at the Lofthouse colliery in Yorkshire when part of the pit was flooded; and five at the steep-seamed Seafield colliery in Fife by an extensive fall of roof. Grim listings of this kind have served for more than a century to focus attention on particular hazards of mining.¹⁵ Yet the industry's safety record has exhibited a similarly consistent

pattern in the sense that the toll of death and injury arising year-in and year-out from mundane safety risks far exceeds that resulting from the periodic underground disasters.

Delayed Effects : Health Hazards

Death, disablement, and sickness arising from occupational health hazards has rarely merited the media coverage accorded to disasters, or even the column-inches in local newspapers which individual fatalities in mines sometimes attract.¹⁶ Yet, mortality rates indicate that the number of men who die every year as a result of pneumoconiosis contracted in coal mines far exceeds those fatally injured in mining accidents, and thousands of others suffer varying degrees of disability arising from this disease alone. In the five year period 1975-79, for example, it was officially recorded that 2,969 men died from pneumoconiosis contracted in mines and quarries.¹⁷ During the same five years, 2,812 new cases attributable to coal mining alone were diagnosed by Pneumoconiosis Medical Panels.¹⁸ These men were added to the register of 'pneumoconiotics' eligible to receive 'benefits' under the various compensation schemes covering those who contracted the disease in coal mines. The latter indicates an appalling legacy, for over this period (1975-9) there was an annual average of about 3,000 men registered as suffering from pneumoconiosis. While respiratory diseases are the principal risk, coal mining also contributes a disproportionately high number of those registered as suffering from other occupational diseases. Thus in 1978/79, for example, although coal miners constituted less than 1.5% of the working population they accounted for 10.6% (1,161) of all those 'qualifying' to receive injury benefit for incapacity due to prescribed occupational diseases other than pneumoconiosis and byssinosis.¹⁹

It is generally acknowledged that available records of occupational ill-health amongst mineworkers, as with all such statistics, underestimate the scale and dimensions of the problem and provide at best only a rough guide as to the effectiveness of past and present preventive measures. This is due to the fact that the latency period involved between exposure to harmful agents at work and the manifestation of disease or ill-health give rise to the problems of a persons incapacity being (a) correctly diagnosed, (b) recognized as occupationally related, and (c) recorded as such. A complex interaction of medical, social and political factors thus affects not only the statistics, but also the time-lag between the identification of a substance as injurious to health, and the introduction of control measures.²⁰ Moreover, as with safety risks, the health risks of a particular workplace or process can be substantially affected by technical change - a factor which further complicates the identification-control process.

In the case of respiratory diseases, for example, while silica dust has long been recognized as a causal agent, recognition of the relationship between coal dust and pneumoconiosis has had a chequered history.²¹ Reflecting this, control provisions in the 1911 Act related solely to rock dust, and as recently as 1938 the suppression of coal-dust during mining operations was still being considered solely as a means of reducing the risks of explosions.²² The significance of coal dust as a causal agent in respiratory disease has since been recognised, for it has been belatedly appreciated that while improvements in mine ventilation systems had a positive spin-off in terms of reducing the incidence of all types of lung disease amongst mineworkers, the gains from better ventilation were increasingly being offset during the inter-war years by the higher concentrations of

coal dust produced at the face along with the introduction of coal-cutting machinery. With an average latency period of thirty years, the results of having treated this by-product as a 'nuisance dust' rather than a hazard were manifestly obvious in the 1950s - with an annual average of about 4,000 new cases of pneumoconiosis being diagnosed among miners and ex-miners. A wide variety of preventive and collateral control measures have subsequently been introduced.²³ Nonetheless, it is generally appreciated that the introduction of power-loading equipment, the subsequent development of ever-more sophisticated and powerful shearers, and the mechanisation of other operations such as road-ripping have increased the hazards of respirable dust. Suppression techniques are thus having to be continually developed in order to keep pace and maintain concentrations below any given level.²⁴

The reduction in the mining workforce and in the proportion of that workforce exposed to the highest concentrations of air-borne dust at the face will undoubtedly mean that the number of new cases of pneumoconiosis diagnosed over the next twenty to thirty years will show a marked reduction. But whether the control measures currently being implemented are sufficient to offset or diminish the risk of miners' contracting this disease remains an open question. The Mines Inspectorate's annual reports, up until 1978, provided statistics on the incidence of new cases of pneumoconiosis diagnosed per 100,000 manshifts worked underground. Obviously this is a crude measure, but it does indicate that if the rate of new cases diagnosed in the mid-1970s persists, a man entering mining then and contemplating an average working life of about 10,000 manshifts has a 1-in-7 chance of contracting the disease. This compares, again assuming that current rates persist, with a 1-in-100 chance of suffering a fatal accident and a 1-in-10 chance of a serious injury accident.

The records of most of the prescribed industrial diseases other than pneumoconiosis which afflict mine-workers have shown an improvement since nationalisation.²⁵ The extent to which this reflects the implementation of control measures and/or changes in the work process and attendant innovations is an endlessly debatable point. For example, the incidence of the 'beat' group of diseases, associated with physically arduous conditions and methods of work, only reduced significantly during the 1960s; with the advent of power-loading, as well as with the increasing range of knee-pads and other protective gear being made available to miners. Similarly, the extended use of mains lighting underground and other lighting innovations accompanied mechanisation. As a result, the incidence of miners' nystagmus (an eye disease related to poor lighting) diminished dramatically from the late 1950s onwards, and new cases are now rare. The incidence of dermatitis has shown little change despite improvements in welfare facilities such as pit-head baths and the introduction of work-wear schemes. The explanation commonly proffered for this is the greater exposure to oils and greases attendant on mechanisation.

There are, of course, other health risks involving sickness or disability for which records are not available. For example : the incidence of arthritis from working in damp or water-logged conditions; the problems associated with heat stress; damage to hearing as the use of increasingly powerful equipment in confined spaces underground has introduced noise hazards; and so on. But, as the Chief Inspector of Factories has put it,²⁶

'We are now talking of potential as opposed to statistics and once one moves into potentials the hazards of the mining industry are absolutely unique.'

Retrospect and Prospect

Since nationalisation the structural transformation of the industry has resulted in an overall reduction in the toll of death, injury and disease, but the risks to those employed in coal mines have not diminished as radically or with the same consistency. Technological change has been the primary variable associated with both the changing magnitude and character of these risks in that it eradicates some hazards but introduces and/or exacerbates others. There have been numerous technical innovations and improvements since the advent of power-loading, designed to modify both new and traditional risks (e.g. pre-start alarms on shearers, dust monitoring and suppression techniques, etc). However, no single innovation to date has had the dramatic positive spin-off in terms of risk-reduction which accompanied the introduction of powered-supports. This, together with the fact that fatal and serious accident rates have remained relatively static over the last decade, has led to suggestions that a 'plateau' in terms of prevention has been reached.²⁷ Current experiments with automation²⁸ indicate that automated, remote-controlled systems of extraction can be expected to yield significant improvements in the future - basically by reducing manpower requirements and hence exposure to risks. In the meantime, deterioration or improvement in this 'plateau' of occupational death, injury and ill-health depends upon continuing control of the unique combination of health and safety hazards facing mineworkers.

In the following sections, consideration is given to the institutional context within which provisions for the involvement of workmen's inspectors in this hazard control process have been accommodated, beginning with a review of the distinctive traits of the physical, legal and organisational framework of mine regulation.

COLLIERY REGULATION

The Physical Environment

You're dealing with a shifting, unpredictable environment - you don't know what problems are going to arise from one minute to the next...And in the Scottish coalfield you meet a wide range of conditions and problems - those associated with heavy faulting in the Ayrshire coalfield, with gassy, thin seams in the old Lanarkshire pits, with steep-seam mining in Fife...

The above observations, made by a Mines Inspector, point to the basic problems of mine regulation : 'the dynamic character of the working environment, its unpredictability and its lack of standardisation'.²⁹

The 'shifting' nature of the underground environment as well as of the actual coal-getting process is a readily appreciable feature. In the network of tunnelled roadways leading to-and-from development, production and salvage sections, geological pressures are such that - as one miner put it - 'the roof and the floor are forever trying to meet again'. 'Rise and crush', strata pressures from the floor and the roof respectively, mean that re-ripping and repairing roadways are endless tasks which become more onerous in terms of manpower deployment as the seams being worked move further away from the shaft and the drivages which require maintenance thereby lengthen. Even so, these conditions are relatively static in comparison with those at the face. Here, a constantly changing environment is inherent to the planned cycle of operations that make up the extractive process which, as coal is cut off the face, is geared towards supporting the newly exposed roof over the working area and to the

controlled collapse of ground in the vacuum left behind it. A change in the hardness or height of a seam, an unsuspected fault, spontaneous combustion or 'heatings' are among the host of unpredictable geological factors which add yet another dimension to the dynamic character of the environment and work process.³⁰ Moreover, heterogeneity in geological and working conditions within and between mines as well as over time, and hence the propensity to certain types of dangerous and/or disruptive occurrences, is an intrinsic feature of deep-mining. The relative age of units³¹ and differences in the scale of operations are other obvious sources of variation. Thus, the depth of underground workings, the distances travelled between the pit bottom and working sections, and the height, length, incline and life-cycle of faces exhibit marked variations. Further differentiation also arises in relation to the methods, machinery and equipment used.³²

Close Statutory Control

Reflecting the increasing complexity of deep-mine operations and the changing character of its health and safety risks, the volume of mines legislation has swollen considerably since nationalisation. Indeed, as Bryan (1975:125) observes, the array of statutory instruments relating to collieries renders mining 'the most closely regulated of all major industries'. Apart from the universal provisions of the HSW Act 1974, the legislative framework of control is embodied in the Mines and Quarries (M&Q) Act 1954, the Mines and Quarries (Tips) Act 1969, and the Mines Management Act 1971. A host of subordinate statutory instruments - regulations, orders and rules - set out more detailed requirements. These are drawn up under about 40 different codes, each of which deals with a particular aspect: for example, the control of flammable and respirable dust; the installation, construction and

use of electrical apparatus; the keeping of plans; the appointment and duties of various categories of colliery personnel, and so on. This extensive battery of statutory measures is further augmented by Production Instructions (PIs), which are drawn up by the NCB in consultation with the M&Q Inspectorate, professional institutes, and the unions. These are treated within the industry as having a legal status equivalent to Codes of Practice (CoP).³³

It is apparent that PIs, as with CoPs generally, provide an administratively flexible means of specifying standards which can bridge the inevitable time-lag involved in amending and/or updating statutory standards in the light of technical change. The 1954 Act itself, however, also provides administratively flexible tools of regulation in the form of the powers vested in inspectors (s.176) to grant exemptions or 'consents' concerning (non-) compliance with most of the statutory requirements.³⁴ As one inspector put it:

It's impossible for (changes in) the law to keep pace with technological developments, which means that it tends to get outdated - to the point where you may actually have a safer method which is technically in contravention of the law... A classic example is (the handling and use of) explosives where the safest methods we now have are 'illegal'. Added to that, of course, whatever laws you have won't fit all circumstances. In these kind of situations we make new rules by granting exemptions.

There is also another administratively flexible means used in determining procedures and standards for particular mines. This is the obligation placed on every colliery manager (CM) under the 1954 Act to draft rules - 'Transport Rules' (s.37) and 'Support Rules (s.54) - which are, in effect, detailed colliery-specific

supplements to the norms and standards set out in statutory instruments.³⁵ These rules are submitted to the Mines Inspectors for approval and amendment, and thereafter have the force of law.

Two distinctive features emerge thus far in relation to the complex framework of protective regulation in mining. These are (a) the high degree of administrative flexibility embodied in the tools of regulation (notably the rule-making and exemption procedures) suited to the changing environmental and operational peculiarities of any one mine, and (b) the exceptionally close involvement on the part of Mines Inspectors which this entails in determining detailed working methods. There are two other related characteristics of mine regulation which should also be considered. First, the proximity of direct state surveillance in mining, as indicated by inspection visits to collieries, contrasts with that exercised by other enforcement agencies in that the Mines Inspectorate's practices can be said to amount to what one informant aptly described as 'saturation inspection'. Second, this overlays a situation peculiar to mine regulation wherein (as noted in Chapter 2) statutory specifications as to the competency, organisation and functions of mine management have accompanied the enumeration of technical measures and standards. These features, which make mining the most closely regulated of all major industries in practice as well as according to the statute books, are reviewed next.

Saturation Inspection

The M&Q Inspectorate's policy as regards inspection is similar to that traditionally held by most of the Inspectorates : to visit every workplace which comes within the ambit of the legislation it is charged with enforcing at least once a year with the aim of inspecting each throughout. However, execution of the policy pursued by any regulatory agency clearly depends on a number of factors, with key variables being the characteristics of its constituency and the manpower resources at its disposal.³⁶ Apart from NCB deep-mines, the M&Q Inspectorate's constituency encompasses small private coal mines worked under license to the Board, miscellaneous mines extracting minerals other than coal, various ancillary worksites such as the NCB's Mines Rescue Stations, and also quarries - including open-cast coal sites operated by civil engineering firms under contract to the NCB's Open Cast Executive. As regards manpower, the Inspectorate recruits its' main cadre of general inspectors from among the industry's pool of qualified mining engineers, with a supplementary contingent of specialists (e.g. mechanical, electrical, and civil engineers) also being employed. But while the size and composition of the Inspectorate has varied over time, a consistent feature has been that the bulk of its' available manpower resources have been devoted to mine regulation.³⁷

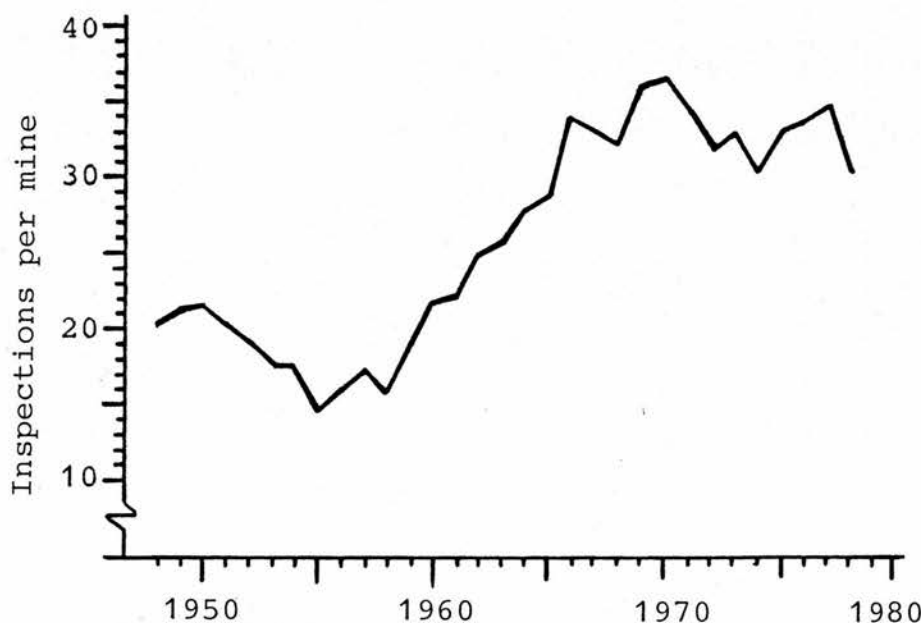
Dominant trends affecting the pattern of state inspection activity in coalmining have been that the technical complexity of inspectors' regulatory task has been increasing while the size of their deep-mine constituency has been shrinking with the contraction of the industry and the concentration of production into ever-fewer, larger units. As Table 5.1 and Figure 5.4 indicate, the overall reduction in state inspection

Table 5.1.State Inspection Activity at Coal Mines for Selected Years, 1950-80

	No. of Coal Mines (NCB)		No. of Inspections ⁺	Average no. per mine	Mines Inspected Throughout
1950	1,404	*	30,411	21.7	'many'
1955	1,477	(991)	22,080	14.9	584 / 40%
1960	1,288	(808)	26,573	21.6	624 / 49%
1965	842	(545)	24,404	29.0	'many'
1970	500	(309)	18,256	36.5	-
1975	416	(250)	13,703	32.9	-
1980	*	*	11,980	-	'many'

+ Figures relate to the total number of surface and underground inspection conducted excluding 'horse inspections'.

* No source reference to the number of mines registered with the Inspectorate.

Figure 5.4.'Intensity' of State Inspection Activity at Coal Mines, 1948-78.

Source : Annual Reports of H.M. Chief Inspector of Mines.

activity over the last 30 years has thus been accompanied by an intensification in colliery surveillance, as shown by changes in the average number of inspections per mine registered with the Inspectorate.³⁸ Yet there have been periodic variations in this 'intensity' indicator which, reflecting changes in the Inspectorate's manning levels, run counter to changes taking place in mining. It is worth noting in this sense that although the Inspectorate has reported difficulties in recruiting and retaining inspectors from inception to date, the shortfall in its authorized manning complement was reported to have become acute during the 1950s.³⁹ The result was that the yearly average of the late 1940s of 20+ inspections per mine was not regained until the early 1960s. It is certainly plausible that this relative 'slump' in state inspection activity was a contributory factor relevant to the deterioration in the industry's safety performance given that it occurred at precisely the time when the industry was entering a phase of dramatic transformation through contraction and mechanisation. That the Inspectorate's ability to recruit and retain inspectors picked up in the 1960s is due in part to changes in its salary scale which linked inspectors' remuneration with that of comparable grades in the NCB and in part, undoubtedly, to the diminishing career prospects open to qualified mining engineers within the NCB.⁴⁰ As reflected in inspection activity, the effect of a full or near-full manning complement from 1966 onwards has been a sustained annual average of not less than 30 inspections per mine: double the 'low' point in 1955 of 15 per mine.

While it provides a useful indicator of the proximity of state surveillance, the average number of inspections per mine is obviously a crude gauge of the 'intensity' of state regulation. In practice, inspection activity is not only concentrated on monitoring NCB units, but

also varies considerably between mines. The inspectors interviewed were questioned on this point, and the size of units, the technical complexity of operations and the extensiveness of underground workings were all predictable factors cited as affecting the frequency of inspection visits to any one mine. Thus, for the small licenced coal mines (and others working miscellaneous minerals), characterised by one inspector as 'the primitives' owing to the methods used and the scale of operations, the entire underground workings can normally be inspected within an hour or two. The general (basic grade) inspectors interviewed planned routine inspections of these workplaces about once every two or three months. But for any one of the NCB mines routine inspection visits are planned in two or three week intervals : about 20 visits a year being thought necessary to inspect a High-Tech mine throughout compared with about a dozen a year for a mine in the Village Pit bracket. In practice neither the mines in a basic grade inspector's allotted sub-constituency nor the different sections within a particular mine are inspected on a rotational basis. As regards the former, inspectors reported that their schedule was determined in large part by the need to investigate applications for exemptions and consents submitted for particular mines and that, within any given mine, their inspections tended to concentrate on the 'moving' sections - development and production faces. Nor can the timing or frequency of inspections be projected with any degree of certainty, for an inspectors scheduled workload is affected by the need to react to unpredictable events - to investigate accidents and dangerous occurrences. Consequently, an inspector can be at any one mine for days on end supervising remedial operations. For example, as one inspector referring to a particular High-Tech mine in his patch related -

Normally I aim to get to that mine about once a fortnight, but it's prone to spontaneous heatings and whenever a problem like that crops up you've got to drop everything else to get on the spot as soon as possible. The last incident there had me at the mine for ten consecutive days - including a sunny week-end!

In addition to the investigations and inspections conducted by basic grade inspectors, a colliery will be visited periodically by the District's two specialist inspectors, by the relevant District Inspector, and also by the Senior District Inspector. The combined effect, as the CM at Mid-Colliery commented, is that 'rarely a week goes by when we don't have an H.M. inspector visiting'.

The situation described above gives a fair indication of what 'saturation inspection' means in practice. Certainly, developments in state inspection activity in Scotland mirror the general trend as regards size; a cadre of 18 inspectors in Scotland in 1947 monitoring 264 mines, of which 190 had newly been taken over by the NCB, compared with a situation as it stood at the time of the survey (1980-81) where there were eight inspectors involved in monitoring 19 NCB mines - of which 4 were being run down for closure - and 17 small licenced mines.⁴¹ In terms of technological change, however, the older areas such as Scotland have not been experiencing developments of a comparable scale or pace to those being instituted in modern mining units such as the Selby Complex in Yorkshire. As Scotland has consistently been at the bottom of the NCB's Area 'league table' of capital investment projects since the mid-1970s, and there are no prospects of a new mine being sunk, it seems unlikely that the technical complexity of the Inspectorate's regulatory task will increase significantly as the size of their deep-mine constituency in Scotland dwindles from year to year. It

is to be expected that the District's cadre of inspectors will, through natural wastage and/or re-deployment, reflect these changes. In the meantime, although the Inspectorate has again been reporting a shortfall in its authorized manning complement over the last few years, the Scottish District cadre was, at the time of the survey, up to par. Consequently, measured crudely in terms of an annual average of 38+ inspections per mine between 1975-80, coal mines in Scotland have been subject to a consistently higher level of saturation inspection than national figures suggest.⁴²

The points made in this section concerning the concentration of state inspection activity bear out popular wisdom at colliery level, as voiced by a variety of informants, that inspectors' visits to collieries had been becoming more frequent as other mines in the locality closed down. At all three of the NCB collieries included in this study, each of which fell within the sub-constituency of a different field inspector, references were made in this sense to 'their' H.M. inspector as now being 'on the books'. But while regulation and supervision by the Inspectorate is intensive by any standards, and has clearly become more so over time, direct intervention in the form of inspection visits remains by definition intermittent. The regulatory activities of the Mines Inspectorate in this sense complement the continuous monitoring and self-inspection activities undertaken (by law) by those who are 'on the books' at colliery level.

The Law and Line Management

The CM of an NCB mine works to production targets and budgets set by higher management at Area level, who in turn plan in accordance with the dictates of the NCB's corporate strategy as determined at national level.⁴³ The principal tasks of line management at colliery level thus

revolve around meeting and maintaining planned output targets, deploying manpower, and controlling expenditure within the budget. Yet, irrespective of a colliery's (or an Area's) operating results, organisation and expenditure of capital and management resources at any working mine is determined in no small part by the need to maintain safety standards. The M&Q Act 1954 belatedly reflected the changed realities of the industry's ownership and control structure through reassessing the duties and responsibilities of owners, their agents and colliery management respectively.⁴⁴ The NCB's general obligations in this sense are specified in s.1 as being 'to make such financial and other provision and to take such other steps as may be necessary to secure that the mine or quarry is managed and worked in accordance with the Act' and all other relevant statutory instruments. The NCB has a number of safety engineers and other technical and specialist staff based at colliery, area and national level. Their task is, however, advisory, for responsibility for ensuring safe systems of work is clearly defined by law as a line management function.

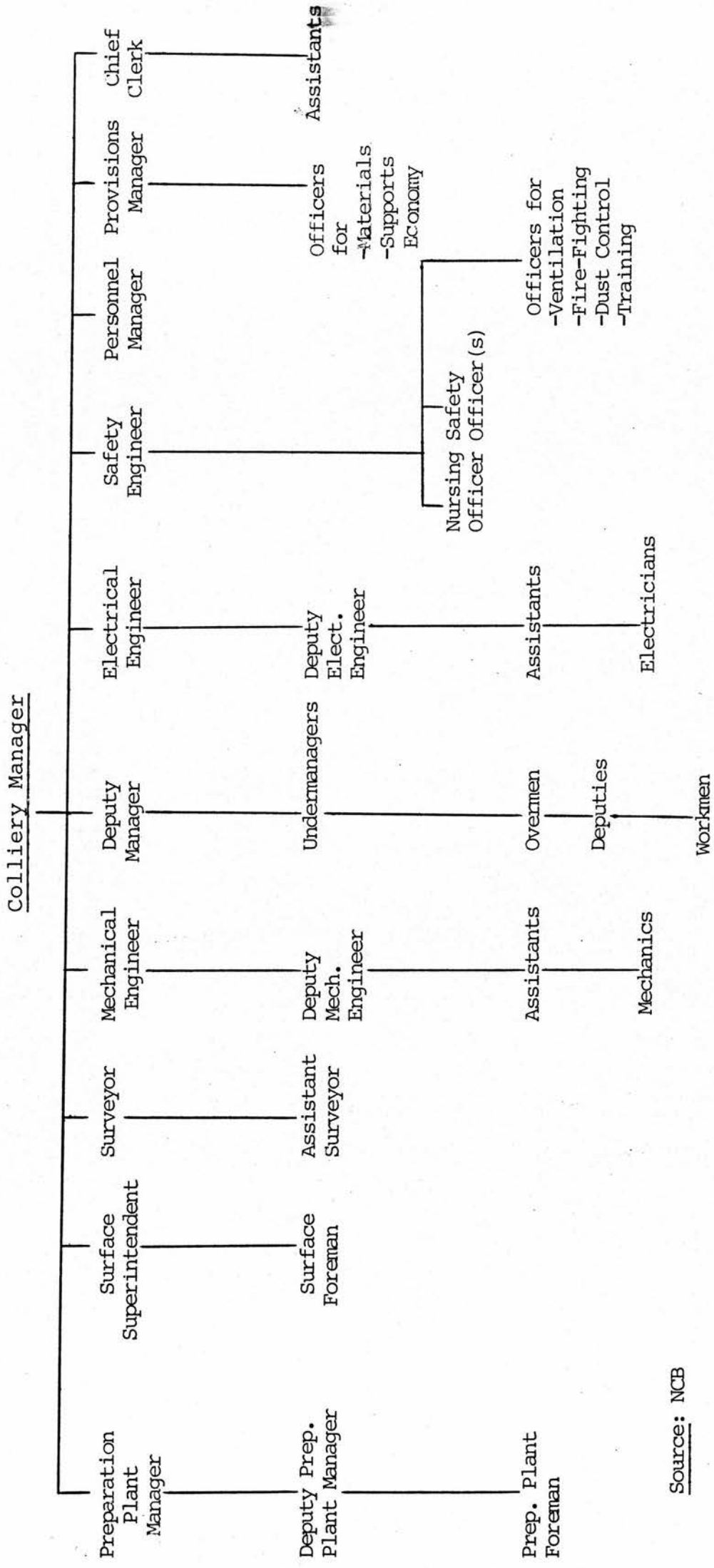
The body of prohibitive and prescriptive law relating to the competency, organisation and functions of mine management has developed along the lines established over a century ago when requirements for workplace organisation in the form of employer-appointed personnel first appeared on the statute books. The administrative control machinery of mine management is examined here in terms of (i) structure, (ii) responsibilities for safety and supervisory practices, and (iii) accountability and disciplinary practices.

(i) Structure

Currently, in terms of basic statutory manning requirements, a mine cannot legally be worked unless a colliery manager has been appointed in accordance with s.2(1) of the M&Q Act 1954. Nor can it be worked without the appointment under s.6(1) of the 1954 Act of at least one under-manager to supervise the underground workings. These men must be qualified mining engineers and each must hold the appropriate first or second class certificate of management competency (ss. 4 and 6(5)).⁴⁵ The mine cannot lawfully be worked unless 'daily personal supervision' is exercised by the appointed CM or, in his temporary absence, by a person nominated for this purpose who must normally hold at least the qualifications of an under-manager (ss. 8 and 9). There must also be a surveyor, responsible for the preparation and keeping of all plans, drawings and records relevant to the mine, appointed in accordance with s.11 of the 1954 Act. In addition, the CM is himself obliged to appoint officials and technical staff. Under s.12 of the 1954 Act he must appoint 'sufficient numbers' of deputies, each of whom must be assigned a particular district, to inspect the mine 'for the purpose of securing the safety and health of the persons employed thereat'. Deputies must be engaged 'whole-time' on the duties prescribed to this end. More generally, under s.13 of the 1954 Act, the CM has a duty to appoint 'such numbers of officials, engineers and technicians and other competent persons as is sufficient...' to secure (a) the adequate inspection of the mine and its' equipment; (b) the thorough supervision of all operations at the mine; and (c) to ensure that 'the carrying on of the undertaking of the mine' conforms with all relevant statutory provisions, orders, and instructions.

Figure 5.5 shows how these basic manning requirements are elaborated upon in the organisation of a 'typical' colliery. There are obviously some variations between mines according to the scale and complexity of operations, which are reflected in the 'rank' of a CM's senior staff. Thus, whereas the chart accurately mirrors the organisation at both High-Tech and Mid-Colliery, at Village Pit the CM was assisted directly by the mine's one under-manager, by a safety officer rather than by a safety engineer, and so on. Every CM at an NCB mine will, however, number a (professionally qualified) mechanical engineer and an electrical engineer among his senior staff for mechanisation from the late 1950s onwards has in effect made such appointments mandatory under s.13 of the 1954 Act. These men have specific responsibilities relating to the installation, maintenance and repair of surface and underground plant and equipment, and for conducting periodic inspections to ensure the integrity of plant such as winding gear and the main ventilation fans. Similarly, the control structure for underground operations is common to all collieries, with the workings being divided and successively subdivided from the whole (or parts) assigned to the under-manager(s) through to the deputies' districts. Thus, an under-manager will normally have three or more overmen reporting to him and each overman in turn will normally be supervising between 3 - 5 deputies districts. Mechanics and electricians report to their respective Chief Engineers, but they come under the immediate jurisdiction of line management when deployed to work in situ underground. The size of this line management contingent varies according to the number of shifts being worked (3 - 6) as well as in relation to the extensiveness of the underground workings and the numbers employed. For example, to control underground operations at Village Pit there were, apart from the under-manager, 5 overmen and 28 deputies, whereas at High-Tech there was a Deputy Manager, 5 under-managers, 47 overmen and 160 deputies 'on the books' at the time of

Figure 5.5. Colliery Organisation



Source: NCB

the survey.

(ii) Safety Responsibilities and Supervisory Practices

In terms of self-inspection and supervisory duties, the CM is responsible for ensuring the safe conduct of colliery operations both in accordance with instructions issued to this end by the NCB's higher management as well as in accordance with the law. As regards the latter, his responsibilities extend beyond the appointment of competent officials and the drafting of rules to the general duty, under s.2(2)(a) of the 1954 Act, to ensure 'the discharge by all others of obligations placed on them with respect to the mine or by virtue of the Act'(s) and subordinate statutory instruments. What this means in terms of the colliery control structure and the obligations placed on the different parties, from the workmen upwards, is as follows.

Employees' general duties under ss.89 and 90 of the M&Q Act 1954 are similar to those under the Factories Act and the HSW Act 1974, in that they are obliged to observe all rules, instructions and provisions made for occupational hazard control, and not to negligently or willfully endanger the safety of the mine or the safety and health of the persons employed thereat. Yet, reflecting the peculiarities of the environment and the greater task autonomy of mineworkers relative to their counterparts in manufacturing industries, s.80 of the 1954 Act also imposes a more active duty on the individual worker. That is, to take the necessary remedial or preventive measures whenever it appears to him that 'a danger affecting the mine or a part thereof has arisen or is about to arise' or, if such measures are outwith the scope of his normal task duties, to report the matter immediately to an official of the mine.

The skills a mineworker requires to recognize and deal with an immediate or imminent hazard clearly vary (a) according to the task and (b), as with the hazards themselves, change over time according to developments in the work process. The CM has a statutory duty in this respect to ensure that every person employed at the mine has received and/or is receiving training appropriate to his particular job such that (a) he understands his duties and (b) is deemed competent to perform his assigned tasks without supervision (see ss.14 and 88 of the 1954 Act). Some indication as to the proximity of danger and the associated skills required of those employed below ground is to be gleaned from the fact that every trainee undergoes a period of 'close personal supervision'. This phrase is interpreted literally to mean 'within arms reach'; 'that the supervising workman or instructor must be not only present in person but close to his trainee so as to share his working place: close enough to reach out and stop his trainee doing something dangerous or pull him out of harm's way'.⁴⁶ Similarly, reflecting the greater risks associated with face work, only those men who have already graduated as competent for work on the ancillary and support tasks EBG, and have experience on such jobs, are eligible for face training. Each then undergoes a further period of 'close personal supervision' and instruction for the tasks performed by the coal-cutting, roadway drivage, equipment installation and salvage workteams.

Deputies, the first line managerial grade with immediate responsibility for the workmen employed in their respective districts and the operations performed there, are recruited from the ranks of face-trained miners. They must complete a training course and pass a series of tests to obtain the deputy's certificate or 'ticket' of competency, and thereafter are required to

undergo periodic re-tests and to attend refresher training courses. There are two grades of deputy, with the junior grade being known alternatively as shotfirers, fireman, gate-end supervisors (GES) or Grade 2 deputies. These men are not assigned sole charge of a district. Rather, as the various job titles indicate, they normally form part of the coal-cutting and roadway drivage workteams and act as assistants to the fully-qualified Grade 1 deputies. The other category of underofficial, overmen, will possess at least the same qualifications as a Grade 1 deputy.

Associated both with mechanisation and with the gradual phasing-out of the 'self-acting stimulus' of piecework payment systems, supervision of the workforce and operations underground has become considerably closer over the last few decades. In 1957, for example, there was on average one underofficial for every 12.8 men employed underground compared with one for every 8.7 men in 1981.⁴⁷ Practice evidently varies between districts and on different shifts. However, given that two or three GES will normally be deployed in development, production and salvage sections, the supervisory ratio is almost invariably higher in such districts than elsewhere below ground; with approximately one underofficial for every 4-5 face trained workers.

The intensification of supervision which occurred during the 1960s is reflected in the adage of that time, as related by older miners interviewed, that 'the gaffer's lamp started burning into the miner's back'; a common colloquialism being that the underofficials began to 'breathe down their necks'. But such changes are obviously relative and it would be a mistake to consider current supervisory practices in a literal sense as being 'constant'. To do so ignores the size of a deputy's

district and the number of operations being performed there simultaneously by men dispersed individually or in groups throughout the district. Moreover, the physical conditions, both in terms of the layout of underground workings and the restricted visibility afforded by lighting arrangements, prohibit a 'global' overview - 100 feet ahead let alone throughout the district. This holds true in production worksites as well as elsewhere underground, for simply 'travelling' his district can take a deputy $1\frac{1}{2}$ - 2 hours.⁴⁸ Consequently, although changes in mining have undoubtedly reduced the scope of the mineworker's task autonomy and led to a tightening of managerial control over the labour process, supervision by underofficials is still primarily a case of 'looking in on men' periodically. Hence the CM's duty to ensure that every man is competent to work without supervision and also the persistence of the traditional practice, in face districts, of the workmen nominating a 'pool leader' or 'leading man'; he acts as a spokesman for the power-loading pool and is paid a nominal extra sum by management to assist the deputy in a capacity akin to that of a chargehand.

As the officials specifically appointed by statute for safety supervision and inspection purposes, the deputy has detailed responsibilities for the monitoring of colliery conditions. Regulations specify that the deputy must systematically inspect the whole of his district in such a manner 'that no place at which men are at work shall remain uninspected for more than four hours'. In addition the deputy is required to 'carry out such other duties with regard to the presence of gas, ... (checking on) ventilation, support of the roof and sides, and general safety as are required by the (1954) Act and Regulations' for the purposes of securing the safety and health of the men working in his allotted district.⁴⁹

Thus, as one of the underofficials interviewed put it, 'a deputy inspects his district twice per shift but his whole shift is really a continuous inspection'. As regards the basic requirements, each deputy will perform a 'mid-shift' and a 'pre-shift' inspection; the latter being known as such because it is conducted to ensure that the district is safe for the following shift to enter and that the deputy's shift neighbours' are aware of changes in conditions which may have occurred since they were last in charge of the district. Following these inspections the deputy completes a statutory report form (MQ234) which is basically a checklist on the state of the district, matters requiring attention, supplies and equipment needed, and so on. Copies of these reports go to the CM and through him to the relevant managers, and another is displayed in covered accommodation at the pit head.

As regards other mine officials, the overmen are the intermediary link in the managerial control structure with functions akin to foremen. Being a non-statutory appointment, the overman has general inspection and supervisory responsibilities in ensuring that deputies are acting on their statutory duties. But he is there primarily to oversee productive operations and acts as a liaison link to this end between the under-manager(s) and deputies in, as one overman typically put it, 'getting the right men and materials in the right place at the right time to keep the section moving'. The under-managers have specifically defined statutory responsibilities for supervising all operations being carried out in their designated parts of the mine and ensuring that all relevant provisions, regulations and rules are being observed. Among his duties the under-manager is required to periodically visit and inspect all parts of the mine under his jurisdiction, to confer daily with the underofficials

employed there, to read and act on the deputies' reports, and to report daily to the CM or, where a deputy manager has been appointed, to the latter. The Deputy Manager (DM) acts, in effect, as a senior under-manager and Chief Mining Engineer, but he will also take charge of the whole colliery in the CM's (temporary) absence. As such he has general supervisory responsibilities for safety which, as regards the control of underground operations, are discharged principally through ensuring that the under-managers are fulfilling their statutory duties.

The detailed character of the self-inspection duties placed on mine management is reflected in the fact that over 30 different types of reports and records are submitted to the CM in accordance with statutory requirements at specified intervals; every shift, daily, weekly, monthly and quarterly. The CM normally signs or countersigns each to indicate compliance with s.10 of the 1954 Act, which obliges him to read all such reports personally or secure that they are read by a 'competent person' who will notify him of any irregular or unusual matters relating to the mine thus brought to light, or any other information which may require action on his part or on the part of any other person. This task is normally delegated to the colliery safety engineer and/or a colliery safety officer.

As regards the colliery safety department, the safety engineer is a professionally qualified mining engineer who normally holds a first class certificate of management competency (i.e. he is qualified to manage a mine). He assists the CM on matters such as training and the drafting of colliery rules, as well as managing the NCB's various promotional safety campaigns, competitions and inspection schemes.⁵⁰ He is normally assisted by two or more safety officers who hold the qualifications of underofficials.

The safety engineer will also oversee the activities of other technical and specialist staff.⁵¹ Although the safety staff are based on surface locations and classified as such for control purposes, in practice most of their time is spent underground investigating incidents and inspecting equipment and control measures generally (safety officers) or related to their own specialism (fire-fighting, dust monitoring, and so on).

It is worth stressing that, unlike the requirements for employer-appointed personnel existing in a few other industries, the safety staff in mining are not statutory appointments. The specialism evolved with the increasing size and technical complexity of mining units, with the safety staff undertaking advisory and ancillary support functions to assist the CM and line management in discharging their respective statutory duties. The post of Safety Engineer is a relatively new addition in this sense, having been introduced in the mid-1960s reportedly as a means of 'upgrading the status and input of the colliery safety specialists'.⁵² Whether incidental or not, creation of this post clearly also provided a promotional avenue for BACM members which eased the bottleneck created by the contraction of the industry. The question of the 'status and input' of the safety engineer and other safety specialists vis-à-vis line management will be discussed later. But it is relevant to note here that many of the safety specialists interviewed at colliery level expressed reservations concerning the unintended effects of safety specialism per se. As the safety engineer at High-Tech put it,

I sometimes think that the Safety Department was the worst thing that could've happened to the deputy...Because we help them, for example, by reminding them when₅ their monthly second egress inspection is due₃ and when we're running spot campaigns like getting

stone dust ordered and checking that it's put down on rafters (as an explosion barrier). But there's a tendency then to think that those are our responsibilities - that it's the safety officers' job to be ordering stone dust and so on. I have to keep pointing out that if a government inspector comes through the deputy's district he'll not be asking me or the safety officers why this or that hasn't been done; he'll be asking the men responsible for whatever goes on in that district - the deputy, the under-manager and the CM in that order.

The point could hardly be made more clearly : that any tasks either adopted by or assigned to the safety specialists do not relieve line management of their statutory responsibilities for the safety of the mine and the men employed there.

(iii) Accountability and Disciplinary Practices

Accountability is scaled in principle according to the vested authority and control exercised by various parties over the work process and associated responsibilities for ensuring safe systems of work. Thus under the M&Q Act 1954, apart from such liability as falls on senior managers individually or the NCB as a corporate entity, the CM can be held personally liable for the acts or omissions of any person employed at the colliery which (a) constitute non-compliance with that person's statutory obligations or (b) breaches rules and instructions drawn up for that particular mine. Without ameliorating the CM's responsibility, line managers and underofficials can similarly be held personally liable in a criminal court for acts or omissions affecting the conduct of operations and the safety and health of the men under their jurisdiction.

The consequences can be severe for, apart from any other penalty which may be imposed on conviction of an offence, the court may apply to have the individual's certificate of competency cancelled or suspended on the grounds that he is unfit to continue to hold the certificate (and hence the job).

A number of defence provisions are outlined both in the 1954 Act and in the Mine Management Act 1971.⁵⁴ In terms of the colliery control structure, the primary defence available to the CM and/or any mine official charged with an offence not committed personally lies, under s.156 of the 1954 Act, in his ability 'to prove that he used all due diligence to secure compliance with the provision, prohibition, restriction or requirement, as the case may be.' This means that where the contravention can be shown as due to the act or default of another person then that person is deemed guilty of the offence. Every employee, irrespective of rank or position, is liable to prosecution for an offence committed personally. In short, reflecting the allocation of personal duties and responsibilities for safety regulation at the workplace peculiar to protective legislation in mining, the CM, other mine managers, underofficials and workmen can be held individually and/or severally liable for a defined offence and thereby subject to prosecution.

In comparison with other Inspectorates, the Mines' Inspectorate's recourse to formal sanctions (enforcement notices and prosecution) has been notable in its' absence. This feature of enforcement predates nationalisation and persists to date.⁵⁵ The 'special relationship' between inspectors and mine managers associated with this informal regulatory approach is considered later. But it is worth noting here that the inspectorate's distinctive 'record'

on prosecution is closely related to the practice under mining law of instituting proceedings v. individuals rather than v. a depersonalised corporate entity and the associated pragmatic and ethical problems of 'fixing' responsibility and culpability, particularly in post-accident situations.⁵⁶ This has given rise to an interesting and somewhat paradoxical pattern in that prosecution proceedings have rarely been initiated by the Mines Inspectorate, but actively resorted to by mine managements as a means of augmenting internal control mechanisms and disciplinary procedures. The persistence of this traditional practice in mining is indicated by periodic references in the M&Q Inspectorate's annual reports to 'prosecution proceedings taken against workmen by mine managements'. For example, 377 such cases were taken in 1958, 201 in 1959, and 189 during 1960. The offences listed relate to matters such as 'contraband' (i.e. possessing smoking materials or taking flame or spark producing articles into a mine) and 'illegal manriding' (i.e. travelling on a conveyor, wagon, 'bogie', or any other piece of haulage and transport equipment which has not been sanctioned as suitable for manriding purposes). It is reasonable to assume that deputies numbered among these cases taken against workmen in that they handle the job of shotfiring, and 'use of explosives' figures in the listed offences.⁵⁷ It is not possible from available records to tell whether recourse to the courts on the part of mine managements followed the retributive pattern of proceedings instituted by external regulatory agencies such as H.M. Factory Inspectorate, whereby the majority of cases are taken following a fatal or serious accident.⁵⁸ Whatever the case, actions v. individual employees of the type and scale indicated is unusual by any standards and doubly so in being initiated by management rather than by the Inspectorate.

Whether the practice of management instituting criminal proceedings waned naturally and/or as a result of alternative disciplinary measures being agreed to with the mining unions is unclear. But it does seem to have waned. Records ten years on, for 1970, show a total of only 16 infringements as having been prosecuted under the M&Q Act 1954; five prosecutions were initiated by the NCB and eleven by the Procurator Fiscal in Scotland.⁵⁹ Moreover, questioning at the time of the survey indicated that internally defined sanctions and disciplinary measures are currently the norm. It is interesting to note in this sense that the traditional disciplinary practices of management imposing fines on miners for breaches of safety rules continues in a modified form to date. That is, the practice of fining per se whereby, as one manager put it, 'you'd inform the man that he was making a compulsory contribution to the Miners' Benefit Fund or some other charity' has been discontinued, at least in Scotland. Instead for an offence such as illegal manriding it is more usual to transfer a man to surface work for a period of days or weeks which, as one CM pointed out, 'is a fine in other words because, particularly for a man on face work, it means he's to take a drop in earnings'. Similarly, NCB senior management at area and/or national level reportedly conduct investigations at mines when or if a colliery's accident record indicates the need to do so, and disciplinary action in the form of reprimands and transfers of those in managerial positions is not unknown. But in terms of the 'ultimate sanction' of prosecution, all the evidence suggests that instances in which either the NCB or the M&Q Inspectorate initiate formal proceedings are now exceptionally rare, and that such cases as are taken in Scotland are initiated by the Procurator Fiscal following a Fatal Accident Inquiry.

It is apparent from this review of the distinctive traits of colliery regulation that the arrangements for occupational hazard control in mining are subject to intensive regulation and supervision by the state. This regulation takes a direct form through the involvement of H.M. Mines Inspectors in rule-making and exemption procedures governing the work process and through the Inspectorate's intensive monitoring and surveillance practices of 'saturation inspection'. It takes an indirect form in so far as developments in the managerial control structure and mine management practices have occurred within a framework whereby basic organisational and administrative duties have been defined by law. Whether compliance with and/or elaboration upon this framework can be constituted as 'self regulation' is a theme explored later, but it is clear thus far that protective legislation in mining specifies matters which under the general duties of the HSW Act 1974 are to be determined through voluntary action and managerial discretion. That is, in mining detailed requirements relate to the appointment of management personnel and to the provision of training, instruction, information and supervision as well as to technical measures necessary to ensure safe systems of work. Similarly, the general obligation placed on employers to provide a written safety policy is outlined for the NCB de facto; through the legislative provisions and regulations which allocate personal responsibilities for ensuring measures are implemented and which delineate an internal system of monitoring and accountability within collieries through successive layers of supervision, self-inspection, and reporting procedures.

The accommodation of provisions for workers' involvement in mine safety through appointed safety representa-

tives are to be seen within this highly formalised organisational environment. As such it is worth pointing out here that in exercising their statutory rights, workmen's inspectors cannot be held personally liable for the safety of the mine. They have no statutory obligations other than to submit a written report following the inspections which they are entitled to make periodically. Moreover, their influence and contribution in terms of the hazard control process is to be seen in a context where the workplace is subject to virtually continuous monitoring by employer-appointed personnel, where the state of the mine throughout is being reported on every shift, and where management compliance is monitored through frequent inspection visits on the part of the state inspectorate.

Having examined the context of state regulation and management provision, consideration is given next to the features of the industrial relations environment instrumental to the accommodation of provisions for workmen's inspectors as an issue-specific channel of communication between the workforce and mine managements.

WORKERS' INVOLVEMENT

Established Channels

The Coal Industry Nationalisation Act 1946 was based on the precepts of commercial organisation and workers' involvement in the management of public utilities known as 'Morrisonian socialism'.⁶⁰ Trade unions were seen as having a necessary role independent of management, which precluded direct representation on the Board, and a distinction was drawn between matters for collective bargaining and those for joint consultation. Accordingly, the NCB was obliged to recognise appropriate representative

bodies and to draw up the procedural machinery with these unions for (a) the negotiation of pay and conditions and (b) consultation about the organisation and conduct of mining operations and other matters of mutual interest. In this demarcation, health, safety and welfare were explicitly listed as matters for joint consultation (s.46).

In contrast with developments in the regulatory arrangements for occupational hazard control, the changing characteristics of industrial relations in mining under nationalisation have been the subject of numerous, detailed studies. The traits of union organisation and the shifting patterns of collaboration and conflict are reviewed in Part II of Appendix A (Coal Mining in Britain, 1947-84). In brief, dealing with a single employer receptive to trade unionism and to 'orderly' industrial relations, the mineworkers' unions have achieved many of the aspirations of their predecessors and contemporary counterparts; a secure membership base and negotiating rights, together with a form of participation through the joint consultative machinery established at national area and colliery level. Current representational arrangements, whereby virtually all employees belong to a recognised trade union, are the product of a complex, protracted process related to changes in the composition of the workforce, inter-union agreements on membership jurisdictions, and the emergence and subsequent consolidation of new or re-constituted organisations through mergers and affiliations. The principal unions are the NUM, NACODS and BACM. NACODS came to be recognised as the sole organisation representing colliery underofficials, and BACM was established to cater for the new category of managerial employees created with public ownership. As regards the NUM, the persistence of sectionalism and the union's 'incipient party system' (McCormick, 1979:63) have proved potent sources of intra-union conflict over

representation and union policy. But from the outset the NUM has had an organisational monopoly and now represents about 90% of the mining workforce.

In considering use made of the statutory provisions for workmen's inspectors the context is thus one of an elaborate, essentially corporate, institutional apparatus of labour regulation dominated by the relations between the NCB and the NUM, where general channels of representation and communication exist in established collective bargaining and consultative procedures.

It has been noted (Chapter 2) that the statutory provisions for workmen's inspectors enabled the involvement of full-time union officials, and that promotion and activity on the part of itinerant 'full-time workmen's inspectors' appears to have been an important factor affecting the use made of inspection rights at collieries. A number of county unions and associations affiliated to the NUM's predecessor, the MFGB, had full-time officials in post during the inter-war years, with safety functions distinct from those of other full-time officials (known as miners' agents) and from the compensation and legal services of the unions' industrial welfare departments. The practice of appointing safety officials, henceforth referred to as NUM safety agents, became more widespread after nationalisation. Yet, reflecting the NUM's loose federal structure and the autonomy of its' constituent geographical and occupational 'areas', variations in safety services persist to date. Currently the national organisation has a safety engineer and there are 18 safety agents employed throughout the coalfields, accountable to the Presidents of their respective area organisations rather than to the national organisation. Most of the NUM's safety agents, in contrast with their general counterparts, are professionally qualified mining engineers recruited from among

the industry's managerial grades.⁶¹ Reflecting the developments in safety specialism under NUM auspices, an increasingly wide range of technical information, training and advisory services have been provided to promote and complement the activities of colliery-based workmen's inspectors.⁶²

The involvement of miners' agents in inspection and investigative activities at collieries has undoubtedly been significant in establishing and sustaining the organisational machinery for safety representation at mines. In turn, 'area' services and organisation together with developments in safety specialism among full-time officials were clearly facilitated by the joint-cost agreement first reached in 1941 (see Chapter 2) and continued after nationalisation, which applied to union safety agents as well as colliery-based workmen's inspectors. That is, half the cost of quarterly inspections and other specified investigations were paid on a 'lost earnings' basis by the NCB and the remainder made up through a levy on branch funds and from Area funds.⁶³ In Scotland, the relative commitment of organisational resources is illustrated in the convention of the NUM's Area since nationalisation to employ two safety specialists and three general agents.

At colliery level, the appointment and functions of workmen's inspectors continued to be governed by the provisions of the 1911 Coal Mines Act for the first decade of nationalisation. These entitled mineworkers to appoint two men as workmen's inspectors, with rights to investigate accidents and to inspect the mine throughout at least once per month. In practice, reflecting payment arrangements, where the provisions were utilised inspections were normally conducted on a quarterly rather than a monthly basis. The pattern of activity did not

change significantly from that of variable and partial use which had characterised the inter-war years. In fact, there was actually a relative 'slump' immediately after nationalisation and the take-up rate, in terms of the number of collieries where the inspection rights were being acted upon, did not regain that of 1945 until the early 1950s (see Figures 2.1 and 2.2).

The Mines' Inspectorate's annual reports for the early years of nationalisation link the declining use made of the workmen's inspectors' provisions with interest in the newly established colliery consultative machinery as an alternative channel of communication on health and safety matters. Reference is also made in the 1948 report to inspections being conducted in some mines under the auspices of the colliery consultative and safety committees.⁶⁴ But subsequent reports make no allusion to such activity, and merely comment on the declining participation of mineworkers' representatives in the consultative committees. Use made of the workmen's inspectors' provisions in this sense appears to reflect the changing 'mood' of industrial relations which accompanied the transition from private to public ownership. That is, whereas the NCB and the NUM were officially promoting a 'new spirit' of industrial relations and attempting to foster identification with the industry through use of the new joint consultative machinery, there was a rapid waning of the euphoria which had accompanied nationalisation in the coalfields (see Hall, 1981) and disillusion at colliery level, on both sides, with the new consultative procedures (see Anthony, 1973).

To annotate these basic themes, it is worth recording that during interviews with veterans of that era a host of factors were implicated in the persistently limited take-up of the provisions

for workmen's inspectors. Common points, as expressed here by a branch official, were that -

'The mines were in a mess when nationalisation kicked-off, and on top of that everyone was crying (shouting) for coal in those days. That's what the managers were after before anything else...the men were wanting it too and not just for the money in it...We were wanting a lot of things - better conditions, safety, housing...And the union wasn't as powerful - a man wasn't in the union the first day he stepped through the gates in those days...We couldn't do everything overnight.'

But apart from anything else, as one of the NUM safety agents (a lay official at that time) observed -

'It was the same faces in most pits before and after Vesting Day - the managers just changed from being employed by the Fife Coal Company and family firms and the like to being employed by the Board. A lot of them were the old private owners or their sons - not like nowadays where your CM is an NCB man borne and bred. The attitude of the old type was to keep you in the dark - my old CM used to give us a hard time when we wanted to know what was going on in our own pit, and that was going on all over the place...the level of discussion was played down by omission. Still them-and-us you see; there was no background for co-operation and no system for it.'

The phenomenon of near-total coverage in the take-up of statutory inspection rights at most NCB mines which occurred in the late 1950s can in part be associated with the stimulus of new legislation, as the M&Q Act 1954 came into effect in 1957. In effectively defining the right to appoint a panel of workmen's inspectors as being the sole concern of the NUM (Group 1) and also in clarifying the colliery manager's responsibilities, the 1954 Act can be regarded as having removed some of the obstacles to co-operative, joint regulation on

safety matters.⁶⁵ Yet it is hardly credible to assume that the panoply of influences inhibiting use of the provisions prior to 1957 suddenly evaporated. Rather, the increasing take-up rate in these statutory rights should be seen in relation to the dramatic changes taking place in the industry during the late 1950s and throughout the 1960s with constraction, mechanisation and changes in wage payment systems - and the repercussions in terms of workplace industrial relations.

Alterations and Accommodation

During an informal interview with one of the NUM's Scottish Area officials, he pointed out that-

'It's always been union policy to draw workmen's inspectors from men already committed to the union and active through conventional channels.'

'Conventional channels' in mining are based on the colliery branch and its elected committee of lay officials. The numbers on a branch committee vary according to local tradition and the size of the unit, but the principal office bearers at every colliery are the chairman, secretary and delegate, with the latter normally acting as the principal negotiator at Scottish collieries.⁶⁶ The workmen's inspectors are also members of the branch committee. Although the 1954 Act placed no restriction on the size of the panel, the convention of appointing two workmen's inspectors persisted in Scotland, with one or two other members of the branch committee being nominated as 'stand-by' inspectors.

Political affiliations and sectarianism have played a part in local struggles over organisation and representation at Scottish collieries. From the 1950s

onwards, with pit closures and the re-deployment of men en masse to newly developed or re-constructed units, the organisational traditions of different collieries were having to meet and merge. The effects in terms of representation at High-Tech, one of the new 'cosmopolitan' mines, were recollected by one branch official as follows-

There were less than 400 men at this pit when the Mary closed and we were transferred here. A Labour boy from the Nelly - their pit'd closed before ours so they got here first - he was the delegate then. It was a right struggle getting that Labour boy out, but we took over power and got our delegate in - he's CP. There were struggles after, too, with boys coming in from other pits, but our man was well in...I was put on here as Treasurer, but I lost votes from some of the Catholic boys who didn't like it when I joined the CP. But I was still on the committee, and I used to stand-in for the workmen's inspectors now and then...It was two boys from the Whitehouse who took those jobs, as workmen's inspectors.

It is reasonable to assume that similar rivalries and conflicts were being played out at most collieries where men were being re-deployed in sufficient numbers to retain a distinct sense of the identity and traditions of their old pits. That is, that the appointment of workmen's inspectors had meaning in representational terms other than as an issue-specific channel of communication between workforce and management.

Apart from the effects of closures and re-deployment, widespread interest in taking-up the provisions for workmen's inspectors among union representatives at collieries throughout the country occurred at a time when radical alterations were taking place in established relationships and traditional channels of communication. Notable developments were-

- (1) The shift in the locus of power from pit to national level which accompanied the transition to day wage payment systems; the effects were to radically reduce the scope of workplace bargaining and alter the job of the lay negotiator, whose principal concern had been the settlement of disputes over piecework prices and allowances.⁶⁷
- (2) De-skilling and a reduction in the traditional autonomy of miners which accompanied mechanisation, and the attendant alterations taking place in underground relationships. For example: in the status of occupational groups, as the number of tradesmen and their power position was enhanced with mechanisation while that of the traditional elite, faceworkers, was diminishing; and in supervisory relationships as the ratio of mine officials to men increased and the 'self-acting stimulus' of piecework ceased to apply.⁶⁸
- (3) The development of direct means of communication between NCB management and the colliery workforce : from national level under the policy of 'personal communication' developed by Robens as Chairman concerning the Board's policy on closures, re-deployment and redundancies; and through 'coalface team conferences' and other innovations to facilitate the introduction of the new power-loading technology at colliery level. From managements' perspective, these developments were seen as being more effective than the industry's consultative procedures as a means of communicating with the workforce (see Robens, 1972; Anthony, 1973), while from the union perspective they could readily be seen as attempts to bypass the union and reduce its' influence (see Allen, 1981).

It seems reasonable, given the above, that the significant changes taking place in the risks of mining which accompanied technological change were not the

primary variables affecting the increasing use made of the provisions for workmen's inspectors. Rather, the phenomenon of near-total coverage would seem to owe its' origins to the meaning attached to representational rights per se at a time when power relationships and patterns of organisation established through custom and practice were being challenged and disrupted through changes largely outwith the control of the workplace participants. One tangible side-effect in Scotland was that colliery tradesmen did not participate in the arrangements for workmen's inspectors (prior to 1978). As in a few other areas, the tradesmens' association retained a separate identity in Scotland in SCEBTA rather than merging with the NUM's (Group 1) Area organisation. Although both organisations are constituents of the one national union (with SCEBTA being known alternatively as NUM Group 2), under the M&Q Act 1954 an organisation representing a minority at a mine can only appoint workmen's inspectors by agreement with the organisation representing the majority. The financial burden of part funding clearly played a part, but many informants at Area and colliery level also referred to the jealous guarding of prerogative as a brake to agreement. As an NCB informant at Area level, a blunt-speaking man, recollected -

'SCEBTA argued for years that they should be allowed to participate in these arrangements but Group 1 NUM flatly refused to let them in. Then in the '60s Group 1 finally said o.k., they could appoint workmen's inspectors, but that it'd cost them £x a year - if they wanted in then they'd have to provide funds too to pay for it. SCEBTA felt they couldn't afford it, so that scuppered it.'

With the phenomenon of near-total coverage originating alongside the disruption in the status quo of the late 1950s and early 1960s, it is reasonable to assume

that the use made of the provisions did not reflect the unitary perspective advocated by both the NCB and the NUM as official policy at that time. Indeed, a common refrain among informants was that a conflictual stance was the norm. As an NCB safety engineer put it,

Without decrying the union leaders then and what the union was doing for safety it must be said that their main concern was wages. They used to say there was no difference with us over safety but that attitude, if it wasn't just lip service, certainly didn't filter down to pit level. Workmen's inspectors then tended to be anti-management...It was two-ways because a lot of CM's did resent them...many of the workmen's inspectors then were politically motivated - they were in it because it was a way of getting at management, not because they were genuinely interested in safety. But now, when the union says there's no difference with us when it comes to safety everyone knows they mean it. And while I wouldn't say that everything's perfect, that attitude's filtered down to the collieries.

More succinctly, as an MQI inspector (previously employed by the NCB at a colliery in South Wales) put it,

There's been a tremendous change from the 'them-and-us' situation of 20 to 30 years ago. The co-operation that we have nowadays, where everyone's working together for the common good, that's something which has evolved gradually.

CONCLUDING COMMENTS

This chapter has provided an overview of occupational hazard control in mining since nationalisation, the context within which the provisions for workmen's inspectors came to be generally acted upon. The first part looked at the changing magnitude and dimensions of the problem of work related death, injury and disease, with particular reference to the impact of the industry's structural transformation and technological change on the NCB's record and the risks of mining. The second part considered the legal and institutional framework of safety regulation and outlined the detailed and intensive character of state regulation and supervision. Analysis pointed to a general 'tightening' of regulatory arrangements; in terms of the saturation inspection practices of the Mines Inspectorate and in the general trend towards greater managerial control over the labour process with mechanisation and with the related intensification of supervisory practices. It has also been noted that although coal mines are subject to a distinctively detailed phalanx of statutory rules concerning the appointment of personnel and management practices and procedures as well as technical provisions, an equally distinctive trait is the informality with which this elaborate control system appears to function (as indicated by the Mines Inspectorate's scant recourse to formal procedures). In the third and final part, the centralisation of the managerial control structure and the associated standardisation in employer provision at colliery level which occurred under nationalisation was noted as having been paralleled by like developments in the institutional framework of industrial relations. Within this context, the use made of the provisions for workmen's inspectors was considered as one of a number

of channels of communication. The phenomenon of near total coverage in the take-up of these rights occurred during a period when the status quo of established channels of communication and organisational traditions were undergoing fundamental alterations. Sustained use of the inspection rights from the late 1950s onwards indicates that representational arrangements for workmen's inspectors became part of the institutional fabric of workplace industrial relations.

In concluding this overview it is appropriate to note that occupational hazard control is a subject which readily lent itself to the 'new spirit' of industrial relations being promoted by the NCB and the NUM in the early years of nationalisation. Yet, as with the general pattern, common interests and the use of the consultative machinery for joint regulation on safety matters seem to have been perceived more readily at national and area level than at collieries. Despite the shift back to protest unionism which has characterised industrial relations in mining since the late 1960s, there has been a sustained commitment at national and area level to this machinery, which now encompasses a wide range of joint advisory and consultative committees. Interviews with informants involved in regulatory arrangements at area level (M&QI inspectors, NCB safety engineers and NUM safety agents) indicated a high degree of role inter-penetration and adherence to a unitary perspective. The common backgrounds of these parties and in particular the shared professional perspective of safety specialists is undoubtedly significant, but these informants frequently offered more general 'team' analogies. For example, the NUM safety agent who, in response to questioning on the industry's accident record, stated -

'I like to think of us all working together on health and safety like

a football team - you can be the best,
but every team goes through a few bad
seasons.'

While this philosophy has been consistently promoted by all parties since nationalisation, it seems that for years an 'icing effect'⁶⁹ was evident, whereby the unitary perspective evinced by both the NCB and the NUM at national and area level was not as effectively reproduced at colliery level. Whether the ideological orthodoxy of consensus and co-operation which had reportedly 'filtered down' to collieries by the 1970s has been sustained is an underlying theme explored in the following chapters, which examine the arrangements, goals and norms of safety representation at Scottish collieries in the early 1980s.

CHAPTER 6

SAFETY REPRESENTATION IN MINING

SAFETY REPRESENTATION IN MINING

With the impetus of seeking exemption from the HSW Act 1974 the NCB, NUM and other mining unions also sought exemption from the SRSC Regulations and, as an NCB informant put it, 'the HSC succumbed on that one!' Exemption was granted on condition that a voluntary agreement be made to bring established arrangements at coal mines in line with the SRSC Regulations on the matters of representation by recognised trade unions other than the NUM and time-off with pay during working hours for these representatives to perform their functions and for training. Current arrangements for safety representation in mining are thus governed by a national agreement reached between the NCB, NUM, NACODS and BACM in 1978, which complements mineworkers' statutory rights under the M&Q Act 1954.

This chapter provides a descriptive analysis of the institutional arrangements for safety representation at NCB mines in Scotland in the early 1980s. It begins by outlining the industry's detailed provisions on the appointment and functions of these specialist union representatives and then examines the associated patterns of activity. The take-up in appointments at local level and the characteristics of the men designated as safety representatives are described, differing reactions to the re-constitution of established representational arrangements are discussed, and the various activities and procedures which delineate the safety representative's function are critically examined.

FORMAL PROVISIONS

Colliery Panels

The national agreement of 1978 overturned the principle of twenty years standing embodied in s.123(1) of the 1954 Act whereby the right to appoint a 'panel' of workmen's inspectors at coal mines was effectively an NUM (Group 1) prerogative. Considered as 'one union' for the purposes of the national agreement, representation by the NUM's constituent organisations was the subject of inter-'area' agreements. But apart from prompting the inclusion of the NUM's tradesmen's organisations in Scotland, Northumberland and Durham, supervisory employees represented by NACODS and managerial grades represented by BACM were now also entitled to appoint 'safety inspectors', as the industry's agreement dubbed them.

Interpretation of the 1978 agreement was the subject of Area negotiations as well as NCB Instructions¹ with particular attention being given to the number of representatives nominated by each union. Table 6.1 shows the outcome of agreements on the size and composition of colliery panels of union inspectors in Scotland and Table 6.2 lists those in post at the selected units: 8 at Village Pit and 10 and 11 respectively at High-Tech and Mid-Colliery, with the majority at each being representatives nominated by the NUM and SCEBTA.

Table 6.1.Safety Representation 'Panels' at Scottish Collieries.

	(a) At collieries with less than 1000 men	(b) At collieries with more than 1000 men
NUM	3	4
SCEBTA	2	4
NACODS	2	2
BACM	1	1
	<hr/> 8	<hr/> 11

Table 6.2.Safety Representatives Appointed at Selected Collieries.

	(a) Village Pit	(b) Mid-Colliery	(b) High-Tech	Total
NUM	3	4	4	11
SCEBTA	2	4	3	9
NACODS	2	2	1	5
BACM	1	1	2	4
	<hr/> 8	<hr/> 11	<hr/> 10	<hr/> 29

It should be noted first that although the term 'panel' suggests specialist expertise, the only qualification formally required of workmen's inspectors appointed under s.123 of the 1954 Act is that each should have not less than five years practical experience in mining. The 1978 agreement similarly made this a requirement for new entrant nominees.² But the national agreement also specified that all safety representatives should hold office for four years and would be required to undergo such training as agreed between the Board and the relevant union. The specified term of office contrasts with the one or two year term which conventionally applied to workmen's inspectors, as to all NUM branch officials. It appears to have been advocated by the NCB with the stated objective being 'to secure continuity and avoid a rapid turnover of inspectors not only because their training is expensive but because experienced inspectors are a valuable asset.'³

The extent to which interests in the asset of experience or the cost-saving effects played a part is a moot point. The costs involved were certainly considerable, for the NCB undertook to provide training for the industry's representatives rather than simply specifying arrangements for paid educational leave analogous to those of the SRSC Regulations. A strongly articulated preference among the NUM full-time officials interviewed for in-house training rather than 'exposing' the union's representatives to the less controllable influences of TUC provision probably played a part in this respect.⁴ As the agreement came into effect in 1978-9 the NCB organised a series of five-day induction courses in Scotland for NUM and SCEBTA inspectors, with shorter courses being held for NACODS and BACM nominees. Interests in discharging these training obligations and associated monitoring activities were a critical stimulus in ensuring that agreed establishments of union inspectors were initially appointed at Scottish collieries. Indeed, Tables 6.1 and

6.2 indicate the remarkably uniform response at local level, with 'vacancies' in the formally agreed complements of SCEBTA and NACODS inspectors existing only at High-Tech at the time of the survey.⁵

On the constitution of the panels themselves, the size of the NUM contingent conforms with the undertaking of the union's NEC 'to co-operate to keep the number of their nominees down to reasonable proportions', with 6-8 being defined as 'reasonable'.⁶ The tradesmen's complement was decided by agreement at Area level between the NUM (Group 1) and SCEBTA. The smaller number of NACODS and BACM nominees follows national guidelines but flexible provisions were built into the Scottish Area agreement for BACM enabling the nomination of up to four substitutes, so as to minimise the disruption of any one senior managerial job. It was only at High-Tech, however, that this option has been exercised and two men designated as BACM safety inspectors.

It is evident that neither the size nor composition of these panels is based on any rule of thumb ratio of union representatives to membership constituencies.⁷ In general terms this is in keeping with the concepts of effective organisation which limit the size range of branch establishments. For example, NUM Group 1 (which represents approximately 80% of the colliery workforce) had a branch committee of 16 to cover a membership of nearly 2000 at High-Tech whereas at Village Pit there was a branch establishment of 8 serving a constituency of just over 200 mineworkers. More immediately, the criteria determining 'reasonable' numbers of representatives is the maximum contingent involved in any single inspection or investigation and associated concerns with liaison and continuity.

That is, whereas the 1954 Act sets no formal limit on the size of a s.123 panel, it does specify that an inspection or investigation can be conducted by no more than two members of this panel (of whom one must be an employee at the mine). On similar lines, the 1978 agreement specifies that inspections and investigations can be undertaken by a 'team' consisting of no more than two NUM inspectors (all 'areas') and one each from NACODS and BACM.

The agreement that there should be no more than four Group 1 inspectors at a mine is in keeping with the NUM tradition on Scotland of appointing two workmen's inspectors and nominating one or two other members of the branch committee as substitutes. But SCEBTA now had to be accommodated according to the displacement principle. Consequently, although SCEBTA members constitute only about 10% of the workforce at Scottish collieries, a complement of representatives matching the NUM's was agreed by the areas' agents with a view to a tradesman pairing with a mineworker on any inspection or investigation.

One other aspect of note is that, contrary to the collective connotations of the term, there are no meetings between the entire panel of union appointed inspectors at a Scottish colliery. The safety sub-committees of colliery consultative committees were re-constituted in line with the new representational arrangements and these are the sole joint forum. But the same pragmatic concepts of effective organisation which forestalled a possible proliferation in the number of representatives and contained the size of an inspection party were also brought to bear in Area-level agreements on the size and composition of the re-constituted committees. Thus in Scotland no more than four or at most five men from the colliery panel of inspectors (together with one other lay representative from each union) can attend safety committee meetings. With no equivalent to joint shop steward committees,

liaison activity relies on informal communications between those representatives designated as safety committee members and other lay officials - with the NUM delegate or branch secretary playing a key co-ordinating role.⁸

Rights and Functions

The statutory provisions prescribing the rights and functions of workmen's inspectors under s.123 of the M&Q Act 1954 remain in force as far as NUM representatives are concerned. The industry's 1978 agreement closely defines the rights of the new entrants to participate in inspections and investigations and the precise nature of the NCB's undertaking to fund these activities. The combined and revised provisions are as follows.

In terms of inspections, s.123(2) of the M&Q Act entitles workmen's inspectors to conduct routine inspections of a mine throughout at least once per month. However, as noted in Chapter 5, it was customary for workmen's inspectors to make such inspections on a quarterly basis; a practice which was associated with the part-funding provisions of the 1941 (Safety Board) agreement. Under the 1978 agreement the NCB now bears the full wage costs for the routine inspection of a mine throughout once every two months by the combined 'team' of safety representatives. The specified interval and closely defined payment provisions are thus a compromise between the simple right to access monthly under the M&Q Act, previous payment arrangements, and the obligation placed on employers covered by the SRSC Regulations to provide time-off with pay for safety representatives to conduct routine inspections on a quarterly basis. As before, mine managements are obliged to provide access facilities should NUM inspectors wish to exercise their right to make more frequent inspections, but these are conducted at the NUM's expense.

Similar arrangements concerning payment and the involvement of the new entrants apply to the investigation of accidents and dangerous occurrences, and to any other inspection conducted by agreement at local level. The former are governed by fairly complex procedures set out in the M&Q Act (ss.116, 117, 120 and 123(3)) whereby the appointed union inspectors are to be notified of any serious (reportable) accident or occurrence and mine managements are obliged not to disturb the site before workmen's inspectors have had the opportunity to investigate the causes. There is, however, a standard 'consent' granted at all NCB mines which, together with an agreement between the NCB and NUM made in 1958, provides for the nomination of a number of NUM members by the local branch to act as 'Accident Site Observers' and enables management to disturb the site prior to investigation by workmen's inspectors.⁹ These arrangements still hold. Other 'special' inspections and investigations can be made by agreement between union representatives and a colliery manager, as provided in s.123(4) of the M&Q Act. The grounds for such activity are not defined either by statute of the industry's 1978 agreement, but the provision is similar in intent to the more specific provisions of the SRSC Regulations which entitle safety representatives to investigate 'potential hazards' and members' complaints.¹⁰

There are three other points of note concerning inspection and investigative procedures. First, according to s.123(5) of the M&Q Act the mine owner and any person nominated by him, the colliery manager and any person nominated by him and any undermanager can accompany workmen's inspectors on any inspection or investigation. This provision holds irrespective of whether a BACM member is present in the inspection team.

Second, the s.123 provisions go beyond those for the industry's new entrant representatives (and the SRSC Regulations) in specifying links with external regulatory agencies. Namely, in enabling the NUM to appoint non-employees as workmen's inspectors,¹¹ in the reciprocal right under s.123(5) entitling workmen's inspectors to be accompanied by advisors of their own choosing, and in providing a formal link with H.M. Inspectorate through written reporting procedures (ss.123(7) and (8)). The 1978 national agreement elaborated on the latter only to the extent of making it a function of the colliery safety committee to review the statutory report forms completed by NUM workmen's inspectors.¹² As regards the involvement of non-employees, the part-funding provisions which applied to the NUM's safety agents were revised along similar lines to those of NCB employees, so that the Board now reimburses the NUM for the full wage costs of inspections and investigations conducted by the union's safety agents.¹³

Third, the 1978 agreement makes no reference to information disclosure provisions analogous to those of the M&Q Act which entitle workmen's inspectors to inspect any documents kept in accordance with the Act (s.123(5)) and oblige all persons employed at a mine to disclose, on request, any information they possess which relates to the nature and extent of proposed workings in the mine (s.123(6)). Although the omission of similar rights for new entrant representatives is puzzling there is, evidently, an overlap between these inspection-related disclosure provisions and the broader terms of reference of the industry's established consultative machinery.

The closely defined character of national and area agreements covering the re-constitution of arrangements for safety representation at NCB mines points to a commitment on the part of the negotiators to (a) the orderly

implementation of changes in these institutions and (b) standardized procedures. The manner in which these provisions are interpreted and acted upon locally is considered next, beginning with a closer look at the take-up in appointments by the NUM and the new entrants, the characteristics of these representatives, and their reactions to re-organisation.

REPRESENTATION

Workmen's Inspectors

Safety representatives nominated by the NUM are still commonly referred to as workmen's inspectors. 'Veterans' predominated at the three selected units, with 6 of the 11 inspectors being over 50 years old. Most had a record of continuous employment in mining spanning 30-40 years and only one, at Mid-Colliery, was anywhere near the minimum five years employment requirement. Apart from his youth this individual also differed from the other workmen's inspectors in being the only surface employee. Nine were face-trained miners, but only three of these men were regularly deployed in production, development or salvage sections. This difference between job classification and actual deployment reflects in part the age profile of inspectors, but is related primarily to local time-off arrangements for lay officials.

Mineworkers and managers alike tended to dub workmen's inspectors as 'union men' or 'committee men'; a characterisation which reflects the traditional NUM preference for drawing these specialist representatives from among those already involved in the union through conventional channels (see Chapter 5). Table 6.3 illustrates the point. It shows that whereas incumbents continuous office as workmen's inspectors ranged from less than two years to over eight,¹⁴ only two of these men were newcomers to the branch committee.

All of the others had been branch committee members for a number of years before being appointed as workmen's inspectors, and five had acted as officials in some other capacity in the past. As regards post held concurrently, one of the workmen's inspectors at High-Tech was the branch secretary and at Village Pit all three held dual office - as delegate, secretary and treasurer respectively.

Table 6.3

Workmen's Inspectors : Length of Service as Union Representatives

(a) Continuous Years in Office as Workmen's Inspectors.

	High-Tech	Mid-Colliery	Village Pit	
Less than 2	2	3	-	5
2 - 4	1	-	1	2
5 - 7	1	1	-	2
8 +	-	-	2	2

(b) Total Years on NUM Branch Committee(s)

	High-Tech	Mid-Colliery	Village Pit	
Less than 2	-	2	-	2
2 - 9	-	-	-	-
10 - 19	3	1	3	7
Over 20	1	1	-	2

It was reportedly common for the delegate or branch secretary to act as workmen's inspectors in the past, but doubling on branch posts was described by these individuals as a matter of necessity rather than union policy or personal preference.¹⁵ While met in a different manner, the appointment of newcomers as workmen's inspectors at Mid-Colliery was also commented on by branch officials as an expedient. The common problem was that of recruiting and retaining suitably experienced candidates for branch office.¹⁶

This topic is worth examining given the stated interests in avoiding a rapid turnover among safety representatives and the reputation for rank-and-file activism among mineworkers.

The first point of note is that direct membership involvement in the nomination of candidates for branch office appears to be minimal. As principal negotiator, the post of delegate is the one most likely to be contested by what one informant described as 'the popular boys'; candidates with no previous experience on the branch committee who are nominated by particular workgroups or sections dissatisfied with local settlements negotiated by the incumbent. The delegate at Mid-Colliery alone fitted this bill. But whereas the delegate at each of these units had had his re-election contested at least once, the workmen's inspectors had all assumed and/or retained office unopposed. This comparative lack of competition for the job can be tied to the fact that the election process for workmen's inspectors has atrophied: all recent appointments of re-appointments at these units had been made and endorsed by the branch committee or at ordinary branch meetings rather than through pit elections.¹⁷

With the norm being stability in office, 'vacancies' for the position of workmen's inspector were reported to arise in one of three ways: (a) through the resignation of an incumbent to contest some other branch post, (b) resignation from the NUM on promotion to underofficial, and (c) retirements. A particular tendency for workmen's inspectors (compared with other branch officials) to be 'lost through promotion' was commented on by several informants and associated with a policy of the NUM, dating from the mid-1960s, of encouraging workmen's inspectors to complement the union's educational provision by attending deputy's qualifying courses. Although the numbers subsequently leaving the NUM to use this qualification were said to be significant, only one vacancy had arisen through promotion at the selected units in the five years prior to the study: a workmen's

inspector of 8 years standing at Mid-Colliery having sought and gained a position as colliery safety officer. (An interim as underofficial is usual but the pursuit of safety specialism is obviously popular given that 4 of the 5 safety officers interviewed had at some stage in their career acted as workmen's inspectors.) More immediately, the retirement of incumbents had been the most significant source of recent turnover among workmen's inspectors (and substitutes) particularly at the two larger units. The problem of finding replacements, with existing committee members being the first source, was linked by several informants to the phenomenon of 'ageing branches' or, more accurately, with a 'generation gap' among branch committee members. That is, few men between the youth delegates and those verging on retirement. Efforts on the part of lay officials to involve 'new blood' were common to all three units, with the pattern being an informal system of sponsorship among men exhibiting interest in the union through attendance at branch meetings.

It should be appreciated that although workplace organisation in mining centres on the union branch, branch meetings are not conducted on colliery premises or during working hours. Popular misimpression on this point is readily traceable, for numerous meetings are held at the pithead between branch officials as well as those involving particular sections. Moreover, the office facilities provided for the NUM at NCB mines are an obvious feature, usually prominently signposted along with all offices and surface installations in the standard yellow-and-blue NCB format! It is from this office, or 'lodge', that the NUM's national ballots are distributed. The returns on these ballots are undoubtedly high, but it would be mistaken to regard the turnouts for branch elections, let alone ordinary branch meetings, as being necessarily similar. As one of the branch officials put it,

'There's a big difference between voting on a ballot at the pit before or after your shift and the men attending branch meetings to cast a vote!... You'll get the solidarity and the packed meetings on issues like wages and closures, but if all's going well the men're just not prepared to attend branch meetings and record their views - they're more interested in the end results than in the business of the union.'

The outcome is a small pool of likely candidates, for branch officials reported that (apart from the full committee) there were rarely more than half a dozen members present at meetings.¹⁹ In short, workmen's inspectors at Scottish mines tend to be drawn from a small, mainly self-selected group of committed 'union men', most of whom have long personal histories of active involvement in branch affairs. The relevance of differing claims to the membership mandate as a resource for effective action is discussed later. What has been noted so far is the sense of tradition and organisational continuity which underpinned the concerns of local officials that the right to appoint workmen's inspectors is taken up on behalf of mineworkers and the agreed number of positions filled.

The New Entrants

(a) SCEBTA

Acting on the new rights to appoint safety inspectors entailed an expansion in the branch establishments on the NUM's Scottish tradesmen's affiliate, SCEBTA. The procedure was similar to the NUM's in that appointments were made by elected branch representatives rather than directly endorsed by the membership. The SCEBTA representatives thus selected were all apprenticed, experienced mine electricians or mechanics, and all were normally deployed on work underground rather than in the surface workshops. These men were, on average, younger than their Group 1 counterparts ; an age

range of 31-48 years, with most being between 38-43. The more significant difference, however, was in union profiles: only three of the nine SCEBTA inspectors appointed at these units had previously been actively involved in their local branches - including the delegates at Mid-Colliery and Village Pit who had doubled as safety inspectors. More than half reported that they rarely or never attended branch meetings and spoke of having been 'co-opted' onto the branch committee when nominated as inspectors. These men related having been approached by their respective delegates while at work and associated their appointments with their particular job, specialist expertise or local reputation.²⁰

As noted in Chapter 5, some informants spoke of SCEBTA as having been 'debarred' from involvement in the arrangements for workmen's inspectors prior to 1978. This should not be taken to mean the exclusion of SCEBTA lay officials from safety matters per se, for they were invariably present at some stage in those accident investigations involving SCEBTA members. Moreover, branch officials at Mid-Colliery and Village Pit claimed that a SCEBTA representative had occasionally (and with increasing frequency in recent years) been requested to accompany workmen's inspectors on routine inspections. The formal concession of rights to appoint safety representatives was thus commented on by most SCEBTA informants as being overdue recognition that, as one put it, 'SCEBTA should be given its place'. There had, however, been no surfeit of tradesmen at local level willing to take on the role. Indeed, SCEBTA delegates spoke of 'struggling to get the numbers'. This difficulty was attributed in part to the general 'great reluctance to participate in the running of the union', and in part to expectations as to what the role of workmen's inspector would entail. Thus, delegates attributed rejected overtures to a potential candidate's lack of confidence in his level of technical competency and, more significantly, to unpopular

'informer' connotations. As one delegate put it,

'A lot of men were frightened off because they thought it meant shopping your mates - that they'd have to stand in court against a mechanic or an electrician if he'd stepped out of line.'

Ambivalence on this score probably contributes to the emphasis which SCEBTA representatives placed on impersonal technical skills. Certainly, the self-image of these men was distinctly individualistic; with Group 1 inspectors acting as the reference point, most described themselves as 'not being union minded'. But this characterisation is also indicative of the ambiguity which surrounds the institutional position of SCEBTA: the union has catered to a growing and strategically significant section of the workforce but it still lacks the established niche of the mineworkers' and underofficials' organisations and, as reflected in the popular characterisation of SCEBTA as 'a sort of Group 1 nursery union-wise' functions locally in the shadow of the NUM.²¹ Associated with this, there was a marked tendency to regard SCEBTA inspectors as being under the tutelage of NUM men. Allusions of this character were made not only by the longer serving workmen's inspectors but also by safety officers and by some of SCEBTA inspectors themselves. For example, in references to the NUM having 'taken in SCEBTA', to following the NUM's lead and 'learning the ropes' from the workmen's inspectors.

In light of the above it is perhaps inevitable that the new alliance planned for in area agreements should run up against or exacerbate existing tensions between NUM and SCEBTA representatives locally. At the selected units a settled pattern had emerged by the time of the survey whereby SCEBTA inspectors paired with NUM inspectors on all inspections and investigations and also in making out the

statutory reports, but this was not the case at all mines in the Area.²² Moreover, although the relations between NUM and SCEBTA representatives at Mid-Colliery and Village Pit were described by the respective parties as cordial, at High-Tech co-operation was, as one informant put it, 'on bickering terms'; the product of a patronising stance adopted by some of the NUM veterans and the aggrieved elitism exhibited by a few of the tradesmen's representatives. Nonetheless, SCEBTA had been more readily integrated into established arrangements for workmen's inspectors in Scotland than the other new entrants.

(b) NACODS and BACM

NACODS lay officials reported that, like SCEBTA, they had occasionally been involved in routine inspections in a union capacity prior to 1978 as well as having an established role in relevant accident investigations. But the customary point of contact with workmen's inspectors for both NACODS and BACM members is as managerial and supervisory representatives. Thus deputies, overmen, and sometimes and under-manager will meet workmen's inspectors entering their respective sections for inspection purposes, and sometimes accompany them on part of their route. More formally, the management entitlement to accompany workmen's inspectors was (and is) invariably utilised. Common practice at the selected units was for colliery representatives to be accompanied by a safety officer (a member of COSA or NACODS) whereas the colliery manager himself or another senior BACM man normally accompanies NUM safety agents and MQI inspectors on their respective visits.

NACODS' response to the 1978 agreement had been similar to SCEBTA's in that the provision to appoint safety inspectors was met in part by men who were, as one delegate put it, 'outside the hard core of branch activists'. Schooling in collectivist traditions within the NUM and rapid promotion

once the decision to go for an underofficial's job has been made seem to be common traits among these activists. For example, the NACODS delegates interviewed had all been active as lay officials in the NUM prior to their promotion; two were now senior overmen and one was a colliery explosives officer. In contrast, although the NACODS inspectors at each of the selected units were also drawn from the high status grades (overmen and face deputies), for most of them an interest in union matters dated since their promotion to underofficial. Nominations for safety inspector had been sought from among the men regularly attending branch meetings, but others with an accredited reputation on safety matters had also been approached. Thus, two of those nominated as inspectors had no association with the NACODS branch at the time of their appointment but both men (one at Mid-Colliery and the other at Village Pit) were members of local Mines Rescue brigades; described as 'a sort of SAS - an elite among mining men'.

BACM has no equivalent to the branch organisations of the other mining unions for as a managerial union, representing a tiny minority at any one mine, it is a regional and national rather than a local entity.²³ The nomination of BACM inspectors had thus occurred at ordinary or specially convened business meetings of colliery management. Those designated as safety inspectors joked that their appointment had been less a question of volunteering than being 'told by the Chief' or 'asked by the colliery manager to take it on', Even so, two of these men considered themselves to have been 'an obvious choice' in that both were known to take an active interest in BACM affairs.

The appointment of supervisory and managerial representatives at these units occurred amid debate as to whether - and is so how - NACODS and BACM should actually take part in the joint regulatory arrangements. As has been indicated, one area of role ambivalence for a NUM representative lies in relation to the individual member who has contravened his duties as an employee. With the statutory responsibilities of line management being commensurably greater the question of role conflict is more acute for NACODS and BACM representatives - particularly for the latter. Indeed, it is worth noting that although BACM appointments at the selected units were all men drawn from the production engineering grades (mining, mechanical and electrical) this had not been the case everywhere. The pilot study conducted at another mine in the Area revealed that the colliery manager, believing the tensions between an individual's managerial role and involvement in joint-union activities to be irreconcilable, had screened out all managers with production responsibilities and appointed the colliery surveyor as BACM inspector. Widespread reticence among BACM members concerning their participation was couched officially in the muted terms of competing time commitments but 'unofficially', as one BACM inspector pointed out,

'We thought we were being put on the spot - that we'd be sitting ducks for the NUM and that we'd be there to defend ourselves'.

Discussion also focussed on the particular question of self-incrimination, with rota arrangements or opt-out provisions being made to avoid the situation where a NACODS or BACM representative found himself involved in inspecting the district, section or process for which he has jurisdictional responsibility on a day-to-day basis.

The outcome was that a NACODS inspector accompanied NUM representatives on most routine inspections whereas it was only at High-Tech that a BACM inspector numbered among the inspection party fairly regularly. These men reported that initial anxieties about being cast in a defensive role and 'wearing two hats' had not materialised: i.e. none had yet come across an occasion in their experience of inspections when he had felt it necessary to append a rider to the workmen's inspectors report. But herein lies a critical distinction, for apart from 'taking a back seat' in the scheduling and conduct of inspections, as one put it, lay officials and management informants alike emphasised the difference between NUM inspectors compared with those nominated by NACODS and BACM as being that the latter do not make and sign the statutory s.123 reports. Accordingly NACODS and BACM inspectors described themselves, like the accompanying safety officers, as participating in the joint regulatory arrangements simply as 'advisors' or 'observers'.

Re-organisation and 'the Team'

NCB policy statements issued with the 1978 agreement comment on the re-constitution of representational arrangements to include all recognised trade union as

'...establish(ing) the principle that safety is the prime, united and indivisible objective of all employees...(and) as a means of improving accident prevention and the safety arrangements at collieries.'²⁴

Informants were questioned on the symbolic and instrumental effects which they associated with re-organisation and, as might be expected, their reactions were decidedly mixed.

As regards specific pros and cons, most of the key informants (notably the safety representatives themselves) referred to two positive elements. First, that re-organisation had created 'a formidable team' in a technical sense through the new combination of experience and expertise, with the inclusion of electricians and mechanics in particular being commented on as a valuable complement to the hazard detection capabilities of mineworkers' representatives. Second, that the new arrangements had improved communications between workmen's inspectors and management generally, and particularly between workmen's inspectors and underofficials. On the other hand, management safety specialists invariably made some critical comment to the effect that re-organisation had entailed a loss of continuity and time-consuming liaison work associated with the relatively large number of representatives now involved and the introduction of rota systems for inspections.

On a more general plane, none of these informants subscribed unreservedly to the collaborative meaning imputed to re-organisation in NCB-NUM policy statements. This is not to say that ideology of collectivist interests in safety was challenged. Most made some reference to concepts of teamwork and a few elaborated on this theme; for example, the NUM safety agent who referred to the inclusion of NACODS and BACM as 'a sign of maturity' and commitment to the ideal of 'objective' safety work. Just as the recruitment of NCB safety engineers as union safety agents is significant in this respect so too the common backgrounds of, for example, NACODS delegates and colliery safety officers as 'union men' when in the NUM fosters role-interpenetration and emphasises common interests in mine safety locally. But there is a barb beneath the joking references to these men as 'turncoats'. And it was in a similar vein that most of the informants directly involved in implementing the 1978 agreement voiced

reservations to the effect that managerial safety representation at collieries was a paradox which verged on parody in blurring the traditionally independent role associated with workmen's inspectors vis-a-vis mine management. Colliery safety officers as well as NUM veterans were among those who were particularly scathing on this point, characterising re-organisation dismissively as 'a political scheme' which had served simply, as one workmen's inspector put it, 'to muddy the waters'.

It is interesting to note that the majority of rank-and-file mineworkers and underofficials interviewed vaguely echoed NCB-NUM espoused policy in linking re-organisation with collective interests in mine safety and concepts of teamwork - popularly supported with reference to the fact that mine managers and underofficials as well as mineworkers suffer fatal and serious injury accidents and debilitating occupational disease. But it was evident that for most of these men re-organisation had made little practical impression; the dominant view being that safety representation in mining was still very much 'an NUM affair'. Such reactions are hardly surprising given the way in which ambivalence concerning the participation of NACODS and BACM representatives had been coped with in practice: through non-action on the part of the BACM representatives at the two smaller units and a pattern of activity among the others which complemented rather than differed noticeably from the customary role of managers and underofficials respectively in accompanying workmen's inspectors in an observational capacity.

To summarize : implementation of the industry's agreement extending provisions for safety representation to all mine employees met with mixed reactions locally. A few key lay officials played a critical role in ensuring the take-up in appointments but among the new entrants, in contrast with the NUM, technical skills rather than a

demonstrable interest in union representation played an important part in the selection of candidates. As regards managerial representation, take-up of the new provisions had gone little beyond the formal nomination of safety inspectors. Indeed in practice, apart from the accommodation of SCEBTA representatives (henceforth bracketted with Group 1 representatives as workmen's inspectors), the immediate effects of re-organisation were less dramatic than changes in the size and composition of colliery panels of safety representatives would suggest. In short, the dominant impression gained is that by tradition, inclination and as representatives of the majority union the NUM workmen's inspectors are, as a safety officer aptly put it, 'still the leading gaffers'.

Having examined who is involved and with the focus being on workmen's inspectors, we turn next to consider what these men actually do. That is, the activities and procedures which delineate the safety representative's function in mining.

ACTIVITIES AND PROCEDURES

According to the prescriptive jargon of the M&Q Act (s.123) the provisions for safety representation in mining are promulgated specifically 'for the purpose of enabling inspections to be carried out at a mine...on behalf of the persons employed thereat'. This section describes how the formal provisions outlined previously are utilised locally, looking in turn at inspections, investigations, and associated reporting procedures. The overlapping representational function of workmen's inspectors as exercised through consultative procedures is also considered.

Inspections

Consistent with the term 'inspector' used for the industry's safety representatives, 84% of informants at the selected collieries cited routine inspections rather than the investigation of accidents or taking-up members' complaints as the primary function of these specialist union representatives. The emphasis given to routine inspections is unsurprising in that these are (a) the dominant activity in terms of time-off provisions and (b) the sole point of contact with workmen's inspectors for most workmen and underofficials.

The number of shifts involved in inspecting a mine once throughout is decided by the colliery safety committee and re-negotiated annually or in view of changes in the scale or nature of underground operations. The mine is divided into a number of sections for this purpose, each of which should take a full shift to inspect. Local agreements for inspections by safety representatives at the selected units were for 10 shifts per two months at High-Tech, 6 at Mid-Colliery and 3 at Village Pit. Scheduling arrangements vary, but the preferred format is for inspections to be timetabled in blocs of consecutive days (e.g. the first and fifth week of every two month period at High-Tech).

Although the colliery safety committee will agree on the schedule of inspections the amount of pre-planning is normally limited, with the decision as to which section of the mine will be visited on a particular day usually being made shortly beforehand by the NUM inspectors. Management permission must be sought but it tends to be a formality. As the deputy manager at High-Tech put it,

'The NUM boys have their heads together and come and tell me which section they want to look at and I've never yet refused permission

- if I did they'd think I was trying to hide something in that section and they'd make a beeline for it!'

Like the M&Q inspectors, workmen's inspectors tend to visit production and development sections more frequently than other relatively static districts. These periodic inspections are basically 'walkabout' in character, with the workmen's inspectors forming a general view of the state of the districts through which they are travelling. They may take atmospheric readings and will focus on particular problem areas noticed in passing or brought to their attention in discussions with the men working in those particular districts.

The time allocated as 'reasonable' for an inspection is determined in part by logistics and physically feasible travel times, but primarily by the purposes associated with it. There are, for example, differences in the pace at which a deputy is expected to conduct the statutory task-related inspections of his particular district and the pace at which an overman will cover the same ground. Similarly, local time-off agreements for inspections by safety representatives will necessarily be influenced by the NCB's policy of accommodation but they will also reflect attitudes to this form of worker involvement on the part of managers and union representatives at a particular mine. Differing evaluations can and will surface during these negotiations. For example, changes in the payment provisions with the 1978 agreement entailed re-negotiation of inspection schedules during which, at Village Pit, as one workmen's inspector related -

'The under-manager made it plain that as far as he was concerned it was just a formality - he thought we should be able to cover the whole pit in a single shift! What was the reaction? Well the CM nearly bit through his pipe when he heard that - it was so daft!'

Monitoring by the NUM is undoubtedly a significant factor influencing the outcome of local inspection agreements in that, as one of the union's safety agents observed,

'There are a few managers in this Area who pay lip service to it but who wouldn't give workmen's inspectors the time of day if they could get away with it'.

But the NUM can also be seen to exercise a moderating influence. For example, when questioned on changes in the payment provisions several informants expressed a preference for the traditional part-funding arrangements as a form of control over workmen's inspectors which ensured both accountability to the larger union and a degree of independence from mine management. Among the majority who favoured the new provisions, a few offered differing interpretations along the lines of the NACODS delegate who argued that the NUM had not pressed for an improvement in the funding arrangements inherited at nationalisation basically because 'as often as not the union full-time officials are afraid of rocking the boat'.²⁵

The NUM safety agents are, however, rarely involved directly in settling the differences which may arise during local negotiations over inspection schedules. Antipathy on the part of a few managers is, as indicated, subdued. It can be attributed in part to resentment at criticism coming from workmen's representatives and in part to beliefs that the arrangements for workmen's inspectors are an anachronism; as one management informant put it - 'a hangover from the days when the men were having to deal with rogue employers and intransigent managements'. With those openly expressing such views being in a minority, the position adopted by most mine managers seems to be one of acceptance if not enthusiasm.

In tracing the use made of the statutory provisions for workmen's inspectors from inception to date, it has been noted that the formal entitlement to inspect a mine throughout on a monthly basis has never been fully utilised - the interval in practice reflecting in part the fact that the burden of funding these activities rested with the workmen and their unions. An interesting aspect of contemporary arrangements in this respect is that a discrepancy also exists between formal provisions and practice in the application of inspection agreements. At each of the selected collieries the number of sections the mine was divided into for routine inspection purposes exceeded the shift allocations (by 3-6). Thus, even if inspected on a rotational basis, none of these mines could be inspected throughout at two monthly intervals. Indeed, although the reduction in the formal interval from 3 to 2 months with the 1978 agreement had increased the overall number of inspections, a concentration on production and development sections meant that in practice these mines were inspected throughout twice or at most three times a year.

The colliery informants who considered the agreed frequency of inspections to be 'on the borderline' of too few were in a small minority. And it was only the newly appointed workmen's inspectors (perhaps less influenced by past practices) who expressed dissatisfaction with the existing arrangements. Even so, when informants were questioned as to whether full use of the formal provisions to inspect the mine throughout on a monthly basis would be beneficial, their responses were invariably negative - primarily on the grounds that this would turn the workmen's inspectors' task into a full-time job. Three main arguments were advanced against this development.

The first, favoured by management informants, was that although the dynamic character of the working environment warranted constant monitoring, this task was

already being performed by under-officials. More frequent inspections by workmen's representatives were held to be both unnecessary and undesirable in that this was likely to change the character of job by, as a deputy manager put it, 'making workmen's inspectors into the sort of full-time supervisors we already have in the deputies'. This argument was put more forcibly by under-officials themselves along the lines of the NACODS delegate at High-Tech who exclaimed -

'But we're safety inspectors too - we're all safety men...As far as we're concerned there are 200 safety inspectors at this pit and we're on the job on a 24 hour basis 7 days a week...If the workmen's inspectors did any more (inspections) than they're doing now then we're into overkill - they'd lose their effect.'

Most of the workmen's inspectors and other lay officials took a different tack related to the question of representative's credibility in the eyes of members; the dominant view being that a significant increase in the time spent on routine inspections carried the risk of isolation and would invariably devalue the standing of workmen's inspectors as practical working men. This reaction should be seen in terms of the opposition commonly expressed concerning the notion of lay officials at collieries being engaged full-time on union business and the fact that branch officials all come up against half-joking accusations as 'guisers' and muttered grumbles that they are 'onto a cushy number' or 'on soft jobs'. They will themselves level harsh criticism at an individual thought to be abusing time-off privileges for personal ends, as a means of avoiding work, and will attempt to limit the damage by dissociation or seeking his removal from the branch committee. The accepted orthodoxy is that union representatives generally, and workmen's inspectors in particular, should spend time 'on the tools' and thereby

maintain a working knowledge of the habits and realities of mining experienced daily by the men they represent. Most of these informants were thus opposed to the idea of inspections on a monthly basis in the belief that, as one put it, 'it'd make the workmen's inspectors job look like a guisers charter', and thereby also attract men who were 'interested in the job for the wrong reasons'.

From a different angle, this was also a factor in the pragmatic third line of argument; that current arrangements were made with a view to 'what management will wear and what the unit will bear'. Reference was made by management informants not only to their general concern with controlling the amount of time lay officials spent on union business²⁷ but also to interests in the credibility of workmen's inspectors vis-a-vis the men if they were to act as effective channels of communication. Current arrangements were also seen as the product of 'responsible attitudes', with union representatives as well as management informants commenting on the cumulative loss of productive manhours associated with the exercise of inspection rights. To add to this burden on the unit - particularly at the smaller mines - was simply not politic at a time of grave uncertainty concerning the mines' viability and closures.

There are, then, well entrenched attitudes and beliefs which underpin inspection practices locally and militate against full use being made of the formal inspection provisions. The routine inspection schedules of local agreements give an appearance of bureaucratic rigidity at odds with the changeable and unpredictable character of the mining environment, but these schedules can be complemented by the impromptu investigative functions of workmen's inspectors.

Investigations

Investigative activities are basically reactive in character. As noted, there are provisions governing the investigation of notifiable accidents and dangerous occurrences and also for making other 'special inspections'. The accepted interpretation of these looser investigative rights is 'that it would be in the interests of safety for a special investigation to be undertaken of a part of the mine',²⁸ as agreed by the colliery safety committee or by the workmen's inspectors and the colliery manager.

(a) Accidents

Fatal and serious injury accidents and notifiable occurrences are relatively rare events at any one mine and a M&QI inspector, an NCB Area safety engineer and a NUM safety agent will all normally be involved at some stage in the investigation of such incidents. But as those among the first on the scene, workmen's inspectors and/or accident site observers have a critical function in the preliminary stages of the investigation. They will usually make sketches of the accident site and take statements from witnesses, and the workmen's inspectors will file a statutory report form which is then made available to any interested party.

Accident investigation procedures look fairly straightforward on paper but in practice, of course, they are not. It has been noted that official definitions of what constitutes a 'serious' (reportable) accident or 'dangerous occurrence' in mining are fairly restrictive, and contention can occur as to whether a particular incident is notifiable or 'a domestic matter'. The facility to conduct investigations 'in the interests of safety' can be used to cover the grey area. For example, at High-Tech where -

'a shaftsman got his arm trapped in a (ventilation) door - there was nobody about and he was stuck there near on 2½ hours before he was found. According to the lists that wasn't reportable - there was no fracture or burn - but his arm was near enough black from the loss of circulation and he was off work for months afterwards - and I ken that boy's no guiser. So his injury's serious, whether it's reportable or not - and we'll (workmen's inspectors) want to look into that kind of thing to make sure some other laddie doesn't get hurt like that again.'

Occasionally, according to an NUM safety agent, some colliery managers will refuse a workmen's inspectors request to conduct an investigation in such circumstances, although it was argued by NCB safety engineers that disagreement on this score was rarely about access per se but rather to do with who should pay for the investigation. Most workmen's inspectors will be given the benefit of the doubt in that, as one management informant put it, 'they won't ask for an investigation if they don't think it's warranted'. Nonetheless, a distinction is maintained between 'serious' incidents and the far greater number of relatively minor accidents and occurrences and it seems to be generally accepted that, as a workmen's inspector put it, 'it's not our place to look into every wee incident which crops up'. Disagreement as to whether an investigation is actually necessary was said by most to be confined to this sphere, with colliery management and union informants alike commenting on the need to guard against a tendency on the part of 'over zealous' or 'inexperienced' workmen's inspectors to want to investigate all such incidents or to 'act in the place of accident site observers'.

Changes in the criteria for 'serious' accidents anticipated at the time of the survey with the introduction of standardised HSE notification requirements were expected

to reduce the existing area of difference between 'serious' and notifiable incidents in mining. But concerns were expressed by a few informants (notably M&QI inspectors and NCB safety engineers) that the new reporting regulations, particularly provisions for the notification of relatively minor injuries on the basis of accident absenteeism criteria, should not be seen as necessitating any significant change in existing investigative practices which might shift attention from the pre-emptive functions of workmen's inspectors as exercised through routine inspections.

Discussion of accident investigations inevitably gives rise to the question of compensation. Of note here is the strict division of functions observed within the industry between the business of accident investigations and the prosecution of claims. This finds institutional expression in the existence of separate departments for safety and compensation within both the NCB and NUM, and is reflected in the views strongly expressed by NUM safety agents in response to questioning on this theme that, as one put it,

'The Safety Department and the Compensation Department have nothing in common and they're not complementary - one exists because the other has failed to prevent an occurrence, and our objective is to make the Compensation Department redundant!'

Efforts have been made to develop and maintain a similar division of functions at colliery level: the workmen's inspectors being concerned solely with accident investigations while the branch secretary and/or the delegate handle the business of processing damage claims and representing members at medical tribunals. The separation of functions is, however, neither necessarily clearcut nor appreciated in that most of the workmen and under-officials interviewed referred to compensatory considerations in response to questioning as to the role of workmen's inspectors in accident investigations. Moreover, although

not considered desirable, branch secretaries do double as workmen's inspectors and, as one pointed out, 'taking part in an accident investigation yourself can be of great help when it comes to preparing the man's claim'. Nonetheless, all the workmen's inspectors interviewed subscribed to the official view, as expressed by an NUM safety agent, that -

'The point of accident investigations is to reach an objective understanding of its causes, and you're not going to get that if you don't keep the two separate because the man's judgement is bound to be clouded by questions of what he can get for the victim. What we're going for is the facts ...and what each organisation does with the information afterwards is its own affair.'

The following extract from an NUM report for the mid-1950s²⁹ indicates not only that this sort of role demarcation is relatively recent, but also points to reasons for such a development other than those cited above, viz :

'The prosecution of claims for liability on behalf of injured members has become a very considerable task and a great part of the time of s.16 inspectors has been devoted to this work...It is hoped that the monies recovered from the Coal Board will act as a deterrent to bad practices and illegal or unsafe systems of work in the mines. Unfortunately there is little evidence of this desirable end being achieved.'

Hiving-off the compensatory work performed by workmen's inspectors can thus be related to the increasing volume of administrative work associated with processing members' claims. This in turn can be attributed not only to the escalating number of injury accidents occurring at that time but also to the steadily increasing proportion of accidents felt to warrant compensation : a theme commented on by several informants who contrasted their experiences in earlier days when men would lodge claims for seriously

disabling injuries to the situation nowadays where men with relatively minor injuries will ask 'what it's worth' - e.g. for burst fingers, 'black nail', and the blue scars which miners get when coal dust gets into cuts and grazes. The case for dividing the investigative and compensatory functions with respect to accidents was undoubtedly furthered by open acknowledgement of the fact that although the union was winning ever larger sums annually from the Board through common law claims, workmen's inspectors were being tied down with after-the-event paperwork which was having little tangible effect on safety performance at their workplaces.³⁰

(b) Other Safety Matters

Investigations by workmen's inspectors into matters other than accidents which are deemed to be 'in the interests of safety' also indicate a division of functions insofar as members' complaints and grievances over 'conditions' are defined as being the delegate's rather than the workmen's inspectors province. Compensatory allowances are a key factor here. The fact that bargaining over such matters used to be prevalent was commented on by several informants and linked with the combination of time and piecework payment systems which existed in mining up until the mid-1960s. As an NCB Area informant pointed out -

'There used to be allowances for almost everything and some would even go so far as calling for "danger money"...but we're growing away from all that.'

Those aspects of working conditions for which remuneration is considered the appropriate response can obviously change in the light of new information - the discontinuation of 'dust money' being one example. But there are still

allowances for working in certain conditions, such as heat and water, and most informants agreed with the view that it is eligibility for such allowances rather than concerns about safety matters per se which spark-off disputes and walk outs ³¹ As a safety engineer put it -

'These disputes are still about payment - you'll find that it's not the heat or the humidity that's stopping them going down but the fact that they're not getting the payments for "excessive heat". The men'll sometimes introduce safety into it and in that case a workmen's inspector may go into the section to take a look 'round - to check on the temperature readings and the flow of air - but any negotiation that goes on about the allowances is done by the delegate...The men may have a genuine complaint but I've never yet met a case which extra money couldn't solve!'

The point is underlined in the complaints voiced by several of the underofficials interviewed that they were supposed to be immune to the effects of working in hot or water-logged conditions in that they did not get the same allowances as the men!

A survey of 162 safety representatives from manufacturing establishments conducted by Beaumont (1981) showed that 51% considered their most important single function to be the taking up of individual workers' health and safety complaints with management. That over half this sample of newly appointed safety representatives were also shop stewards is probably significant in this respect. Certainly, the limited extent to which workmen's inspectors defined their role in terms of investigating men's complaints and the fact that none put this function above either routine inspections or accident investigations can be attributed in part to the sort of issue demarcation which exists between workmen's inspectors and the mine delegate. In part it can also be associated with the

characteristics of primary workgroups and established procedures whereby mineworkers can, as one put it, 'get a lot of questions about safety off through the deputies and overmen.'

Differences between workmen and underofficials invariably arise as to what constitutes a prompt or an appropriate response to the particular matters the men raise. But an insistence on procedures evinced by the workmen's inspectors themselves (related not just to 'good form' but also to concerns that workmen should not be found in breach of their statutory duties under s.80 of the M&Q Act to notify an underofficial of any immediate or anticipated hazard) means that they are only directly involved if a failure to agree is felt to warrant a formal complaint. Several of the underofficials interviewed pointed out that, as with grievances over allowances, 'you get threatened with the union by the men but they don't usually go to the extent of carrying it out'. Thus although miners will approach workmen's inspectors with a wide range of questions and concerns (common examples relating to dust, handling heavy equipment, and manriding facilities), we found a general consensus among informants that disputes or grievances of this character 'rarely reach the surface'.

Although investigations are rarely instigated directly in response to members' complaints, workmen's inspectors are usually well informed on the problems or developments in different parts of the mine which are giving cause for concern. Apart from hearing what is 'on the grapevine' when working underground themselves, such information comes to their attention through the network of accident site observers and branch committee members, liaison with the branch secretary, the delegate, and management safety specialists. Routine inspections will be scheduled on the basis of such information unless the matter is consid-

ered urgent enough to warrant an investigation. At the two smaller units workmen's inspectors had requested permission for no more than 3 - 5 such investigations in the year prior to the survey. More would be expected at larger units, but custom and practice concerning time-off arrangements for union representatives also has a bearing on the fact that at High-Tech, as the safety engineer put it, 'hardly a day goes by when the workmen's inspectors don't find some excuse to be off 'round the pit'. But an interesting point is that much of this activity (estimates ranging from a third to more than half) is initiated by management rather than by the workmen's inspectors themselves. For example, by a safety engineer wanting assistance with regard to an NCB safety inspection scheme or as a result of requests made by a colliery manager during a safety committee meeting; e.g. that workmen's inspectors should 'talk to the men in a particular area where illegal manriding is suspected'. Moreover, much of the investigative activity which does occur at large mines such as High-Tech is informal in that workmen's inspectors do not submit written reports.

Reporting Procedures

The reports completed by workmen's inspectors tend to be brief, itemized listings of matters ascertained as a result of an inspection or investigation. The standardised report form used has a wide margin section which should be completed by the manager within seven days, giving details of any specific action taken as a result of the report.³² Managers will usually add their comments to the report before copies are posted up in the mine and despatched to the M&Q District Inspectorate. Copies are also usually sent to the NUM safety agents and kept for branch files, while the original is kept in a book at the mine. As with all entries made in a statutory book used at a mine these reports must, according to s.133 of the M&Q Act, be preserved for three years after they are made.

The significance attached to these written procedures as a source of legitimacy and leverage is discussed later. Of note here is that the distribution of workmen's inspectors reports and their potential uses as a record of matters raised and action taken makes them potentially controversial documents. Standards and reporting styles vary considerably but the conventional and (NUM) approved format is negative in character. That is, a listing of specific hazards or contraventions or matters felt to warrant attention rather than positive statements to the effect that a particular piece of equipment, process, or section is "in good condition" or "working satisfactorily". The rationale is not one of personal liability (workmen's inspectors have no statutory responsibilities for mine safety per se) but rather the possible use of these reports in the event of accidents or inquiries. Nonetheless, we found that a few of the workmen's inspectors at Mid-Colliery and Village Pit did go in for positive reporting and that this was actively promoted by the colliery managers at these units - ostensibly on the grounds that it was dispiriting for under-officials to receive only negative comments on their sections but basically, as safety specialists at those units interpreted it, as a form of "insurance cover" or "clearance".

Workmen's inspectors write their reports immediately after an inspection and, as all parties will assert, these are not modified or re-written in the light of subsequent discussion with mine management. Much is made of this by both sides as evidence of the independent nature of the workmen's inspectors' reports. Nonetheless, as verbal reporting in situ is an accepted part of the process it is hardly credible to assume that the content of written reports are not influenced by the discussions which occur with under-officials and managers during the conduct of an inspection or investigation. Indeed, the process can be seen as one of quasi-negotiation in all but name in that,

while disagreement as to whether a problem exists and should be dealt with was said to arise rarely, discussion as to whether or not a particular matter raised by workmen's inspectors warranted inclusion in the reports was acknowledged by management and union informants alike to be common. This was seen as being legitimate by managerial and supervisory informants as a means of 'setting workmen's inspectors on the right lines' - ensuring that the reports were not, as one put it, 'full of trivial issues or matters which the deputy is already dealing with'. This can, however, verge on or be construed as 'interference', and most workmen's inspectors will cite instances of browbeating by under-officials and/or under-managers concerned that a particular contravention brought to their attention by a workmen's inspector should not be broadcasted. On the other hand, several of the line managers and under-officials interviewed referred to the practice of mentioning particular matters to workmen's inspectors 'on the side' on the grounds that 'priming the union', as one under-manager put it, was an effective means of expediting action (e.g. as a means of 'jumping the queue' for a lathe repair job, hastening the delivery of supplies which have been ordered or securing extra manpower requested to perform a particular ancillary task). The net effect in terms of what actually goes into the written reports thus depends not simply on the experience and inclinations of the workmen's inspector but on the state of existing relationships between the union representatives and local management. Indeed, as an MQI inspector commented,

'You can usually tell from what goes into a report and from reading between the lines whether or not industrial relations at a mine are at a low ebb'.

Apart from the written reports, there are established procedures for referral and information exchange between workmen's inspectors and MQI inspectors, but there is

little in the way of direct contact. Questioned on the point of feedback to the workmen's inspectors' reports, MQI inspectors themselves acknowledged that this was limited and that the information disclosure provisions of the HSW Act 1974 (s.28), which require HM Inspectors to inform nominated representatives about any unusual or important issue relating to workplace health and safety, had prompted a re-appraisal of existing liaison arrangements. As it stands, MQI inspectors are rarely accompanied on their inspections or investigations by workmen's inspectors.³³ Arrangements are usually made for a union representative to meet a MQI inspector after the latter's underground visits, but the workmen's inspector is not necessarily involved. As a basic grade inspector put it -

'If there's an accident you'll seek out a workmen's inspector, because he'll have been involved in the initial investigation, but otherwise you're just looking for an NUM representative who will pass on the information and the delegate is usually the man most available'.

Apart from such occasional contact as occurs, workmen's inspectors do not refer directly to the MQI. Accepted form is that their first point of contact is with the NUM safety agents. All communications are channelled through one particular individual, either the branch secretary or a senior workmen's inspector, and regular 'phone contact between these men and the NUM safety agents is maintained at most mines. This covers local developments relevant to the routine inspection visits conducted by NUM agents and the outcome of any investigations into accidents or dangerous occurrences. Workmen's inspectors will also refer to NUM safety agents rather than to MQI inspectors when, as one put it,

'They're getting a technical story they can't understand or being given the runaround by management'.

The NUM safety agent may then in turn contact the MQI.

Within the mine workmen's inspectors' reports form part of the agenda on the safety committees and colliery consultative committee.

Consultative Procedures

NCB monthly bulletins on fatal and serious accidents, a colliery's accident record, results of safety competitions and its place in the NCB's 'league table' for mine safety as well as workmen's inspectors' reports are the sort of matters discussed at safety committee meetings. It is normally at these meetings that the colliery manager will amplify on his brief written response to the s.123 reports and that discussion occurs between workmen's inspectors and senior colliery managers as to what type of remedial action is appropriate for any particular problem.

According to NCB recommendations on the constitution and functioning of safety committees, meetings should be held at least quarterly. Practice varies considerably. Meetings were held religiously every fortnight at High-Tech and on a monthly basis at Mid Colliery. But at Village Pit the safety committee existed to all intents and purposes only on paper - having met once only in the year prior to the survey. This non-use or 'lapse' was associated with the fact that 'the same faces' sat on the consultative committee. As safety matters and the workmen's inspectors reports were discussed at these meetings (held weekly or fortnightly at all mines), to hold safety committee meetings as well was considered merely to duplicate the business being handled elsewhere.

Colliery consultative committees function primarily as a means for senior managers to inform workforce representatives about the mine's productive performance, the problems that it is facing and future plans. Particular working methods and the performance of particular sections are also considered. "Safety policy" in this sense also comes in the remit of these committees.

Studies of consultative procedures as a means of workers' involvement have pointed to a demarcation or gap between business/strategic decisions and job/task related decisions (see e.g. Cressey et al, 1981). The same sort of demarcation applies in terms of safety policy. That is, decisions relating to mining methods, transport systems, the introduction of new technology and capital investment are taken outside the colliery. Only one of the workmen's inspectors interviewed felt that colliery representatives should have more say in these decisions. Workmen's inspectors are however, involved in implementing these decisions and negotiations occur at this stage. In short, they are involved in the administration of rules rather than their determination.

SUMMARY

This chapter has described the institutional arrangements for safety representation in mining and the use made of statutory provisions locally. Take-up in the appointment of representatives is governed in part by NCB-NUM espoused policy and monitoring by Area agents but relies heavily on the activities of a few lay officials locally. Periodic routine inspections are clearly the primary function. What emerges is a picture of highly specialised union representatives, a narrowing focus on technical rather than compensatory matters, and an established pattern of activity.

Close bureaucratic controls and the institutionalized character of safety representation in mining ensures the maintenance of this form of worker involvement, but this is not an end in itself in terms of occupational hazard control. The following chapter assesses the contribution of workmen's inspectors to workplace health and safety.

CHAPTER 7

WORKMEN'S INSPECTORS CONTRIBUTION

WORKMEN'S INSPECTORS CONTRIBUTION

This chapter is concerned with interpretation: the meaning associated with workmen's inspectors activities and assessments as to the value of these arrangements for safety representation. The objectives associated with workmen's inspectors are first discussed and an attempt is then made to explain the origins of these role expectations with reference to underlying attitudes and beliefs concerning occupational hazard control in mining. The contribution of workmen's inspectors as seen by the different groups involved in mine regulation is then examined.

GOALS

General and Specialist

'Accident prevention', 'mine safety', and 'the protection of men from the health and safety risks of mining' are the phrases popularly used to describe workmen's inspectors general goals. These general objectives are held to be common to all parties in mining, with the refrain among informants at collieries being that the unions, NCB managements and the M&QI inspectors were all 'after the same things'. A corollary is that workmen's inspectors themselves tend to echo the views expressed by Commissions of Inquiry over the last century (see Chapter 2) in describing their role as one of assisting mine managements and the Inspectorate in achieving these ends. Indeed, this was a point which was frequently made during the interviews. For example, the workmen's inspector who considered the new payment provisions introduced with the 1978 agreement to be 'a good thing' on the grounds that -

'we're doing a job for the Board as well
as the Union and the men at the mine...'. .

More specifically, we found broad agreement among informants that the particular purposes of carrying out the workmen's inspectors functions were (a) monitoring and (b) educational.

The monitoring role of workmen's inspectors was interpreted in two different ways. The majority of informants took the view that the NUM representatives acted primarily as reporters; bringing health and safety hazards to the attention of mine managers and H.M. inspectors. This was the interpretation favoured by the M&QI inspectors, line managers and under-officials interviewed. As the matters raised reflect primarily on the standards maintained by under-officials it is hardly surprising to note that few of the under-officials interviewed considered this function in a favourable light as assistance per se; the refrain being somewhat disparaging references to the workmen's inspectors as 'fault finders' and references by some to the effect that workmen's inspectors monitoring activities amounted to 'spying missions'. Perhaps reflecting this element of resentment nearly all the mineworkers interviewed and more than half (12) of the NUM representatives themselves interpreted the workmen's inspectors monitoring activities in terms of enforcement. That is, as having a 'watchdog' role in ensuring that mine managers and under-officials were complying with statutory standards and regulations; that they were 'following the rules' and 'working by the book'.

The educational purposes of workmen's inspectors were generally seen in terms of promoting safety awareness among the workforce, disseminating information about health and safety, and encouraging the men to adopt best working practices and abide by the colliery managers rules and regulations. Management informants stressed the latter in particular, with the activities of workmen's inspectors in this direction being to complement managerial efforts in 'getting the message over to the men'. All but one of the workmen's inspectors interviewed accepted that they had a role in educating the workforce and most saw this in leadership terms rather than simply interpreting or 'translating' information about safety for the men they represent. It

is, however, interesting to note that most of the workmen interviewed emphasised the observance of rules, the refrain in this sense being that the workmen's inspectors job was 'to put us on the right track' and 'keep us in line'.

Technical and Motivational Controls

Concepts of control are central to safety regulation and the purposes associated with workmen's inspectors need to be seen in these terms. A distinction can be drawn between what Dawson et al (1983) usefully dub as 'technical controls' and 'motivational controls'. The former covers control activity directed towards the identification of a particular hazard, the determination of means to tackle the problem (be it elimination, containment and/or mitigation), and the implementation and maintenance of the physical and procedural standards or safeguards developed. Motivational controls are those concerned with the more diffuse objective of influencing attitudes and behaviour in the sense of promoting and maintaining general safety awareness and commitment to technical controls. As indicated in the previous chapter, workmen's inspectors do play a part in the solution of particular technical problems - in discussing alternative ways and means of performing a particular task or implementing policy decisions. But the monitoring and educational purposes associated with workmen's inspectors activities emphasize their presence in terms of motivational controls. In short, as a safety officer aptly put it,

'workmen's inspectors are there to jag management and to keep the deputies and the men on their toes'.

The following section looks at the basis of these role expectations and reactions to the activities of workmen's inspectors in terms of underlying attitudes and beliefs as to management and workforce interests in occupational hazard control in mining.

INTERESTS IN OCCUPATIONAL HAZARD CONTROL

Corporate Management

As has been noted, the arrangements made for workmen's inspectors locally reflect the NCB's policy of accommodation. Corporate policy can also be expected to influence attitudes and reactions to this form of worker involvement - and indeed the role adopted by workmen's inspectors - insofar as these are tailored to management interests in safety regulation generally. It is in this sense that the commitment of senior managers to safety objectives is widely regarded as critical in determining the effectiveness of 'self-regulatory' measures throughout an organisation.¹

We found a general consensus among informants that the NCB was 'a progressive employer' and that its reputation as a 'safety conscious' corporation was justified. The political-organisational 'culture' or 'ethos' of a corporation is an intangible, but interests in safety can be expressed in a number of ways. Formal declarations such as those made by the NCB in the policy documents issued for interpretation of the 1978 agreement on safety representation (see p.178) have an impact. But the most obvious and tangible demonstration is a willingness to allocate financial resources, and it was largesse in this direction which most colliery informants referred to as evidence of the NCB's sensitivity on safety matters.

Public ownership was considered by several colliery informants to be a significant contributory factor influencing the NCB's stance on safety matters in the sense of access to a relatively 'bottomless purse' - despite the strings being drawn in! - or ability to pass on the costs involved. Others referred to accountability in terms of the social obligations placed on the Board by the Nationalisation Act as an element. But

the point that the NCB is sensitive to these social obligations should not be taken to mean that it is necessarily more responsive than private corporations per se. As one M&QI inspector responding to questioning on this theme observed -

'I expect you'd find the same sort of commitment to safety in most major corporations...We find that the quarries owned and operated by the larger companies - particularly the multi-national corporations - tend to be as good as the NCB's mines when it comes to safety standards'.

M&QI informants together with NCB and NUM Area informants commented at length on 'cost-benefit' evaluations as being the basis for expenditure. NCB safety engineers in particular considered that decisions to implement a particular measure depended on a strong case being built for it in that, as one observed -

'Safety is a relatively new profession in this country and we tend to be the poor relation of industry - and that's the case even in mining. And as a struggling industry there are obviously limits to what we can spend - especially in Scotland. So ours is basically a selling job - and we've got to get better at showing how we can contribute to efficiency by designing safety into processes.'

The 'accidental' politics of safety do, however, prompt the allocation of resources. Hence the adage among safety specialists at colliery and Area level that 'the easiest way to get money spent is after an accident'. In particular, cost-benefit considerations were accepted as being of marginal significance in the wake of disasters, with every Inquiry costing the NCB millions (£) in implementing measures at all units to prevent a recurrence.²

Colliery Management

Accountability within the NCB for performance in the areas of production and safety are likely to affect a colliery manager's interpretations of NCB espoused policy on safety as 'the prime objective of all employees'. A reliance on the essentially negative criteria of accident records and the conceptual and pragmatic difficulties associated with developing more positive measures of safety performance undoubtedly play a part here.³ But the typical reaction to questioning on 'Safety First' slogans was that of the colliery manager who exclaimed 'we dig holes in the ground for the purposes of getting coal!': most informants held firmly to the view that mine managers' objectives were (and should rightly be) defined first and foremost in production terms. The schooling of managers in this sense was commented on by a M&QI inspector as follows -

'Your under-manager or colliery manager is a man who, from the time of joining the industry, has been production orientated - everything he does or thinks is production orientated - sometimes to the detriment of safety.'

This is not to imply a disinterest in safety; most informants at the selected units considered their respective colliery managers to be 'very safety conscious' or at least concerned with the safety and welfare of the men. But concerns with productive performance and viability were accepted by almost all informants as legitimate constraints affecting what could be done in the way of safety and, in particular, in framing a colliery managers willingness to promote particular developments which involve negotiations with Area managements over capital investment or budget relaxations. For example, proposals by workmen's inspectors at High-Tech that refrigeration plant should be installed as part of the ventilation system

so as to cool the airflow were considered desirable as a means of eliminating chronic problems of heat and humidity in certain sections. It was accepted, however, that to raise such a capital investment project at a time when the colliery was struggling to demonstrate its viability and thereby secure its future would not be politic.

It has been argued that management interests in safety will be strongly influenced by the extent to which the achievement of overall business objectives are seen as being dependent on, and/or served by hazard control. Statutory standards and technical considerations play no part in decisions such as that described above. It is simply an example, one of a number of situations, involving activities and decisions where health and safety considerations are accepted as having to be balanced against other demands and the practical realities of organisational existence.

In terms of day-to-day operations, as shown in Chapter 5, management organisation at collieries is subject to the strictures of the M&Q Act and a host of subordinate statutory instruments. The fact that all levels of line management have clearly defined statutory responsibilities and duties for safety can be taken as indicative of the inter-dependence between safety and production in mining. The question here is (assessments of) the priority which management accords to safety on this plane, in terms of ensuring that the various formally defined rules and regulations governing the conduct of colliery operations are actually observed.

Espoused and attributed beliefs were found to match on the point that the colliery manager himself placed 'safety first' where specific legal considerations played a part in any of the activities or decisions he was personally involved in. Two main elements were referred to by informants as influencing this stance. First, the

colliery manager's own sense of personal identification with the safety and welfare of the men and a natural aversion to creating harm and unnecessary risk at work. Second, his personal interests in 'self-preservation' in the sense that, as one miner put it, 'he's the man for the chop if anything goes wrong'. An appreciation that the NCB is more likely to castigate than to defend a manager found to be in breach of his statutory duties figured prominently in the responses of BACM member, with instances being cited of BACM members having been dismissed in the wake of Inquiries. The close character of regulation and supervision by the M&QI is undoubtedly also influential in this respect. There were, however, marked differences in beliefs as to whether a colliery manager actually wanted to be informed of malpractices or activities which were technically in contravention of formally defined procedures. And the fact remains that the critical elements here are beliefs as to the relationship between operational efficiency, compliance with safety rules and regulations, and perceptions of risk per se.

The official view is that safety rules and regulations are a codification of best practices which are drawn up with a view to efficient production. Although it was acknowledged that specified standards and procedures inhibit maximum potential productivity (e.g. in terms of available machine running times, speed limits on transport vehicles, etc) BACM informants at the selected units expressed a strong belief in the official line that 'safe production is efficient production'. Nonetheless we did find quiet sympathy with the view that this was not necessarily synonymous with strict compliance with safety procedures - among basic grade M&QI inspectors as well as management informants. Indeed, it was a M&QI inspector who commented that this 'would be likely to upset the operations somewhat'. But this discrepancy is seen in progressively more radical terms the closer one gets to the point of production:

'pit wisdom' being reflected in the popular adages, as expressed here by a mineworker, that

'if you went strictly by the book you wouldn't raise a tonne of coal!...Or we'd be selling what we did get in 11b bags at chemist shops!'

The questions of safety, operational efficiency and compliance with formal procedures were discussed by BACM informants with reference to the type of contingency management required to cope with the heterogeneous and unpredictable traits of mining. This was popularly expressed in the refrain that 'mining is all about safely supervised improvisation' in that, as a deputy manager put it, 'you're continually having to re-adjust your thinking about the way things are to be done'. The point here was that statutory standards and procedures had to be both interpreted and applied 'with a large dose of common sense'. Applications to the M&QI for 'consents' and exemptions from particular statutory requirements were discussed in these terms, as was the determination of standards and procedures detailed in the support and transport rules which a colliery manager is required to draft and submit to the M&QI for approval before work in any section can commence. Indeed, it was discussion of these rule-making procedures and the delays experienced in obtaining any subsequent amendments which prompted the safety engineer at High-Tech to exclaim -

'The colliery manager is obliged to fashion the stick to beat his own back with - and that's what the rules can be unless you're damn careful with the wording not to set yourself legally binding standards which just aren't practicable to work with or abide by... For example, that you specify 4 feet rather than 3 as the maximum permissible spacing between powered supports so that you can spread them out if roof conditions in that section turn out to be O.K.' 4

Practicability is, however, also the guiding tenet in terms of adherence to formally defined procedures and was accepted by managerial informants as being a critical element in the judgements and decisions made on the spot by BACM men to cope with particular problems. And the point that non-compliance can and will occur in particular situations is formally conceded in that, under s.157 of the M&Q Act, one line of defence open to anyone charged with an offence lies in proving that 'it was impracticable to prevent the contravention'. M&QI and management informants alike asserted that the circumstances in which such actions could be justified were exceptionally rare. Nonetheless, while there are acknowledged 'grey areas' in this sense, far more pervasive are those situations where, as an under-manager put it, 'you're bending the rules a bit rather than breaking them'.

The Miners

The attitudes and behaviour of men at work are likely to be influenced by the commitment to health and safety demonstrated by colliery management and, as indicated, the cues coming down to under-officials and workmen can be ambivalent. Yet accident rates also point to interpretative activity which amounts to normative acceptance of rule-bending. Indeed, this is underlined by references in recent M&QI reports to the high proportion of accidents attributable to 'lack of discipline', 'bad operator practice', and improvisation in the use of equipment and in methods of work, together with periodic statements decrying situations where unsafe practices have been condoned by mine officials or otherwise tacitly accepted as the norm.⁵

In view of the above there are certain aspects of 'pit wisdom' concerning safety which should be mentioned. The baseline here is an acceptance of risk as an intrinsic

part of work activity. This finds popular expression in the adage that, as a deputy put it,

'If you wanted to make a pit totally safe there's only one way you can do it - and that's to leave the turf on top!'

In part such beliefs stem from recognition that even the strictest observance of statutory safety procedures - or 'the Bible' as the M&Q Act is popularly dubbed - would not prevent all accidents. But in part they also embody an element of fatalism about injury and disease and tolerance for 'minor injuries' as 'part of the job'. At the same time every man is credited with 'pit sense' concerning safety fostered by the very nature of the work. Thus deputies and workmen will talk about 'taking shortcuts but never taking big risks'; of workmen themselves 'sorting out a boy who's sticking his neck out', and the type of awareness which would, for example, render a man caught smoking underground liable to be lynched by his own work-mates.⁶

The co-existence of such beliefs that conscious or deliberate risk-taking (which jeopardises the safety of the perpetuator and/or others) is the province of a tiny minority while risk per se is an accepted part of working life may be strongly articulated in mining. But it should not be regarded as peculiar to the industry or even to dangerous trades. Rather, it points simply to the existence of what can be called a 'wage-risk contract', much on the lines of the accepted notion of an 'effort bargain' as applied to productivity, in that there are normatively accepted levels of risk - and the amount rather than the principle of exchange which is questioned. The refrain among under-officials and mineworkers that 'you can bend the rules a bit and still be safe' should be seen in this light.

Non-compliance with specific statutory requirements on the part of deputies and mineworkers alike, whether deliberate or not, undoubtedly arises through a failure to appreciate or recognise the accident potential associated with a chosen method or task. This in turn can be linked with the demands placed on an individual's initiative and competence to deal with the immediate or routine business of contingency management and thereby minimise workflow disruptions. But of immediate interest here is the way in which deputies and workmen see 'shortcuts', in terms of saving time and effort rather than risk-taking per se, as legitimate means of 'marrying safety and production'.

Under-officials

The strains of coping with contradictory pressures and constraints focus on the deputy as the mine official with immediate statutory responsibilities for the safety of men working under him as well as the task duties of a first line supervisor. Most of the under-officials interviewed described their job in this sense as involving 'a daily balancing act' which required compromise solutions rather than strict compliance with formally defined safety procedures.

Deputies invariably responded to questioning on compliance with formal safety procedures with some reference to task-overloading and difficulties of having 'to apply the Act and to get the volume of coal that management requires'. Management pressures were generally accepted to be diffuse rather than direct but 'the message' concerning productivity, production targets and viability was felt to be plain - particularly so at Mid-Colliery in being seen to stem not simply from middle-ranking managerial grades but directly from the colliery manager personally.⁷ A corollary was the attitude that 'some rules were made to be broken' and, particularly among under-

officials at High-Tech and Mid-Colliery, resentment at what was interpreted as active duplicity in this respect on the part of mine management. This was normally expressed to the tune that although the colliery manager was required to draft rules and the deputies did try 'to work broadly within them', many of the detailed requirements were 'impracticable' and existed solely for the purpose of 'covering the Board and the colliery manager's backside if anything goes wrong'. As an under-official at High-Tech put it,

'You can have an accepted practice which a man may've been doing for years without so much as a scratched finger but if there's an accident it's never the system that's broken down or the rules which are at fault - it's the man who's blamed because he wasn't following the rules!'

Yet, although there was a strong sense of grievance about 'buck-passing', it was precisely the statutory character of the deputy's own responsibilities which were emphasised as providing a buffer to management pressure. Thus on the one hand we found sympathy for the belief that a deputy who was 'a stickler for the rules' would be 'quietly moved' by mine management to a section 'where he wouldn't be holding up production'; but on the other that while management officials may complain of delay they would not directly challenge any action taken by a deputy in the interests of safety (such as locking-off a machine or withdrawing men from a section), and were bound to support such actions because, as one deputy graphically put it,

'The deputies can't afford to act otherwise - if there's an accident we're the boys that go in front of the geezer with the crimped wig and no-one else wants to know you then'.

In short, it was this awareness of the deputy as being 'first in the firing line' which served to forestall the

expression of managerial pressures for production, ensured that the deputy 'watched himself' and that safety took precedence over all other considerations in 'crunch situations'.

Workmen

As has been noted, supervision in mining retains the character of periodic visits to the places where men are working and, as such, mineworkers possess a fair degree of task autonomy. A corollary is (a) the reliance placed on workmen themselves to follow formally defined procedures and (b) an appreciation that malpractices or risk-taking can easily remain hidden from even the most vigilant deputy. Indeed, a refrain among the deputies interviewed was that as 'the middle men' they were acting not simply as a buffer between management and the men but also 'getting it from both ends'. As one put it -

'The men see more of the job than you do just passing it and in fact it's the men who run the place - especially if they're a good team - and you just organise it. If they see anything's wrong then they're not slow in raising it - but that's mostly if you've got geological problems - it's the men pushing you to keep the job going or complaining that the job's getting held back because of equipment or materials they need is slow in coming or parts have been pilfered off it on it's way between the cage and the section and that sort of thing. But if they're on a good road then you never really hear from them - except for the usual 'keep me going with girders'. And then if you go up the road and maybe spot something they'll accuse you of not wanting coal or of trying to stop them making money because you're stopping the road for a wee fault....!

Workmen's interests in speed and the manner in which these were seen as being affected by strict compliance with formal procedures did not differ noticeably from

those of mine officials. But given that these are the men who bear the brunt of failures in occupational hazard control, it is worth mentioning here the three contributory elements which informants considered to be most significant in fostering and/or reinforcing incentives to take shortcuts. First, that interests in job security can exert an overriding influence; a point made eloquently by the mine-worker who, referring to threat of closure which was hanging over his workplace at the time of the survey, exclaimed in angry tones that -

'men at this pit and at others too I ken have been making a big effort to increase productivity and there's shortcuts that've been taken to get productivity up to the record level we've been tallying up here - and our reward for all that is the Board turns round and puts us on the hit list!'

Second, a natural desire to minimise the time and effort required to 'get the job done'; and it is interesting to note that the type of group bonus system introduced in 1978 was not considered to be a significant contributory factor in this respect.⁸ And third, a 'work ethic' commonly discussed in terms of a preference 'for getting on with a job rather than looking at it' and related to (a) the kudos associated with the reputation of being an experienced miner and (b) a low tolerance for 'guisers' or men who 'don't do their stint'.

'Disciplinary offences' should also be mentioned here in that, as has been noted, contraventions of safety rules are regarded as a form of industrial misconduct. Disciplinary procedures are normally instigated only for behaviour classed as 'gross industrial conduct' such as illegal manriding or possession of contraband. The official policy of all the mining unions is that a man found to be breaking safety rules should not be defended

per se. But the interesting point here is not simply that the local delegate(s) will almost invariably plead mitigating circumstances to reduce the severity of any penalty being contemplated but the type of plea bargaining that can go on. Perhaps the most curious example encountered was that related by a safety officer at Mid-Colliery who, as the COSA delegate, was involved in a case of an under-official (WPIS) discovered in the act of illegal manriding. As there are limited manriding facilities and long distances travelled on foot at this particular mine, the temptation to 'hitch a ride off the haulage systems' was acknowledged to be great. The colliery manager had reportedly been keen to 'make an example' by dismissing the official but had apparently been dissuaded by the COSA delegate who had 'hinted' that were the man dismissed he, as safety officer, would then feel obliged 'to go down and sack half the pit for illegal manriding - including a couple of the under-managers!'

What emerges from this review of interests in occupational hazard control is a general picture of safety awareness co-existing with a normative acceptance of rule-bending which seems to permeate through espoused policy and, in one way or another, to affect both the immediate management and conduct of colliery operations.

THE WORKMEN'S INSPECTORS RESOURCES

Pit Credibility

Given the pattern of interests in occupational hazard control outlined it is hardly surprising to record that workmen's inspectors cannot necessarily expect a sympathetic reaction from either management, under-officials or workmen. Nor that the effectiveness of workmen's inspectors - and indeed the system of safety representation itself - should be seen as heavily dependent on the motivation and

calibre of the individuals who have taken on the job. His position in this respect is seen as being quite different from that of the delegate, with the typical response to questioning on this point being that of the branch official who observed -

'The workmen's inspector(s) get more support and consideration off management than they ever give a delegate but the men are inclined to be the reverse...because the delegate's always defending men while the workmen's inspector needs to criticize them at times - and that causes a wee bit of in-built resentment'.

Whereas the delegate's effectiveness is generally judged in terms of his ability 'to get results' which in itself is intimately bound up with the support he can rely on from the membership, the workmen's inspector is cast in an independent role and by the same token judged largely in terms of his personal resources. Indeed, the 'role models' which informants described in response to questioning as to the requirements of an effective workmen's inspector emphasised character traits, personal qualities and qualifications which were regarded as guaranteeing credibility in the eyes of both workmen and management and ensuring their standing as independent agents. A sample:-

- that he should be 'honest', genuine and conscientious, 'have his heart in the job', be 'committed to safety and not in it for a guise';
- that he needed to be 'thick skinned', 'able to take backchat', 'not worried about his popularity';
- that he should be 'a first class workman' and/or 'should hold at least a deputy's ticket', be 'conversant with "the Bible" and the manager's rules', 'well versed in the art of mining coal';
- that he needed 'to apply common sense to the situation

underground rather than insisting rigidly on the rules', 'practice what he preaches', 'never take shortcuts himself';

- that he should 'put forward his opinions without fear or favour', 'not be a yes man', 'willing to fight his own corner', 'able to stand his own ground'...

In short, a veritable paragon.

Among workmen's inspectors themselves, concerns were expressed about their credibility or standing as 'amateurs' in an industry where the management structure is heavily technocratic and where 'a man's right to judge' is seen as being largely a function of his technical expertise. Most regarded the possession of a deputy's certificate of competency as being beneficial, if not essential, primarily as a means of enhancing their ability to 'stand to' under-officials. But while senior colliery management were generally seen as being responsive to matters raised by workmen's inspectors the prevailing view was that they were regarded by colliery management as 'a necessary evil', 'a nuisance at times' and, with offers of promotion being cited as evidence, that management would prefer to have you on their side.' Moreover, workmen's inspectors themselves had no doubts that the matters they raised would not be dealt with at all/as promptly if their reports did not go 'outside the gates'. The point is underlined by the Deputy Manager who commented -

'you come to realise that most of the things they're raising are basically sound but the first and natural reaction of most mine managers is to think of them as some sort of 5th column.'

Regulatory Networks

The belief that the power of workmen's inspectors to influence management action stems from their role as

reporters to external regulatory agencies has two basic premises. First that their reports are actually acted on by the M&QI and the NUM and second on the efficacy of the measures which inspectors from these agencies are willing to take to ensure action or conformity on the part of colliery management. The focus here is on the M&QI.

As noted in the previous chapter, direct feedback from the M&QI on the workmen's inspectors reports is limited as regards the representatives themselves, with the NUM safety agents acting as their direct point of contact and information exchange. But while the M&QI's response to the reports is not advertised, the M&QI inspectors interviewed asserted categorically that such action did occur - and confirmation was forthcoming on this point from management informants. The procedure is for all reports to be sifted through by the District Inspectors on receipt, with any matters felt to warrant follow-up then being sent to the relevant basic grade inspector. Those occasioning immediate concern are unusual (3-4 times p.a. according to the estimates of basic grade inspectors) and the normal course is for the inspector to 'bear the report in mind' on his next routine visit to the mine.

The relationship between M&QI inspectors and mine management is based essentially on the Inspectorate's role as a law enforcement agency. As has been noted (Chapter 5) the M&QI's limited recourse to prosecution is both a traditional and enduring feature which distinguishes it from most other Inspectorates. This record is normally taken as indicative of the 'special relationship' existing between the M&QI and the NCB. There are two main points of note here concerning (a) the efficacy of informal pressures and (b) accountability.

(a) Informal pressures

M&QI inspectors and management informants alike will make much of the professional qualifications of inspectors, a shared technocratic perspective and common backgrounds in an industry which is marked for its' parochial, introverted character. They will almost invariably refer to their relationship as being 'co-operative' or 'special' vis-a-vis the antagonism believed to characterise the relationships between H.M. Factory Inspectors and management employees in other industries. But, as one inspector remarked -

'You'd probably find the same sort of relationship with ICI or any other major corporation - it's just more noticeable in mining because it's one employer'.

The point that M&QI inspectors are dealing primarily with the middle managers of a single corporation means that referral to senior corporate management is one of a number of 'persuasive pressures' short of recourse to formal sanctions that M&QI inspectors have at their disposal. Consequently, as one put it,

'If I was hitting my head against a wall with a particular collier manager blankly refusing to do something I thought necessary - and here we're not talking about legal requirements which no manager alive would be fool enough to object to - then I'd get in touch with the (NCB) Area Director via our Senior District Inspector and the rocket would go down from there'.

In addition, to this, as another basic grade inspector pointed out,

'We've the advantage of having one union and if I brought it to the NUM's attention that a colliery manager was refusing to

implement a change I considered necessary to prevent an accident that'd clinch it - a manager wouldn't go against all that'.

Whether the interest of a powerful union is instrumental in shaping the commitment to occupational hazard control believed to issue from senior management or simply reinforces it is a moot point. Of significance here is that, as the conditional clauses in the statement cited above indicate, none of the inspectors reported actually having used these referral procedures. The implication is that compliance with statutory obligations on the part of the colliery managers is the norm and that inspectors' recommendations for preventive and remedial measures beyond those required by law are framed, accepted and acted on by colliery management according to certain understood ground rules of 'practicability' as discussed earlier. And the received wisdom in this respect among under-officials and mineworkers is that 'his word is law'; that, as one put it -

'The government inspectors get what they want - they may use their power in a quiet friendly way but the meaning is clear..!'

(b) Accountability

While it would be incorrect to infer that the relationship of 'mutual respect and understanding' said to exist between M&QI inspectors and mine managers is devoid of friction or conflict, it is significant to note that such contention as did occur was reported by inspectors as being 'beyond the baseline of compliance with the law'. Inspectors' lack of recourse to sanctions in this context is consistent with the philosophy common to such enforcement agencies, whereby the use of administrative notices and the traditional criminal sanction of prosecution are valued primarily for their effects in terms of inducing compliance and utilized accordingly, rather than as a response to non-

conformity or contraventions per se. Nonetheless, as analyses of prosecution proceedings instigated by HM Factory Inspectorate indicate, there is a sense of retributive obligation governing policy on enforcement to punish offenders where a contravention has resulted in an accident. M&QI practices warrant consideration given that personal liability for contraventions resulting in an accident emerged as a critical element defining interests in occupational hazard control on the part of mine managements and, in particular, the deputies.

M&QI policy in terms of prosecution is held to be no different from that of the other HSE Inspectorates. But instances in which the M&QI has instigated prosecution proceedings against the NCB/NCB employees are rare and decisions of this character are said to be the province of the policy making levels of the Inspectorate. As most of the cases which are brought under the M&Q Act are instigated by the Procurator Fiscal in Scotland in the wake of Fatal Accident Inquiries and as the format here, according to M&QI informants, is normally one of the Procurator Fiscal 'going ahead with prosecution if there's been a statutory contravention in spite of the recommendations in our reports', it seems likely that the concerns of colliery informants with accountability in a criminal court per se are less pronounced among mine officials in other parts of the country.

It would be naive to believe that the aversion to prosecution exhibited by M&QI inspectors is not at least partially influenced by their own backgrounds in the industry and a sense of personal identification with colliery managers. But the inspectors interviewed discussed their reservations in terms of 'moral culpability' and a firm belief in the inappropriateness of criminal proceedings. As one inspector, an under-manager at the time commented -

'After the Haughton Main explosion in 1975 there was prosecutions brought against the managers - that caused a lot of bitterness because colliery managers and under-managers don't go to work in the morning with criminal intent...'

But prosecution proceedings were also opposed on the grounds that such actions invariably gave rise to animosity which could be counter-productive. As one M&QI inspector put it -

'If there's been a fatality then a pit is, by definition, unsafe. Serious accidents always warrant serious action, but there's no pay-off in terms of safety from prosecution...Because if a colliery manager is found to have been negligent or incompetent it's more beneficial to get him removed than to prosecute him in a court of law....He'd defend himself and the NCB would defend him and the upshot would be that he or the Board would be fined and he'd then be back at the colliery. So it's better to adopt an informal approach and get him moved.'

A reliance on 'persuasive pressures' and beliefs as to the efficacy of such action brings one back to the question of corporate management interests in safety and in maintaining a reputation as a 'safety conscious employer'. Whether widely held within the M&QI or not, interpretations such as that cited above concerning the NCB's likely response in the event of prosecution are at odds with those voiced by BACM and NACODS informants alike and the 'scapegoat' allegations a few levelled at the Board. But the same sort of logic probably holds in terms of maintaining the 'co-operative relationship' said to exist between M&QI inspectors and colliery managers, which the M&QI inspectors considered central to their ability 'to get results'. And on this point, as the colliery manager at High-Tech aptly commented -

'If I dismissed every man who was contravening the Acts there'd be no-one left to work the colliery!'

Whether or not prosecution proceedings and/or internal disciplinary procedures are the 'appropriate' response to contraventions resulting in accidents is a moot issue. Of interest here is that despite the 'in-house' character of the regulatory approach favoured by the M&QI the inspectors, as representatives of the state enforcement agency, carry the authority of 'the law' and, in the eyes of most mine officials, personal accountability 'before the law'. Hence the joking references among middle-ranking mine managers and under-officials to the M&QI inspector as 'he who must be obeyed'; the belief that a mine official 'gets no second chance with a government inspector' and the kind of reaction among under-officials described by a NACODS delegate whereby

'some boys get the hair rising on the back o' their necks when they hear that the government inspector is coming down!'

The fact that workmen's inspectors 'have the ear of the government inspector' and that they can rely on the support of the larger union thus provides them with powerful sources of legitimacy and leverage within the colliery. Not only because their reports are considered to be 'too sensitive for a colliery manager to ignore'. But also because of an established preference among most mine managers in dealing with safety as well as industrial relations problems to, as a safety engineer put it, 'try and keep all troubles inside the gates and solved fast'.

WORKMEN'S INSPECTORS CONTRIBUTION

Informants assessments as to the value of the arrangements for workmen's inspectors are discussed in this final section: first in terms of the monitoring and educational functions associated with the arrangements and then in

terms of the significance which M&QI inspectors, mine managers and under-officials, union representatives and workmen respectively accord to maintaining these arrangements.

Assessments of Influence

If exercising the inspection and investigative rights of workmen's inspectors is to be regarded as more than 'routine good intentions' then the baseline for evaluating their contribution rests on the question of whether workmen's inspectors do bring to light hazards which might otherwise have gone (a) undetected and/or (b) unremedied.

(a) Hazard Detection

M&QI inspectors, mine managers and under-officials alike claimed that they were already aware of most of the matters raised by workmen's inspectors e.g. the need for repairs and maintenance work in particular roadways or sections, the need for particular types of equipment or supplies for a district or job which had been ordered or were scheduled for delivery, and so on. Nonetheless, it was generally accepted that workmen's inspectors did pick up on particular faults and hazards which had been missed. The basic theme here was that any individual with a practical working knowledge of mining who entered a deputy's district had the advantage of 'new eyes' in spotting particular faults which have been overlooked by others or problems which under-officials and mine managers, through habituation with conditions in a particular section, had not noticed developing or deteriorating. Workmen's inspectors most often raise matters such as missing guards on machinery, the absence of fire extinguishers, a build-up of waste material and roadway maintenance. Informants

will describe these as 'basic faults', 'low key material' or 'trivial' - the latter being the stock response among under-officials.

'Trivialisation' can obviously be a function of a man's ability 'to take criticism' and a self-defensive device insofar as it serves to discredit the source (workmen's inspectors) of the irritant to an individual's self-esteem. Nonetheless, while few of the under-officials were willing to concede that workmen's inspectors did occasionally bring to light 'serious oversights', most of the managerial informants and all the M&QI inspectors interviewed agreed on this score. As one of the M&QI inspectors put it,

'Most of the workmen's inspectors reports don't bring up anything contentious, and partial or inaccurate reporting can be a bloody nuisance at times...But it's the 1 in 20 which comes up with something startling which makes all the others worthwhile...For example, blackdamp!'

(b) Remedial Action

Whether the matters raised by workmen's inspectors would otherwise be remedied and/or the promptness of remedial action are evidently dependent on priority ratings. As noted in this and the previous chapter, formal procedures together with the essentially corporatist character of regulatory networks are elements which ensure a prompt response - and normally instructions for prompt remedial action - on the part of colliery managers. Namely, the fact that the reports are brought to the attention of regulatory agencies and that, within the unit, the reports go 'to the top of the pile' on a colliery manager's desk, thereby by-passing the usual sifting process applied to the 'domestic reports' of mine officials and expediting action on matters already raised. And an interesting point here is that colliery safety specialists numbered alongside those line managers and under-officials who spoke of priming

the union' as a means of expediting management action. But apart from an enumeration of the faults detected and remedied, consideration of the workmen's inspectors contribution necessarily entails assessments of their effect in influencing attitudes and behaviour - among mine-workers as well as managers. Three main dimensions or 'levels' can be distinguished with regard to the workmen's inspectors input in maintaining 'motivational controls'.

First, that the presence of workmen's inspectors per se serves to raise 'safety awareness' generally; a point which most informants commented on in one way or another. But this applies equally to the presence of management safety specialists, safety propaganda campaigns, and so on. The influence in this sense is that of a recognised need for some form of 'positive discrimination' to offset the 'accidental' character of interests in safety and to counter the tendency for safety considerations to be subordinated to competing pressures and concerns. Thus the activities of workmen's inspectors were commented on as having a salutary 'reminder' effect on managers, officials and workmen alike.

Second, and more specific, there was fairly wide support for the views that workmen's inspectors were (a) more likely to hear about the host of 'neat tricks' men invent and develop to minimise effort which involve 'short-cuts' or the defeat of safety devices (e.g. wedging open machine guards); (b) more likely than management officials to be successful in tracking down the perpetrators, and (c) more likely to be successful in 'getting the message over' about the need for compliance with formally defined procedures. Management informants and workmen's inspectors alike invariably made some reference in this context to the standards and varying levels of competence among under-officials, as well as touching on the contentious issue of willingness among under-officials to tolerate malpractices

or turn 'the blind eye' to shortcuts. A deputy's status among the workmen he is supervising and associated variations in the willingness or capability of deputies to 'stand to' their authority was a critical point, particularly in the case of relatively young deputies dealing with experienced men who regard themselves to be 'teaching the gaffer his job'.

Third, related to the above, workmen's inspectors were considered to have a role in bringing disciplinary offences to the attention of management - an aspect stressed by management informants and accepted by all but one of the workmen's inspectors. It is recognised that such actions are unpopular and will involve 'soul searching' by workmen's inspectors on the question of divided loyalty. Practice obviously varies according to the personality of particular workmen's inspectors and their ability to 'tear a strip off a man'; but accepted format is that more often than not he will have 'a quiet word' with the man rather than necessarily report him. Management informants will sometimes accuse workmen's inspectors of 'sheltering men' by 'refusing to name names', but management and union informants could cite a number of instances where under-officials and/or workmen had been reported for 'doing something crazy' or for persistent and blatant misconduct.

Given that involvement in disciplinary action can be an area of acute role ambivalence, two points are worth noting here. The first is that apart from the workmen's inspectors themselves accepting that they had certain responsibilities in this direction, most of the workmen interviewed considered reporting by workmen's inspectors to be a justifiable course of action 'in certain circumstances' - normally those where the safety of others was being jeopardised. The invariable rider, however, was that the workmen's inspector himself should not personally be involved in the disciplinary proceedings; that it was up to the colliery manager 'to

wield the big stick' in deciding on appropriate disciplinary action and that every man was 'entitled to defence' by the delegate 'whatever's he's done' - a point of view not necessarily shared either by the delegates themselves or by union full-time officials. A second point is the extent to which attitudes on such matters are held to have changed. As the colliery manager at High-Tech put it,

'Twenty years ago and less you'd be hard put to find a workmen's inspector who'd report a man...If there was a problem and the workmen's inspector knew that if he carried it through it'd lead to disciplinary action and maybe even the sack for the man concerned he'd be a brave man to do it - the backlash of the men at work and socially would be something awful - he'd not only be unpopular, he'd be treated as a social leper!'

While there may be a general consensus as to the way in which workmen's inspectors can or do contribute to mine safety regulation, the question that remains is how highly is this contribution actually rated?

A Valued Institution?

The most direct way of ascertaining opinions as to the value of a particular institution and interests in its maintenance are reactions to the idea of it being dismantled. And of the 102 men interviewed at Scottish collieries, 68 concurred with the opinion of the M&QI informants and the NUM and NCB Area agents interviewed that workmen's inspectors would 'definitely' or 'probably' be missed in some way. Reference was made here not simply to their contribution in maintaining safety standards but also to basic representational rights. What follows is a brief breakdown of responses to questioning on this theme which indicates the distribution of the significant third of colliery informants who considered that the institution of safety representation in mining 'would not be missed', and a summary of the main

arguments put forward in support of the system by M&QI inspectors, mine managers and under-officials, NUM representatives and workmen respectively.

M&QI Inspectors

M&QI inspectors, predictably, stressed the value of arrangements for safety representation as a channel of communication between the workforce and management and between the collieries and the inspection services. All except one also referred to the routine monitoring activities of workmen's inspectors as being essential in releasing the inspectors themselves from a pre-occupation with routine tasks and enabling them to, as one put it, 'act almost as consultants'. The following extracts from these informants' responses illustrate the line of argument

First,

'These people are much closer to operations in the pit than we could ever hope to be. Their inspections are of great use to us in drawing our attention to defects we could never hope to discover because we don't have the manpower to inspect in that detail. So we see it as inspection on our behalf - and we'd be less effective without them.'

Second,

'As practical working men they'r picking up on localised problems like missing guards, etc. They don't appreciate the full significance of some things they do raise and we'll try and sort out the salient points that need follow-up. If we were involved in dealing with all the low key material ourselves it'd be a waste of our resources as professional mining engineers - our bat is influencing policy: planning methods of work and layouts, etc.'

In effect,

'It's best summed up as we need them and they need us'.

Colliery Management

86% (19) of the management officials interviewed considered that they would 'feel the draft', as one put it, without workmen's inspectors whereas 3 considered the arrangements to be an anachronism. Colliery safety specialists were among the strongest advocates of workmen's inspectors in terms of their contribution to the maintenance of safety standards and this view also found support among some of the middle-ranking BACM grades. Statements on this point ranged from the deputy manager who simply conceded that -

'things would be different without the workmen's inspectors - same as they would be different without the government inspectors, because management in the pits are the same as anywhere else in that our prime purpose is to produce and in that business safety gets left behind.'

Through to the safety officer who declared -

'It would be murder without the workmen's inspectors - management are cautious of workmen's inspectors because he's a man with great powers - the only one who can legitimately bypass the colliery manager without as much as a by your leave and take his points out of the colliery by two avenues - the union and the government inspectors. Anyone else who did that, like us taking matters over his head to the NCB Area engineers - would jeopardise whatever kind of working relationship they'd got with the colliery manager.'

In contrast, the view among senior colliery managers was that safety standards were unlikely to deteriorate with or without workmen's inspectors, but that they would be missed as an issue specific channel of communication between management and the workforce; in 'getting the men

to realise they've a part to play and responsibility for their own safety' and, as the colliery manager at Mid-Colliery put it, in the facility

'to use the union men to put the point across to the men - because we use the workmen's inspectors in the same way we'll use the delegate - if we've a box of eggs we handle it sideways...'

As for the NCB Area informants, accepted opinion in the safety department was that the contribution of workmen's inspectors was 'psychological' rather than objective. As one put it,

'The main contribution of workmen's inspectors is the indirect one of creating the right attitudes rather than directly in terms of accident prevention. They're a clear demonstration to the workforce, management and men, that there are people watching what's going on, that there's an interest in safety, and that it's a team effort.'

Under-officials

Only 40% (16) of the under-officials interviewed considered that the arrangements for safety representation would be missed in any way. Prevailing opinion was that they might be 'a bonus' in the way of safety and could be 'used' to expedite management action and thereby assist the under-officials themselves, but that their presence was not essential. The reaction is unsurprising given that the existence of workmen's inspectors is an irritant to deputies, and at odds with their own self-image as protecting the safety and welfare of the men they are responsible for supervising and acting as their workgroup representative vis-a-vis management officials in any matters of concern regarding such matters.

Mineworkers

The deputies' opinion was shared by a minority of the workmen interviewed and by three of the NUM workmen's inspectors themselves (!); tradesmen's representatives who considered the system of safety representation to be 'too amateurish' to make any contribution to mine safety and that the men did not need 'to go through all those channels because everything can get sorted with their gaffer'.

The initial reaction of mineworkers when asked about workmen's inspectors is to talk of them as 'a bunch of guisers' who are 'not worth the subs'. But apart from at Village Pit,⁹ mineworkers reactions to the idea that the system should be dismantled was almost invariably one of opposition. Among those formally interviewed, 76% of whom considered that workmen's inspectors would be missed, references were made to their role in providing information about safety in the section, to their presence in accident investigations and to the fact that, as one put it, 'you may never use them but you know the back-up is there if you've a complaint your gaffer won't sort'. But the dominant reaction was simply that 'accidents would skyrocket': that the standards maintained by deputies and mine officials would deteriorate because, as one put it, 'it would give the colliery manager the rule of the pit'. And the 'collective memory'¹⁰ of mineworkers is a critical element here in that the men invariably support their views with reference to 'what it was like before we had workmen's inspectors': to 'the death figures'; to fathers, grandfathers and uncles who were killed in mining accidents, crippled with broken backs, or who gasped to a slow death from pneumoconiosis; and to the victimisation of 'the man who complained about conditions' which went with the unbridled prerogative of overmen and under-managers as well as managers.

Among the NUM lay and full-time officials interviewed this awareness was overlain by a keen appreciation of the struggle waged by the mining unions to establish the arrangements for safety representation. Tales of victimisation and the obstruction of Scottish union agents such as Abe Moffat who were attempting to conduct inspections (while some managers of the Fife Coal company preferred to see him 'escorted off the premises by the local police!') figures in this sense, as do personal experiences such as having unwittingly taken part in 'management cover-ups'; complying with instructions to carry out certain work to make the site of an accident 'safe' before any union representative or government inspector had visited the scene, and belatedly appreciating that an honest evaluation of the causes had been made impossible by the locale having been 'changed beyond recognition'. A sense of personal reparation for the injustices and 'price paid' in terms of health and safety by forbears and relatives in their own families as well as a strong sense of organisational traditions and continuity thus figured prominently in the commitment expressed by these men to maintaining the institution of safety representation in mining.

CONCLUDING COMMENTS

The picture to emerge of safety representation in mining is one of an established institution. There is widespread support for the institution among mineworkers but not necessarily for the workmen's inspectors per se. Difficulties are experienced in finding sufficient numbers of candidates willing to take on the job and there are few volunteers. Maintenance of the institution thus depends critically on the commitment of individual union activists at collieries in ensuring that the rights to safety representation are taken up and on the promotional and monitoring activities of the NUM's safety agents.

Most mine managers recognise the workmen's inspectors as having a role to play in maintaining safety standards, but the institution is valued primarily as a demonstration of common interests in mine safety. The workmen's inspectors themselves are valued primarily as an issue specific 'channel' of communication between the workforce and mine management - as a means of checking on the standards of discipline maintained by under-officials and reinforcing managerial efforts to 'get the message over to the men'. Interests are expressed as to the credibility of workmen's inspectors, an individual's calibre and personality, and in 'getting the best man for the job'. Espoused policy, team analogies, the type of role inter-penetration which stems from promotional and job-change options in mining, beliefs in collective interests in mine safety and in management as a technocracy are among the most significant elements ensuring that mine managers are sensitive to matters raised by workmen's inspectors. But their responsiveness is seen as being critically affected by the fact that workmen's inspectors activities at the mine are connected through formally defined reporting procedures with the wider regulatory networks of the NUM and the M&QI. M&QI inspectors tend to regard workmen's inspectors as a kind of 'sub-grade' adjunct to their own organisation and as acting on their behalf.

As a 'model', the system of mine safety regulation and the part played therein by workmen's inspectors reflects the type of relationship and interaction between state regulation and 'self-regulation' which the Robens Committee was advocating as the basis for future improvements in occupational hazard control in industry generally. But in mining, this system has taken over a century to evolve and it functions in the closed corporatist structure of a single major employer, a single major union, and intensive regulation and supervision by the state inspectorate.

And the fact that the provisions for workmen's inspectors were extended to all those in workplaces covered by the M&QI Act 1954 but not widely used in quarries, or even on those open cast coal sites where the NCB is client to civil engineering contractors, points to the limited applicability of the model elsewhere.

Statutory backing for 'self-regulating' systems of occupational hazard control embodied in the HSW Act 1974 and in the generalisation similar rights to safety representation rely on the inspectorates, employers, trade unions, managements and workpeople developing arrangements which are appropriate to their own industry and their own workplaces. The following chapters examine the potential and practice in the construction industry in terms of the use being made of the new statutory rights to safety representation in the radically different organisational setting of private sector sites.

CHAPTER 8

SAFETY REGULATION IN CONSTRUCTION : THE CASE AND CONTEXT
FOR CHANGE

SAFETY REGULATION IN CONSTRUCTION : THE CASE AND CONTEXT
FOR CHANGE.

The daily casualties of construction work rarely merit attention as 'newsworthy' events. Yet the very monotony with which mundane and unspectacular features of site activity kill, maim and otherwise injure men classes construction in the same bracket as those dangerous occupations, like coal mining, which more readily capture the public imagination and the headlines. The new provisions for safety representation are of particular interest in this context, for they offer opportunities for potentially radical improvements in the construction industry's tragic record of death, injury and ill-health. The object of this and the following chapter is to describe and analyze the scope for safety representatives' activity and to highlight the significant influences affecting the use made of the legislative provisions on private sector construction sites.

This chapter begins by looking at 'the price of construction' paid in terms of life and limb by men engaged in site activities. The available data on the industry's safety performance is examined in comparison with mining and manufacturing, and the scope for improvement is considered. Drawing on the survey data collected for this study, the structural and organizational characteristics of construction which render this industry less susceptible than others to regulation by conventional methods are examined. Consideration is then given to the salient characteristics of the industrial relations environment in construction, the context into which the new provisions of the HSW Act 1974 and the SRSC Regulations have been grafted and within which safety representatives are expected to act.

ACCIDENTS AND ILL-HEALTH IN THE CONSTRUCTION INDUSTRY :
MAGNITUDE AND DIMENSIONS OF THE PROBLEM.

The Official Score

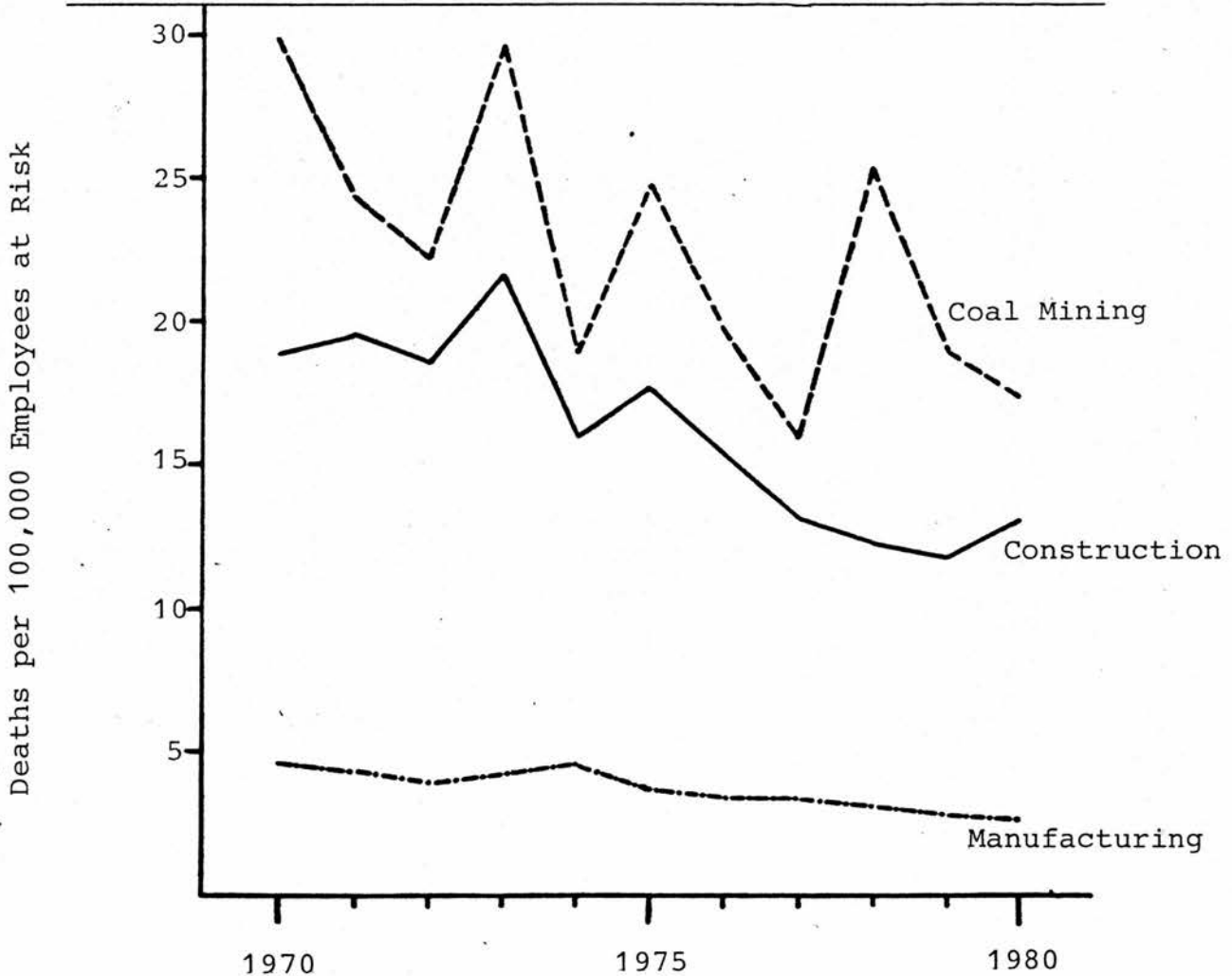
In terms of the relative risk of an employee suffering a fatal accident Table 8.1. and Figure 8.1. indicate that construction is a less hazardous occupation than mining, but that a site worker is four to five times more likely to die in a work-related accident than his counterpart in manufacturing. However, in terms of the actual numbers killed at work, Table 8.2. and Figure 8.2. illustrate that the death toll in construction far exceeds that in coal mining and in 1980 actually exceeded the number of deaths in all manufacturing industries combined. Overall, the disproportionately high 'price' of work for construction employees is indicated by the fact that while they account for only about 5% of the country's workforce, their occupation regularly produces over 20% of all fatal accidents at work.¹ Within this bleak context it is worth noting that the HSE's two Scottish Areas contribute a persistently high proportion of the industry's annual fatalities.²

Fatality figures and the incidence rates calculated by the HSE and cited here serve as a useful but nonetheless crude guide to relative risk exposure, for the statistics relate solely to accidents which are statutorily reportable. In relation to manufacturing and construction this refers to accidents occurring to those directly employed in workplaces defined under the Factories Act 1961.³ The figures are thus deficient in that they exclude the self-employed as well as employees working on operations or premises not covered by these definitions. Although the 1974 Act brought these people within the

Table 8.1: Fatal Accident Incidence Rates for Coal Mining
Construction & Manufacturing, 1970 - 1980.

	<u>Deaths per 100,000 Employees at Risk</u>		
	<u>Coal Mining</u>	<u>Construction</u>	<u>Manufacturing</u>
1970	29.9	18.9	4.6
1971	24.2	19.6	4.3
1972	22.1	18.7	3.9
1973	29.6	21.6	4.2
1974	<u>18.7</u>	<u>16.0</u>	<u>4.5</u>
Average 1970-74	25.0	18.9	4.3
1975	24.7	17.7	3.7
1976	19.6	15.3	3.4
1977	15.8	13.1	3.4
1978	25.4	12.2	3.1
1979	<u>18.9</u>	<u>11.8</u>	<u>2.9</u>
Average 1975-79	20.9	14.0	3.3
1980	17.3	13.0	2.7

Figure 8.1: Fatal Accident Incidence Rates...1970 - 1980.



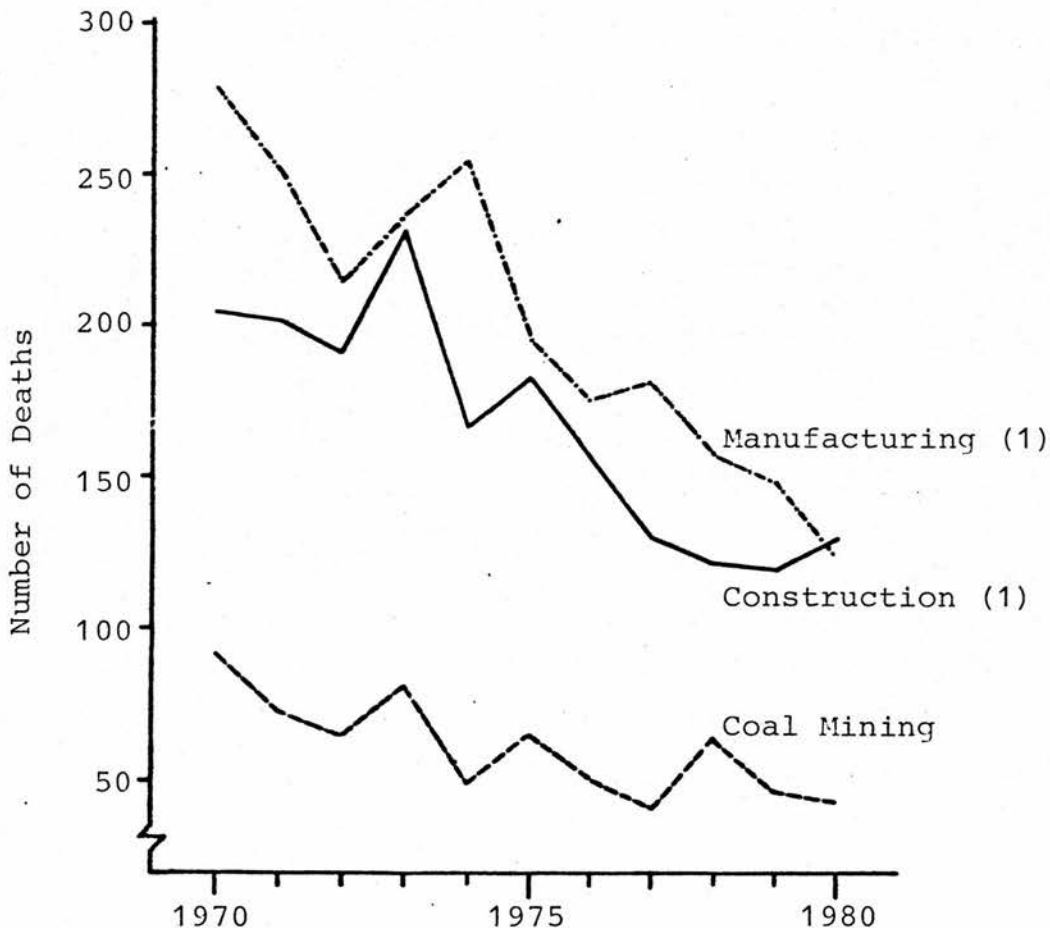
Source : HSE and HSC Reports.

Table 8.2 : Fatal Accidents Reported for Coal Mining, Construction, Manufacturing, 1970-80

	<u>Number of Deaths</u>				
	<u>Coal Mining</u>	<u>Construction</u>		<u>Manufacturing</u>	
	(1)	(1)	(2)	(1)	(2)
1970	91	204		278	
1971	72	201		251	
1972	64	190		214	
1973	80	231		236	
1974	48	166		254	
Average 1970-74	71	198		247	
1975	64	182		196	
1976	50	156		175	
1977	40	130		180	
1978	63	121	(156)	157	(162)
1979	46	119	(149)	148	(153)
Average 1975-79	53	142		171	
1980	42	128	(165)	124	(128)

(1) Statutorily reportable fatalities; (2) Adjusted total to include 'non-reportable Fatalities'.

Figure 8.2 : Fatal Accidents Reported...1970 - 1980.



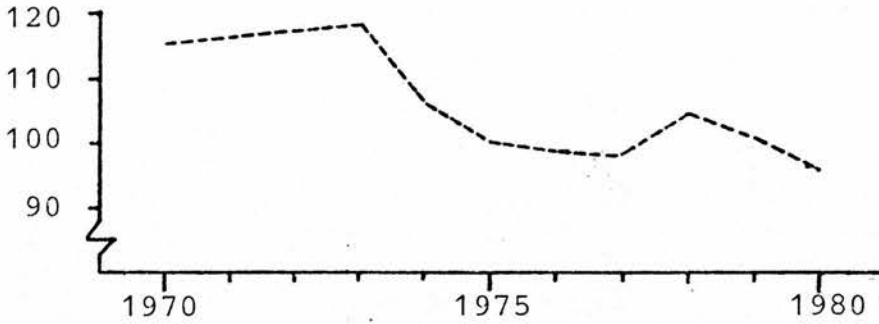
Source : HSE and HSC Reports.

ambit of statutory protection for the first time, reporting obligations were not similarly extended. The extent to which this partial coverage affected the validity of official statistics on the numbers killed at work could only be guessed at prior to 1978, when the HSE began collating and publishing statistics for this anomalous category of 'non-reportable fatalities'. While the numbers recorded do not necessarily represent the total number of such fatal accidents,⁴ the effects of adding those which are known to the HSE are shown in the adjusted totals in Table 8.2. Fatality statistics for manufacturing have been only marginally adjusted, whereas in construction the additions represent a serious distortion. This change is unsurprising in view of the fact that in construction the self-employed, including labour-only sub-contractors (LOSC), currently account for between a quarter to a third of the total workforce,⁵ whereas in manufacturing they constitute a relatively small proportion (about 8%).

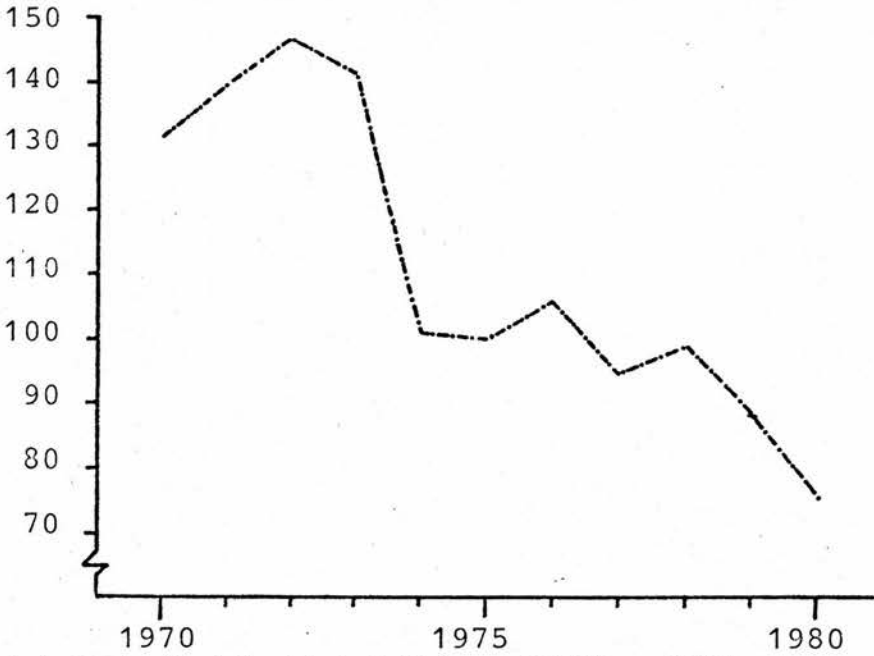
It is apparent that reported statistics not only mask the true scale of fatal accidents in construction, but also render comparative analysis on the basis of fatal accident (incidence) rates as at best a crude indicator of relative risk exposure. The dramatic reduction in the number of statutorily reportable fatal accidents in construction over the last few years has, nonetheless, been the focus for much recent debate as to whether this record of the industry's performance signifies the beginning of a 'downward trend'. (Flemming, 1978 ; Lobstein and Ive, 1978 ; HSE, Construction...1979-80, 1981). It is, however, generally recognized that the 'improvement' since 1973 is more apparent than real for, as Figures 8.3. and 8.4. illustrate, it has been accompanied by, and can largely be explained in terms of, the sustained downturn in the industry's economic activity

Figure 8.3. : Construction Activity Indices.

(a) Output : All Work (1975 = 100)



(b) New Orders : All New Work (1975 = 100)

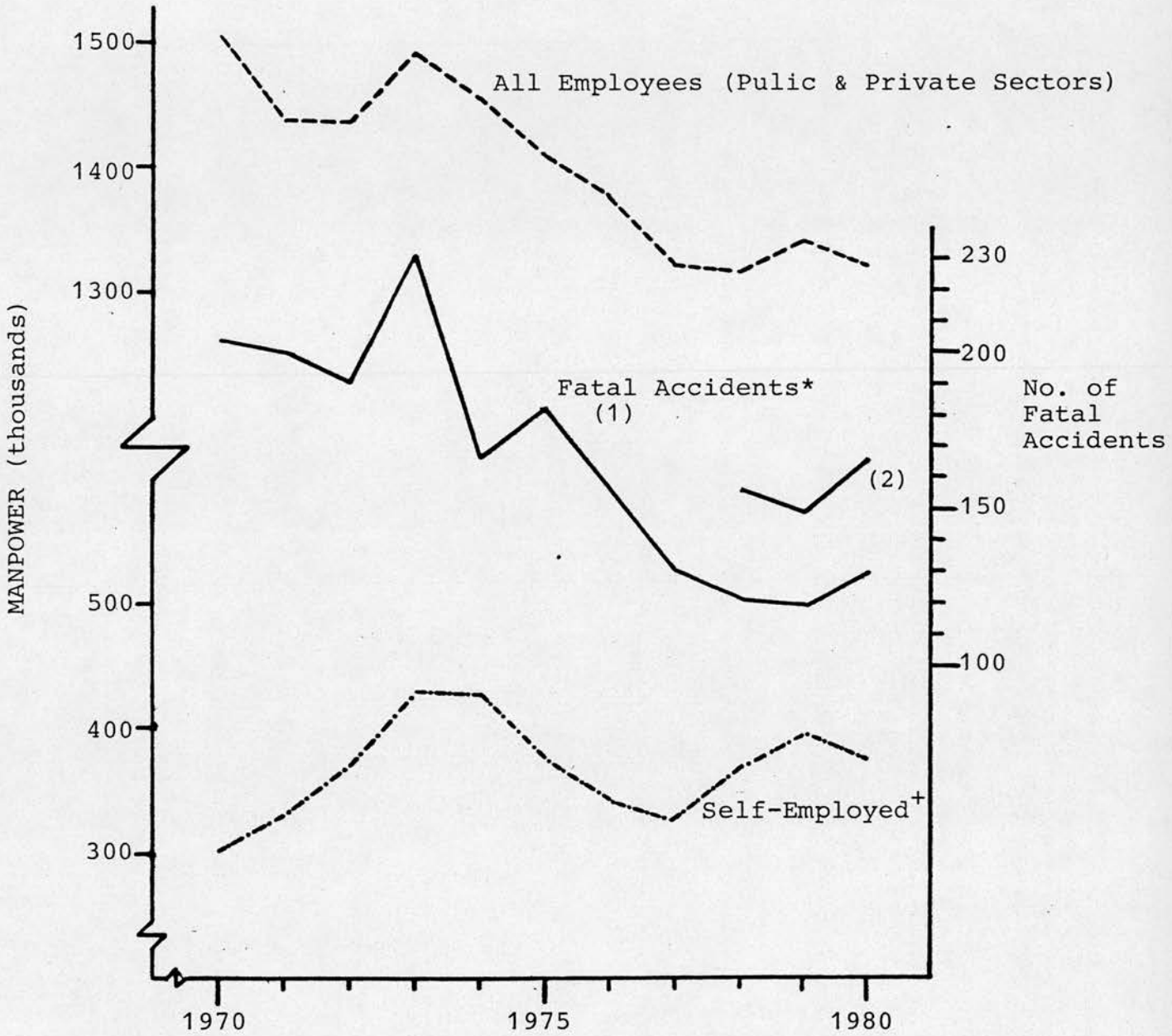


(c) Notifiable Fatalities (1975 = 100)



SOURCE : (a) & (b) DOE Housing & Construction Statistics.
 (c) derived from HSE Statistics.

Figure 8.4 : Employment, Self-Employment & Fatal Accidents in Construction, 1970 - 1980.



* Fatal Accidents: (1) Notifiable Fatalities; (2) All known fatalities.
 + Including Working Proprietors.

Sources: DOE Housing & Construction Statistics 1970 - 1980
 & HSE Statistics.

levels with the recession⁶ and attendant reductions in the numbers directly employed. Scepticism that the downward trend in fatalities represents improvement is re-inforced by the figures for 1980 which indicate a worsening of performance in real terms; an increase in the number of employees killed in the context of a further slump in the industry's workload. This scepticism is further re-inforced when one takes a longer term perspective : an analysis of fatality rates for the 15 years prior to 1973 by Eden (1975) noted that the wholly erratic changes in annual fatality rates in construction revealed no discernible trend whatsoever, in contrast to the marked and relatively steady improvement in mining and other industries.

The recorded improvement in fatal accident incidence rates (calculated on the basis of notifiable fatalities per 100,000 employees at risk) suggests that the reduction in the numbers employed since 1973 has been accompanied by a reduction in risk exposure. It is plausible to suggest, however, that this reflects a shift in the pattern of risk exposure rather than an improvement in site safety per se, for it is evident that employers attempting to 'ride out the recession' have been coping with market fluctuations and reducing their labour costs not only by shedding employees but also by making increasing use of self-employed sub-contractors.⁷ Definitive analysis in support of this contention, based on an assessment of the changing proportions of the self-employed as compared with those directly employed in the different sectors and their respective fatal accident incidence rates, is not possible owing to the incomplete and inaccurate nature of published statistics.⁸ Nonetheless a study by Leopold (1982), based on the internally consistent data of Construction Industry Training Board (CITB) records, provides some hard evidence in relation to roofing,

demolition and painting. These occupations together with labouring accounted for almost half the employees killed in construction between 1977-79.⁹ Leopolds' analysis of the occupational distribution of the self-employed workforce compared with that of the directly employed reveals a much higher concentration of the former in these three 'high risk' trades; approximately double the relative proportion of the employed labour force. Moreover, Leopold notes that whereas the numbers directly employed in roofing and demolition fell by 9% and 17% respectively between October 1977 and April 1980, the number of self-employed men working in the same two trades increased by 13% and 28%. In demolition the numbers directly employed increased by 13% but the corresponding increase in those self-employed was a dramatic 97%. Given that there are no a priori grounds for assuming that the accident rate amongst the self-employed will be lower than for the directly employed, the ameliorative impact of this shifting pattern of employment on incidence rates is evident. This ameliorative effect is further exacerbated when one considers that repairs and maintenance work, a sector dominated by the small jobbing contractor and the self-employed, has experienced an upturn over the last decade which stands in marked contrast with the general slump in other types of construction activity.¹⁰

The actual extent to which the reduction in published incidence rates can be attributed to a shift in the pattern of risk-exposure between directly employed and self-employed site workers remains a matter of speculation. Nonetheless, the credibility of assertions of 'improvement' made on the basis of notifiable fatalities must be in doubt when considered in the context of relative changes in employment and self-employment and the distortion occasioned by adding the known 'non-reportable fatalities' of the self-employed. Moreover, given the dramatic increase

in the significance of self-employment within the construction labour force over the last twenty years,¹¹ which contrasts with the relatively stable proportion of the self-employed in manufacturing as a whole, Leopold (1982) has noted that 'on the assumption of a constant fatality rate across all industries...the "hidden deaths" to self-employed building workers will have risen both absolutely and relative to other industries'. Indeed, the 'improvement' indicated by the downward trend in fatality rates since 1973 may well mask a worsening in real terms of the industry's safety performance.

The high annual toll of fatalities are, however, merely the tip of the iceberg when one is assessing the risks to safety and health engendered by construction activities. The other dimensions are considered next.

The Hidden Toll.

Assessing the absolute and relative magnitude of safety risk associated with construction activities on the basis of fatal accidents,¹² despite the above noted limitations, is generally acknowledged as providing the most reliable indication of safety performance owing to the problems associated with the collation of other accident data. (see Shipp and Sutton, 1972). In particular, comparative analysis is complicated by differences in definitions as to what constitutes an 'accident' and by the wide variations in the level of accident reporting within different sectors of the same industry as well as between industries. Whereas reporting in NCB mines approaches 100%, the HSE estimates that only about 50% of reportable accidents occurring on construction worksites subject to the Factories Act 1961 are actually reported, compared with about 75% of reportable accidents in manufacturing establishments.¹³ These limitations, together

with the varying accuracy of employment figures and the exclusion of accidents to the self-employed, exacerbate the crudity of incidence rates as a comparative measure of risk exposure in relation to non-fatal accidents. The accident data cited in Table 8.3. should thus be viewed within the context of the hidden toll of injury.

As Table 8.4. indicates, DHSS figures for industrial injury provide a more realistic reflection of the industry's accident experience than HMFII figures. New regulations governing the notification of accidents which came into effect on 1 January 1981,¹⁴ in incorporating DHSS accident data, improved the reliability of the statistics collated by the HSE. Fatalities and accidents involving serious personal injury (as defined by the regulations) were still directly reportable to the HSE,¹⁵ with other notifiable accidents being reported via the DHSS. Thus, provisional figures for 1981 showed a total of 45,599 notifiable accidents in construction, with the provisional figure for 1982 being 40,602.¹⁶ Given that not all those eligible for DHSS injury benefit will have actually claimed and that the self-employed are not entitled to such benefits, these statistics too underestimate the scale of the problem. However, recent changes in the system of certifying absence due to sickness and injury and the abolition of the industrial injury benefits scheme in April 1983¹⁷ completely disrupted the base of DHSS statistics and have necessitated further changes in the regulations governing the notification of accidents.¹⁸ It thus seems likely that the real magnitude of safety risk in construction as indicated by injury accidents will continue to be hidden.

Table 8.3.All Reported Accidents (with incidence rates) in Coal Mining, Construction and Manufacturing, 1970 - 1980.

	<u>Coal Mines</u>		<u>Construction</u>		<u>Manufacturing</u>	
	(1)	(2)	(1)	(2)	(1)	(2)
1970	90.4*	29.7	42.3	3.9	232.2	3.8
1971	77.2*	25.9	36.7	3.6	204.9	3.5
1972	59.1	20.4	37.2	3.7	194.6	3.5
1973	65.0	24.1	37.9	3.5	209.7	3.7
1974	49.6	19.3	34.6	3.3	199.1	3.5
Average 1970-74	68.3	24.1	37.7	3.6	208.1	3.6
1975	54.1	20.9	35.6	3.5	184.3	3.5
1976	50.8	20.0	36.1	3.5	181.1	3.5
1977	49.3	19.5	32.8	3.3	187.9	3.6
1978	46.8	18.9	33.8	3.4	186.6	3.6
1979	40.8	16.8	31.8	3.1	168.5	3.3
Average 1975-79	48.4	19.2	34.0	3.4	181.7	3.5
1980	36.8	15.1	29.5	3.0	133.3	2.9

(1) Number of Accidents (thousands).

(2) Accidents per 100 employees at risk.

* Excluding accidents at licensed mines (NCB mines account for 99% of the labour force engaged in coal mining).

Source : HSC Annual Reports.

Table 8.4.

Comparison Between Accidents Reported to HMFII and DHSS
Returns for Industrial Injuries in Construction, 1970-1979.

No. of Accident Reported to HMFII (thousands).*		No. of Industrial Injuries (thousands) : DHSS**	
1970	42.3	1970/71	76
1971	36.7	1971/72	72
1972	37.2	1972/73	76
1973	37.9	1973/74	76
1974	34.6	1974/75	65
Average	37.7	Average	73
1975	35.6	1975/76	-
1976	36.1	1976/77	67
1977	32.8	1977/78	66
1978	33.8	1978/79	-
1979	31.8	1979/80	57
Average	34.0	Average	63

* Reportable accidents (involving absence from work for more than 3 days). Source : HSC Annual Reports.

**Industrial Injury Benefits : certified incapacity as a result of fresh industrial accidents, commencing in the statistical year June - June. (Based on a 2.5% sample of claimants to 1974/5, 2% in 1976/7 & 1977/8, & 1% thereafter. No statistics available for those years when sampling procedure was changed).
Source : DHSS Social Security Statistics.

Off the Record : Further Dimensions.

Statistics relating to the time-specific events of injury accidents provide some measure, albeit inaccurate, of the magnitude and dimensions of the safety risks associated with construction work. The toll of illness and death arising from site health hazards is, however, even more difficult to ascertain. Occupational mortality statistics produced by the Registrar General indicate disproportionately high mortality rates for many construction trades' workers compared with others in the same social class and age groups.¹⁹ Similarly, high levels of incapacity due to work-related illness and disease have been documented by Lobstein and Ive (1978).²⁰ However, as has been noted in relation to mining, such statistics as are available seriously underestimate the scale of the problem. Related to the latency period of diseases, distortions are occasioned by incorrect diagnosis, by non-recognition as an occupationally related illness, and by non-recording. In construction the data is further circumscribed by the fact that the less fit tend to move out of the industry to less strenuous jobs prior to retirement age, so that although a man may subsequently die from a disease contracted during his employment in construction his death is recorded according to his latest full-time gainful employment.²¹ Mortality statistics and figures for occupationally induced ill-health thus relate solely to those who have remained in the workforce - commonly regarded as a largely self-selected 'survivor population'.²²

While the mobility of the construction workforce and the lack of information as to the numbers 'invalided out' of the industry precludes accurate prognosis of the extent of ill-health and death arising from construction experience, there are few grounds for complacency about the

health risks associated with site activities. Apart from the adverse effects of exposure to diverse weather conditions, which aggravate problems arising from the physically arduous nature of much construction work,²³ there is a growing body of evidence which indicates that many of the materials and substances indentified for their toxic or carcinogenic effects in other industries are routinely encountered by construction site workers.²⁴ The construction industry is, for example, the prime user of asbestos products. As such, site workers are liable to constitute a significant proportion of those dying from diseases associated with this one substance alone, which some sources predict will reach epidemic dimensions over the next few decades.²⁵ Apart from the well documented risks associated with this and other long-established health hazards, such as exposure to lead and silica dusts, the introduction of new materials and substances known or suspected for their harmful effects expose construction workers to an increasingly wide range of new health risks. Thus, although the true scale of ill-health and death associated with site health risks is largely a matter for speculation, it would appear that construction experience carries with it a growing threat of occupationally related illness or disease which may well overshadow the more conventional safety risks and belies the popular image of construction work being a 'healthy outdoor occupation'.

Even so, the grim dimensions of construction work outlined above do not reflect the full scale of the problem. The accident data cited, for example, relates solely to 'fresh' industrial accidents. Yet, as with ill-health, an injury accident can result in permanent or recurring disability which affects a man's ability to work and the type of work he can do. A large scale comprehensive survey of construction operatives conducted

by Marsh et al (1981) revealed that 1 in 6 were suffering from some form of disability caused by injurious working conditions or accidents. Thus, apart from the unknown numbers who leave the industry owing to ill-health, disease, or a serious or crippling accident, we are also presented with evidence which, as Marsh et al note, 'points to the presence within the current workforce of a worryingly high proportion of men who are, figuratively speaking, "walking wounded and sick".'

Traditional Problems and Solutions.

On the basis of all the available evidence it is apparent that construction extracts a disproportionately high 'price' in terms of death, injury and ill-health from those who work in the industry. While being aware of the various dimensions of the insidious and growing problem of health hazards, the regulation of site conditions has traditionally, and continues to be, focussed more on the immediate and obvious safety risks.²⁶ Certainly, in contrast with health risks, the safety hazards of the industry are relatively straightforward. Detailed analysis of the industry's accident experience has revealed that most of the accidents resulting in death or serious injury occur not at work on 'the frontiers of advanced construction technology', but happen to those engaged in routine site activities.²⁷ Moreover, despite changes in techniques and the scale of operations, the same basic hazards have continued to produce a high proportion of accidents in the industry, literally 'picking men off one at a time' since the turn of the century.²⁸ Indeed, the traditional nature of the industry's safety hazards is summed up in the HSE's Black Spot report for 1977, which baldly states that :

Most of the men killed in the construction industry in 1977 were killed in ways

familiar to their ancestors who worked on say, Lichfield Cathedral or Stirling Castle, that is, by falls from their places of work or by falls of earth or by falls of material. (para.43).

The safety hazards of the industry are thus both readily identifiable and traditional ones and, being reasonably foreseeable events, they are also acknowledged as preventable.

Lack of improvement in the industry's accident record, despite the obvious and traditional nature of safety risks, prompted the introduction between 1960-62 of a series of detailed Regulations to supplement the existing plethora of statutory provisions relating to construction work.²⁹ Of particular interest are the provisions of the Construction (General Provisions) Act 1961 which placed a statutory duty on all those employing more than 20 to appoint a safety officer, a requirement for workplace organization in the form of employer appointed personnel which, outside mining, applies to few other industries. Moreover in relation to enforcement, the Factory Inspectorate, in a novel departure from standard practices, conducted a large recruitment drive within the industry between 1968-72 and appointed a cadre of (approximately 80) men experienced in construction work specifically as construction industry inspectors.³⁰ Together, these provisions have afforded construction workers a degree of statutory protection found in few other industries. Nonetheless, the remarkable consistency of the industry's accident record stands as testimony to the fact that, as Eden (1975) has noted, within the general framework of protection existing prior to the 1974 Act "nothing has yet been done which appears to have had any measurable overall effect". The provisions of the 1974 Act for a more 'self-regulating' system of accident prevention offer new opportunities for

improvement which were particularly welcomed by the then newly formed Construction National Industry Group (NIG) of the HSE for, as the Chief Inspector of Factories bleakly forecasted in 1976 :

Unless there is a radical improvement in the effectiveness of accident prevention in the industry, over 2,000 men will die and about 400,000 will be injured over the next ten years.³¹

In the following sections the framework for this 'radical improvement in the effectiveness of accident prevention' is considered, beginning with a review of the structural and organizational characteristics of construction which render this industry less susceptible than others to regulation by conventional methods.

SAFETY REGULATION IN THE CONSTRUCTION CONTEXT.

The fact that the construction industry's safety performance has been relatively impervious to improvement by conventional regulatory methods can in part be attributed to structural and organizational characteristics peculiar to the 'production' process and market environment, for construction is a large, diverse, and geographically dispersed industry.³² Worksites are by definition temporary in location and the construction process is characterized by constant change throughout the different phases of a sites' life-cycle. The casual nature of employment and frequently high turnover of labour on sites accentuates this central feature of transience. The small scale of much construction work, particularly in the building and maintenance sector, the traditional system of sub-contracting, which diffuses responsibility,³³ and the minimal capital requirements for setting up in

business are amongst the factors accounting for the predominance of small firms and large numbers of self-employed proprietors . The marginality of many such firms in the industry's competitive market environment, illustrated by the fact that construction companies typically account for between 16-22% of all company liquidations,³⁴ adds yet another dimension of transience in the sense of the high failure rate amongst contractors. Together these characteristics give rise to a highly fragmented and fluid industrial structure, reflected at site level in a shifting complex of employment relationships and organizational arrangements.

These features evidently pose, at the most basic level, physical and logistical problems for the regulation of site safety different in kind to those encountered in the manufacturing and mining industries. The Construction Group inspectors interviewed were questioned on this subject and the characteristics of the industry mentioned by inspectors as affecting the performance of their regulatory function are discussed below under three headings: (a) worksites, (b) contractors, and (c) construction practices and procedures.

Worksites.

Locating where work is actually being carried out was cited by all the inspectors interviewed as being one of the main features peculiar to construction which hindered their regulatory task. This problem was related not only to the sheer number and geographic dispersion of sites but more basically to the variation in their size and duration which, as one inspector aptly put it, can

range from two masons repairing a chimney in half a day up to complex

civil engineering projects the size of the nuclear power station being built at Torness, which has an expected life of ten years.

The varying complexity of the inspection task once on site, associated with the diversity of construction operations, was also commented on. The extreme examples cited by one inspector illustrate the point :

At its peak the Nig Bay oil terminal site (Shetland) was the largest in Europe, with approximately 7,000 men employed by 50 to 55 different contractors. The site was like a town - the sheer size and complexity of the project made it an inspection nightmare. There's no comparison between that and the 'one man up a ladder in a close' type jobs.

Only those contractors undertaking work with a life-cycle of six weeks or more are required to notify the HSE of their activities. By these means the HSE's East Scotland Construction Group were informed of 942 new sites in the Area in 1981, of which only a quarter employed more than 21 men. By including the number of ongoing sites notified in preceeding years, this figure doubles to approximately 2,000 sites 'live' in the Area during 1981. Even in terms of these 'long-term' sites, however, inspectors were aware that many contractors required to notify work failed to do so - either through ignorance of wilful neglect. As one inspector observed :

You'll get the type of contractor, such as the housebuilder I came across the other day, who doesn't notify us because he sees the job as being straightforward - or he'll notify us after he's dug the foundations which means we can't check whether it's safe or not.³⁵ Then you get others who'll deliberately hide - e.g. the operator who's going to be

underpinning a wall : he knows there's a risk of the wall collapsing and that we're bound to find something wrong with the way he's doing it, so he doesn't let us know about it.

The sites covered by notification requirements were, however, considered by inspectors to be but a small fraction of the total number operating at any point in time. As one put it :

We may be notified of a thousand sites in the course of a year but we know fine well that this is the tip of the iceberg and there's probably that number operating in Lothian alone.³⁶

Locating these innumerable small jobs is largely a matter of chance; a hit and miss process depending on an inspector spotting such activity when travelling to inspect a known site in his district. Inspectors were acutely aware that much construction activity remains hidden - a fact periodically reinforced when, as one inspector observed :

We're informed of a fatal accident on a site we hadn't heard of, run by a contractor we didn't know even existed.

Contractors.

That inspectors can be unaware of a contractors' existence is hardly surprising in view of the industry's fragmented and fluid structure. Indeed, inspectors reported that it was quite common to some across men on sites working for contractors of which the Construction Group had no previous record. Thus, at the time of the survey,

the East Scotland Group had Head Office files on 1,605 individual companies and site details of approximately 500 other companies for which Head Office files had yet to be compiled. Moreover, the Group was aware of about 1,000 'jobbing tradesmen' operating in the Area.³⁷ Ease of entry to trade combined with a high failure rate - through bankruptcy and voluntary liquidation - were cited by all inspectors as features of construction which compounded these problems of tracing and keeping track of the multitude of small contractors, the most difficult to monitor because of the short duration of jobs they undertake.

The scale and complexity of the regulatory task facing inspectors has been aggravated in the current recession for, contrary to the apparent trend in the 1960s,³⁸ employers and employment relations in construction have become more fragmented in recent years. As Table 8.5 indicates, between 1970-1980 there was a net increase of 55% in the number of firms registered as private contractors in the U.K. Within this overall increase, however, the number of firms employing 600 or more fell by 33% (from 210 to 140) whereas those employing 7 or less virtually doubled - from 53,473 / 73% of the total in 1970 to 91,657 / 81% of the total in 1980. Although the fragmentation amongst contractors registered in Scotland appears to be marginally less acute, the situation in this region mirrors the general trend with a recorded net increase in the number of firms of 37% (from 5,450 to 7,485) between 1970 and 1980.

The overall proliferation in the number of small firms has also been accompanied by an increase in the number of self-employed working proprietors (from 81,000 in 1970 to 127,580 by 1980) of which, in 1980, 85.6% employed between 1-7 men. Within the overall reduction

Table 8.5.
Number of Private Contractors by Size of Firm.*

Size of firm (by numbers employed)	Number of Firms						Scotland† (1980) no. %	
	1970		1975		1980			
	no.	%	no.	%	no.	%		
1 - 7	53,473	72.8	67,210	76.4	91,657	80.7	5,132	68.6
8 - 24	13,304	18.1	14,183	16.1	15,901	14.0	1,640	21.9
25 - 79	4,764	6.5	4,782	5.4	4,579	4.0	529	7.1
80 - 599	1,669	2.3	1,644	1.9	1,355	1.2	169	2.3
600 - 1,199	132	0.3	127	0.2	92	0.1	15	0.2
1,200 & over	78		71		48			
Total :	73,420	100	88,017	100	113,632	100	7,485	100.1

* Excludes Self-Employed Working Proprietors.

† Of the total for 1980, number of firms registered in Scotland.

Source : DOE Housing & Construction Statistics 1970-80.

in construction activity and employment with the recession, Tables 8.6. and 8.7. indicate that there has been a redistribution of employment and market share of output from the larger to the smaller contractors to match these changes. Such developments do not bode well for site safety for, whether working alone or as sub-contractors on larger projects, small and small-to-medium sized firms account for the majority of fatal accidents in construction.³⁹

Construction Practices and Procedures.

Apart from the obvious logistical difficulties associated with locating dispersed and temporary worksites and keeping track of contractors' activities, inspectors' regulatory role is subject to constraints arising from changes as the construction process evolves. As one inspector put it :

In a factory situation an inspector can tell management to put a guard on a machine and be reasonably sure that, whether he likes it or not, the man'll do it because he knows that that'll be the first thing the inspector will be looking for when he next visits. But in construction the site will be changing from day-to-day, so you can tell a man to get a trench shored, for example, but the odds are he'll treat it as a sort of game and won't do it because he knows you're unlikely to be back on the site again in time to check whether he's complied. And even when he does do it you know you've only gained a temporary reprieve because he'll soon start on the next phase of the work. On most sites it's routine but it's not repetitive - and that's what makes it so much more difficult in construction to ensure that safety standards are being adhered to.

Table 8.6.

Private Contractors : Manpower by Size of Firm.

<u>Size of firm</u> (by numbers employed)	<u>Manpower (Thousands)</u>					
	1970		1975		1980	
	no.	%	no.	%	no.	%
1 - 7	135.3	11.6	166.0	14.2	224.4	20.6
8 - 24	174.2	14.9	188.1	16.1	203.1	18.6
25 - 79	196.4	16.8	197.3	16.9	185.6	17.0
80 - 599	303.2	26.0	292.9	25.1	249.1	22.8
600 - 1,199	97.5	8.4	103.8	8.9	75.1	6.9
1,200 & over	260.5	22.3	221.0	18.9	153.9	14.1
Total :	1,167.0	100	1,169.1	100.1	1,091.3	100

Source : DOE Housing & Construction Statistics.

Table 8.7.

Private Contractors : Share of Output by Size of Firm.

<u>Size of Firm</u> (employment)	Share of Output (by value)		
	1970	1975	1980
	%	%	%
1 - 7	10.0	9.4	16.2
8 - 24	12.8	12.9	16.3
25 - 79	16.4	15.8	16.6
80 - 599	27.5	28.5	26.8
600 - 1,199	9.5	11.0	9.1
1,200 & over	23.8	22.5	15.1
Total :	100	100.1	100.1

Source : DOE Housing & Construction Statistics.

The value of workplace organization in monitoring safety standards on site as construction work develops is self-evident. Although this has been recognized for the past two decades in the statutory provision for employer-appointed safety officers, the vast majority of contractors - the poorest in terms of safety performance and the least subject to regulation by conventional inspection methods - are exempt from such requirements. Thus, as one inspector dryly observed :

While every firm should have some form of safety organization the law only categorically requires it, in the form of a safety officer, of those employing more than twenty. We can't force it on those who employ less, though the plain fact is that most of our problems are with small operators.

The requirement, following the 1974 Act, for all contractors employing five or more to have a written safety policy⁴⁰ was viewed by the majority of inspectors as being advantageous in the sense that, as one put it :

It gives us a starting point for tackling these weaknesses by getting contractors to think about safety organization in the first place.

The characteristics of construction site management per se were commented on by most inspectors as being integrally related to the absence of developed forms of safety organization amongst contractors. In this sense inspectors referred to problems frequently encountered on small sites, many of which are totally unsupervised or visited only periodically by a travelling foreman. In contrast with the situation in mines and factories where management representatives will be on hand to take note of the remedial action recommended by

by inspectors, the decision makers for such sites can be located miles away at offices or on other sites, and thus difficult to contact. Most inspectors also commented at length on the difficulties arising from the traditional system of sub-contracting.⁴¹ The fragmentation of employers and employment relations on multi-contractor sites, particularly acute on large civil engineering (CE) projects, and the associated difficulties of getting employers to act in concert⁴² are aptly described by the inspector who observed :

Some of the larger projects are like transit camps : you get dozens of different contractors, each with their own men, passing through the site to do their bit of the work - and although their activities are inter-connected when it comes to the general safety of the site, getting them to co-operate is virtually impossible when, as often as not, they're unaware that each other are even there!

The structural and organizational features of construction outlined above which render this industry less susceptible than others to the regulatory activities of state inspectors illustrate the environmental parameters common to any form of external regulation and cast in sharp relief the potential scope for 'self - regulating systems' of safety organization. Yet the very features which hamper regulation have also given rise to an industrial relations environment, verging on the anarchic, which would appear to be less conducive than others to 'the development of a closer working relationship between employers and their employees'⁴³ envisaged as the basis for 'self - regulation' and improvements in hazard control at the workplace. We do not propose to become embroiled in a detailed description

of the industry's industrial relations structure; the complex and patchy apparatus of institutional bodies and joint administrative arrangements attempting to regulate the labour market which this fragmented and fluid environment has spawned.⁴⁴ Rather, in the next section, we examine the general characteristics of, and influences affecting, construction trade unionism and the consequences in terms of workplace industrial relations - the context into which the new provisions of the 1974 Act and SRSC Regulations have been grafted and within which safety representatives are expected to act.

THE 'SELF-REGULATORY' CONTEXT : CHARACTERISTICS OF UNION ORGANIZATION AND INDUSTRIAL RELATIONS.

In the preceding section the fragmentation amongst contractors and of employment relations associated with the nature of the construction process and 'product' was noted. That such fragmentation should be matched in terms of trade union organization and membership is hardly surprising for, as England (1979:2) has observed, "both the ethos and the technological and market 'environment' of the industry make it difficult to organize men and even more difficult to retain them." This theme was explored with trade union informants and the factors identified as significantly affecting union organization on construction sites are summarized in Table 8.8. The responses fall into two broad categories which will be referred to as (a) environmental constraints and (b) union marginality.

Environmental Constraints.

The occupational and geographic fragmentation of the

Table 8.8.Factors Affecting Union Organization in Construction.

<u>Environmental Constraints</u>	<u>Regional Officials</u> %	<u>Site Representatives</u> %	<u>Total</u> % no.	
Casual Employment	100	100	100	15
Labour Mobility	86	100	93	14
Geographic Dispersion and Occupational Fragmentation	57	38	47	7
Employers' Resistance	29	38	33	5
<u>Union Marginality</u>				
Mens' Disinterest	71	88	80	12
attributed to :*	*	*	*	
- Payment Systems	100	85	92	11
- Lack of Trade Union Tradition	40	43	42	5
- Lessening Craft Status/Identity	40	29	33	4
- Miscellaneous	20	29	25	3
<hr/>				
Number of Responses :	34	42	76	
Number of Informants :	7	8	15	
<hr/>				

* Responses as % of those citing Mens' Disinterest.

construction workforce, 85% of whom are employed in the private sector, pose obvious problems for union organization⁴⁵ and were referred to by some informants.

The distinctive features of the construction labour market are, however, the casual conditions of employment and the attendant mobility of construction workers.⁴⁶ It was these features, aptly described as follows, which our informants invariably cited as being of primary significance :

The nomadic state of the industry and the sort of hire and fire arrangements which firms go in for - those're the main obstacles to organization in this industry. Most firms start men for a site and when the site runs down they let the men go. They may keep on a nucleus of long-term people but most men're dependent on the size of the site and the time it'll go to,

Consequently,

You can get a huge, shifting workforce together for maybe 6 months - which is a reasonably long job in building - but when the job's finished the men'll scatter : some'll leave the industry, and of the hard core which stays some'll be unemployed (for long spells nowadays) and others'll go to jobs all over the place.

The above observations, made respectively by a Regional Official (RO) and a steward, encapsulate the central dimensions of transience which cause the basic problems of site organization. Subject to the changing size and composition of the workforce and particular phases of site operations, organization at the point of production in construction is a continuous process of organization and re-organization throughout the life cycle of a site which starts again on each new project.

Antagonistic resistance to trade unionism on the part of many construction employers, particularly amongst small operators in rural areas, and alleged practices of victimizing and blacklisting active trade unionists are additional obstacles to (the potential for) site organization.⁴⁷ However, the tough, individualistic ethos customarily ascribed to site workers has been commented on by writers such as England (1979) and Sykes (1969) as being associated with a resistance to trade unionism. This was a theme which was repeated in the courses of an interviews with one safety officer, who remarked that -

most of the men employed by companies
in my Group aren't in the union
because the feeling is that a man
should be able to look out for
himself and fight his own battles.

While most of the union informants conceded that it was not uncommon to come across men who were 'hostile nons', the general theme to emerge from questioning on this issue is more one of indifferent passivity towards union membership rather than hostility. They all reported that they found 'no great resistance to joining the union'. As one RO put it :

The times I can't persuade a man to
join are few and far between. Getting
them organized is just a question of
catching the lads on site.

'Catching the lads on site' is a key organizational strategy⁴⁸ for apart from the dwindling numbers who pay their dues at branch meetings,⁴⁹ and the few who inform ROs that they have changed contractors and need a new 'check-off' agreement arranged, the high membership turnover amongst construction workers⁵⁰ was attributed to the tendency on the part of most men to 'drop out of sight'

when they change jobs. The phenomenon of repeated re-recruitment when these men are 'met up with on another site', commented on by all ROs, is aggravated by the tendency particularly amongst younger men to change jobs often.⁵¹ As one RO put it :

Men jump from job to job, especially if they're good - and if a job doesn't pay they jack and move on. It can be soul-destroying at times because you find you're organizing and re-organizing the same people. For example, and this is not abnormal, I've recruited the same gang of brickies on three different sites in one week - and have had to sign them up for a new check-off agreement on each site.

Batstone et al (1979) refer to the concept of the 'institutional centrality' of a union in the sense of the extent to which the union plays a key role in determining the experience of its members. A high degree of centrality is said to exist when the union is 'importantly involved in determining the wages, conditions, and work of its members'.⁵² The commonly exhibited indifference towards joining the union and maintaining union membership, which was cited by 80% of union informants as a distinctive feature affecting site organization, points to the union as playing a marginal role in determining the 'life chances' of site workers. This situation has its roots in the post-war developments affecting construction trade unionism which we briefly review here in order to arrive at an understanding of the current situation.

Union Marginality.

Historical accounts of the fluctuating development and variable patterns of trade unionism amongst building trades workers has been extensively documented (Postgate, 1932; Higgenbottam, 1939 ; Connelly, 1960 ; and Price,

1980). As Austrin (1980) has noted, it is a history characterized by a highly uneven development, where violent and bitter strikes over wages and wage contracts have co-existed with non-unionism of the most passive kind.⁵³ The most notable feature in the recent history of construction trade unionism is, however, that in contrast with the general post-war trend towards greater union organization, the density of union membership in construction declined significantly - from 44.4% in 1951 to 33.4% in 1971. (Bain and Elsheikh, 1979). This dramatic fall in membership occurred paradoxically during a boom period in construction when acute shortages of skilled and unskilled labour were being experienced ; conditions normally considered conducive to the strengthening of union organization. (Bain and Elsheik, 1982). Most authors attribute this situation to the rapid post-war escalation in the use of labour-only sub-contracting or 'lump' contracts,⁵⁴ a development which parallels the decline in the significance of national wage negotiations dating from 1947 when the construction unions accepted the principle of supplementing nationally agreed standard time rates with payment-by-results incentive schemes devised and implemented at site level.⁵⁵

The declining importance of national agreements and the associated wage drift related to the strengthening of bargaining at the point of production in themselves are not peculiar to the construction industry, but are trends in the general structure of industrial relations in this country which, stemming from the Donovan Report (1968), have been widely studied. (e.g. Brown and Terry, 1978 ; Brown(ed), 1981 ; Ogden, 1982). However, in construction, the strengthening of workplace bargaining displaced rather than augmented union organization at the workplace, for high earnings were increasingly being bargained for on the basis of 'private' one-off lump contracts negotiated independent of and outwith union

regulation between contractors and individuals or small work gangs. Union opposition to lump working was only successful in those areas where strong steward organization was able to negotiate bonus earnings, on top of collectively agreed upon union rates and conditions, equal to those obtainable on the lump. Such 'islands of organization' (England, 1979) were, however, exceptional, with thousands of construction workers⁵⁶ exhibiting a distinct preference for (non-union) lump contracts rather than the 'bare and bones' obtainable on 'union jobs' (Gagg, 1969).

The formation of UCATT in 1971, the product of mergers between the four major craft unions, was in response to the crisis of falling membership levels.⁵⁷ Faced with the alternatives of continued decline or merger with one or other of the two big general unions, Austrin (1980:303) describes this amalgamation as -

"a forced embrace of national union leaderships brought on by bankruptcy. It was a desperate attempt to keep independent building unionism alive, not fought for by construction workers but rather negotiated by their leaderships."

Recruiting solely construction workers and with a membership drawn primarily from the building industry's private sector UCATT, the tenth largest union affiliated to the TUC, recorded a net increase in its membership of 33% between 1971 and 1979 (from 262,610 to 349,000). In common with most other major unions, however, UCATT's membership figures have plunged dramatically over the last few years. While the onset of recession conditions had eroded the incentives - and hence the immediate threat to trade unionism - of the lump, the industry was now experiencing rising and record levels of unemployment.⁵⁸

Thus by 1981 UCATTs membership had dropped to 299,000, a net increase of only 14% since amalgamation a decade earlier, and the unions financial crisis continues unabated.⁵⁹ Moreover, the workforce remains highly fragmented in union membership terms, for while UCATT was established with the aim of creating 'one union' for the construction industry, multi-unionism is a dominant characteristic. Indeed, in an industry not reknown for inter-union co-operation,⁶⁰ the writer was informed that it was not uncommon for five or six of the seven unions currently recruiting in the industry⁶¹ to be represented at any one time on a major CE project. Yet despite this, trade unionists will more often than not be working beside 'nons', for the 'big four' unions - UCATT, TGWU, GMWU (now GEMBAT) and the FTAT- between them can claim to represent no more than a third of the workforce.

The noted indifference towards union membership cited by most of the union informants as a key obstacle to site organization is, at least partially, the legacy of these post-war developments which have relegated the union to an increasingly marginal role in determining the work experience of site workers. In the first place, the basic rates negotiated nationally bear little relation to actual earnings which can be bargained for on an individual or group basis at site level⁶² so that, as one site representative put it : 'the lads see that the unions got no clout when it comes to their take-home pay'. Indeed, as one RO observed, particularly on those sites where 'price work'⁶³ is the norm :

If you're trying to persuade a man to join (the union) on the basis of earnings you're on a losing wicket with the wage system we've got in this industry - because the basic wage is £80 and where you've

got a man on price work earning himself £260 he'll turn round and ask you what the union can do for him! It makes a mockery of the union agreements we've negotiated in Local Authorities but it's a bind we're stuck with.

Other symptoms of union marginality cited by some informants relate to the inability of men to identify with the union. 'Lack of tradition' was remarked on in the sense that the (history and) collectivist goals of trade unionism are alien to those who have been habituated to work on an individual basis through lump contracts. As a steward put it :

We say 'all for one and one for all' - but you've got lads that've been bred on grip⁶⁴ and all they know or care about are the rules on the jungle - look after number one and to hell with everyone else.

Apart from this, however, reference was also made to the long standing lack of trade union tradition in rural areas particularly where, as one RO observed :

Men're still tipping their hats to landlords and masters - that's the sort mentality you're up against (in the Borders).

The 'slackening of craft bonds' was identified as another factor contributing to mens' disinterest in union membership, which was invariably related to the 'decline in branch life'. As one RO put it :

Before amalgamation men used to come to their branch to pay their dues on their own initiative and it didn't matter if they moved between firms. But then men had a stronger bond through their

craft and the long history of struggle to create their organizations. When amalgamation took place the union was open to all and so those old craft bonds loosened. It's had an adverse effect on branch life which has virtually disappeared now.

Certainly, the 'loosening' of craft bonds predates amalgamation,⁶⁵ but the closure of the old craft unions' offices, the merger of branches, and other internal changes following amalgamation, the subject of often bitter discussions with some union informants concerning internal union politics, evidently exacerbated this trend and men's difficulty in identifying with the union.

The individuation of site workers brought about by the casual conditions of the construction labour market, in turn reinforcing a tendency of union marginality, creates a situation in which union organization at the point of production is perhaps more difficult to establish and maintain in construction than in any other industry. In the public sector and in some of the direct labour organizations (DLOs) of companies outside the industry, stability of employment enables the unions to 'effectively operate closed shop agreements'. But instances of strong union organization in the private sector tend to be isolated geographically and over time. In the main, site organization is weak, patchy, and in many cases non-existent.⁶⁶ The consequences for workplace industrial relations are reviewed next.

Workplace Industrial Relations.

On construction sites the casual conditions of employment are not conducive to the development of close and co-operative working relations; all the site

representatives interviewed rated the general 'climate' of site industrial relations as being 'very poor to hostile'. The commonly exhibited indifference of contractors to mens' working conditions fosters a hostile, oppositional attitude amongst stewards expressed by one site representative, and repeated with minor variations by most of the others, as follows :

You come on site and you've to argue for everything - toilets, hot water and towels for a starter. We've always had to fight for anything we ever had because management don't do a thing unless they're pressurized - and in the current climate we're not winning much because the employers have got the upper hand. But you never feel as if you're really making much headway anyway because even when work's good you find it's always the same all over again on the next site.

The fact that site negotiations can be an intimidating exercise for newly appointed stewards fosters and / or reinforces the militancy of many construction stewards,⁶⁷ with half the site representatives describing experiences similar to that of the steward who related that -

When I started on this site there was no steward so I thought I'd have a go at it though I'd no' been a steward before. At first I'd to nerve myself up to it every time I went into the site agent's office because I'd to face the heavy team - the contracts manager, site agent and 2 foremen would be in there all yelling at me at the one time and they used to run rings 'round me 'til I learnt not to be thrown by it and give as good as I get. It's been a real eye-opener - a baptism of fire you could say - and it's obvious to me now that the company's anti-union

despite its rhetoric,

To depict all contractors as resistant or hostile to trade unionism is evidently erroneous and most of the site representatives conceded that, as one put it, there was 'quite a bit of come and go on most jobs'. Experience between sites varies considerably for, as one steward typically observed :

Some sites run themselves and there's no bother because site management are reasonable and at least will listen to you, but on others you'll get a midden of a site agent and then it's bad. On those jobs you're on a treadmill - it's constant fights all the time about the bonus being cut or men being paid off helter-skelter or unjustified sackings which smack of victimization.

The general picture of working relations to emerge from our interviews is aptly summarized by the site representative who lamented :

I don't see why the two of them (management and workmen) can't work in conjunction - it'd be to everyones' advantage. I always thought that if management took an hour a week off and told the stewards what was happening and had a discussion on it that the jobs'd go much better. As it is the men've got no idea what's happening next on site and management seem to wait 'til a problem hits them and then they don't know what to do. So you can get a small problem on site which gets built up and within a couple of hours you've got a civil war on your hands - a full-blown confrontation. That's it in building - management and men are on two sides of the fence and ne'er the twain shall meet.

These characteristics of working relationships, together with the isolation and weakness of site organization, have been posited as accounting for the following characteristics of construction trade unionism (England, 1979):

- (a) the traditional emphasis on the branch as a means of uniting a fragmented workforce;
- (b) the dependence of members on paid officials;
- (c) the emphasis placed on national negotiations.

In concluding this section these features are briefly reviewed in light of the interviews.

There was a consensus amongst union informants that, while the branch still acted as a source of support and information exchange for activists, 'branch life' had died off and no alternative focus had evolved to compensate for this felt loss.⁶⁸ Most attributed this to the growth of check-off arrangements which obviated the need for men to attend meetings in order to 'keep up their cards', a development felt by many to have relegated the branch to little more than 'an administrative unit'. The closure of branches following amalgamation with the attendant loss of craft identity and the consequent greater distances men now have to travel to attend branch meetings were also mentioned. Membership figures, universally reported to falling, varied from 152 - 389 in the branches surveyed. Attendance at branch meetings, however, was generally reported as being poor; averaging between 2 - 20 and with only occasionally larger turnouts. Those site representatives who held branch office invariably lamented that, as one put it, 'the only time you see members at meetings is when they've a personal problem they want you to sort out for them'. Apart from 'run of the mill' issues, such as processing injury claims and advising members on benefits available, it became apparent through questioning on this issue that such 'personal problems'

frequently related to a members' inability or unwillingness to deal with a site grievance himself. As one site representative, a branch secretary, related :

A lot of boys have got their heads down just now - they fear they'll be blown out if they start making waves on site so they're operating undercover. That is, they'll bring their problems about conditions or bonus or whatever to the branch and the branch secretary takes it up with the company - writes a letter saying he's been informed by a member on site, no names like, about whatever the problem is and taking it from there.

Particularly in such cases where the branch secretary is cast in the role of an ex-site steward, it is evident that the branch can still act as a 'resource centre' which occasionally provides some counterbalance to the weakness of site organization and the isolation of members.

The traditionally high ratio of ROs to members⁶⁹ is also symptomatic of the weakness of site organization, for it reflects the dependence of members of paid officials. All the ROs interviewed reported that the vast bulk of their time (estimates varying from 60 - 99%) was spent on 'servicing' activities - reacting to members requests for information and dealing with their problems, complaints and grievances. It would appear that recourse to the RO as a source of leverage is more often than not immediate, for all ROs related that, as one put it,

There's a tendency - especially if there's no steward on the job - to pick up the 'phone and cry you on site before the man's even approached management. They think they'll get nowhere or they're feared to speak out so they're forever trying to shortcircuit the grievance procedure - and some stewards are guilty of that too.

Even on sites where there are experienced stewards who 'know the score', most ROs reported that, as one typically put it,

A hell of a lot of problems which should've been sorted out at their level invariably come to me.

Much of the ROs 'servicing' work is concerned with the application of the industry's various National Working Rule Agreements (NWRA)⁷⁰ to particular site situations. The majority of incidents referred to ROs by stewards were cited as concerning disputes over bonus or bonus targets, followed by 'pay - offs' (redundancies and unfair dismissals). However, ROs reported that the vast bulk of their case work was dealing with individual members' complaints and queries relating to such matters as sick pay, NI stamps, holiday entitlements, travel and other allowances and so on. As one of the ROs observed :

I've no control when it comes to negotiations about wages which are usually sorted on site, so most of my work is concerned with conditions - ensuring that the agreements which the union is party to are carried out by employers and that the men are getting what they're entitled to.

The elaborate nature of the industry's NWRAs, which set out in detail many matters which in other industries are usually determined at the workplace, together with the high degree of RO involvement in such issues, reflects the emphasis placed by the unions on joint regulation at national level rather than on sites. Whatever the significance of such negotiations to members' actual work experience, we would concur with England (1979) in attributing this 'paradox of centralized joint rule-making in a highly fragmented, ill-organized industry'

to the fact that it is only at national level that both the unions and the employers achieve collective credibility.

CONCLUSIONS.

The transient nature of site activities and the associated difficulties, arising from both environmental constraints and the characteristics of union marginality, pose problems for developing and maintaining site organization different in kind to those encountered in static workplaces or environments where stable employment is the norm. The modus vivendi carried forward from site to site fosters an antagonistic orientation amongst stewards and the general picture of working relations to emerge is one whereby, more often than not, management and men are seen as being protagonists in opposing camps. The degree of co-operation commonly exhibited is akin to the 'come and go' across a no-mans' land of entrenched attitudes and beliefs. The general weakness and isolation of site organization together with the fragmentation of the workforce creates a reliance on forms of organization and support external to the site, with ROs particularly playing a key resource and servicing role.

The impact of safety representatives and the provisions of the 1974 Act designed to encourage the development of 'self-regulating systems' of accident prevention, based on co-operative arrangements between employers and their workforce, can hardly be considered to fit easily in this context of workplace industrial relations. The basic pre-requisite for the appointment of safety representatives, trade union site organization, is either lacking entirely or subject to serious constraints. Moreover, the dependence of site workers on external sources of support to counteract the weakness of site

organization suggests that the form and nature of such support as is forthcoming from union and/or other quarters is likely to be a key factor in the promotion of safety representative activities on construction sites. In this context, given the emphasis on joint regulation of the industry at national level despite the low numerical representation of employers by the federations and workmen by their unions, it is ironic that the HSE has placed considerable stress on the role of the federations and unions in 'contributing to the joint effort by disseminating information and promoting safe working practices' amongst their respective members. (HSE: Construction... 1979-80). The provision of training courses, the publication of guidance material and the appointment of national safety officers have been the primary activities of both the major federations and the unions in this direction. Moreover, at national level, the creation of the Construction Industry Advisory Committee (CONIAC) in 1978 by the HSE provides a forum for co-operation on health and safety matters additional to the existing national joint negotiating machinery. Given the industry's fragmented structure and the characteristics of workplace industrial relations there are few grounds for optimism that co-operative initiatives taken at national level are filtering down to sites. In the next chapter, the extent to which the provisions for safety representatives have actually been utilized in construction is considered.

CHAPTER 9

SAFETY REPRESENTATION IN CONSTRUCTION

SAFETY REPRESENTATION IN CONSTRUCTION

In 1979, one year after the SRSC Regulations became operational, the HSE conducted a survey to gauge the impact of the provisions in terms of the extent to which safety representatives had been appointed. Compared with other industries the take-up rate in construction was one of the lowest, with safety representatives appointed in only 4% of the 1,912 worksites included in the survey.¹ When the survey informants were referred to this finding, many gave vent to sentiments deploring the limited take-up rate, but over half expressed surprise that the figure was 'as high as 4%'.

This chapter is concerned with examining the use made of the safety representative provisions in practice. Compiling an accurate census of the number of safety representatives appointed and where they are operating is fraught with difficulties and beyond the scope of this project. However, the quantitative and qualitative data obtained in the course of this study provides insight into the variable impact of the provisions in construction. The first part of this chapter therefore looks at the available data on the appointment of safety representatives and the location of these appointments according to types of worksite, and then considers evidence as to the impact of the provisions in terms of workforce coverage. In the light of this, the second part of the chapter examines informants expectations and beliefs as to the negligible take-up rate and the use of such provisions in the construction context.

THE PATTERN OF ACTIVITY

Safely Appointed ?

UCATT Head Office sources estimated² that throughout the union's twelve regions between 4-6000 UCATT safety representatives had been appointed by April 1982. Despite 70% of UCATT membership being employed in the private sector, the vast majority of these safety representatives were thought to be employed in the public sector. Of the estimated third (or approximately 1,500) in the private sector, no breakdown was available as to the distribution of safety representatives between those engaged by building and civil engineering (B & CE) contractors as compared with those in static 'factory' environments. Figures obtained from the union's Scottish Regional Office suggest that the Head Office's lower estimate is probably a more realistic reflection of activity levels, for these showed a total of only 277 safety representatives as having been appointed in Scotland by October 1981. Of these, the all-encompassing category of 'Construction' accounted for 170 with the remainder being in Local Authorities (78) and the NHS (29).

Setting these figures in context we note here that both national and regional level sources reported that the safety representatives appointed were almost invariably members who already held union office as shop stewards. This 'doubling up' is, in fact, the course of action recommended in the unions handbook for shop stewards, which states that:

in normal circumstances the shop steward should take on the additional task of safety representative and will undergo training for that responsibility. (p.16)

According to Head Office sources there are approximately 12,000 UCATT shop stewards throughout the country which, taken together with the estimated number of safety representatives appointed, suggests a high take-up rate with between a third and half of all stewards holding dual office as safety representatives. However, given that regional records will provide a more accurate guide and assuming that the Scottish Region is not atypical, this take-up rate is probably over-optimistic for, with a recorded total of 2,225 shop stewards in Scotland, the fraction of safety representatives falls to only one eighth. Thus, while the numbers holding sole office as safety representative were considered to be insignificant, the stewards willing to 'take on the additional task of safety representative' evidently also form a distinct minority.

The estimates and figures quoted refer to the number of men who have been issued with union credentials³ as safety representatives which is not, a fact stressed by both national and regional level sources, synonymous with the numbers currently active. The high 'drop-out' rate amongst nominated safety representatives either before or after having attended training courses was commented on by the ROs interviewed. The difficulty of 'holding onto reps' was attributed most frequently to the turnover and dispersal of men following the completion of projects, and to the 'inevitable wastage' of those who 'lacked commitment' or who lacked confidence in their ability to 'handle the job'. Reference was also made, however, to the effects of 'disillusion and isolation on site', which one RO described as follows:

He may be fired up after the course but the training is a blunt weapon when he gets back onto site because no-one's really interested. He sees that his

recommendations aren't being dealt with properly by management and that he's being fobbed-off with promises - and that the men aren't too bothered about it anyway. So - he questions the viability of his position and he's not going to be inclined to take the job on again when he starts on another site.

Others attributed the drop-out rate among safety representatives to more tangible factors:

There's a feeling that he's been complaining too much and he's likely to come off the job without having made a decent bonus for himself because he's been chasing up other mens' problems.

On a more general level we found a broad consensus of opinion between informants that, as far as the appointment of safety representatives is concerned, the initial stimulus of the 1974 Act and the SRSC Regulations had evaporated, particularly in the private sector. ROs commented on the period 1976 - 79 as having been one of considerable interest in the provisions and activity in terms of 'putting a lot of men through TUC courses',⁴ but that this momentum had since fallen-off dramatically. Most of the ROs attributed this to the worsening employment situation in the industry - 'the hidden connotations of the recession whereby men fear for their jobs and are keeping their heads down'.

The evidence presented thus far suggests that even the relatively small number of UCATT safety representatives recorded as having been appointed overestimates the numbers currently operating. Moreover, the known 'wastage' of appointed representatives together with the declining rate of new appointments suggests that there are probably fewer construction worksites with safety representatives

now than the 4% reported by the HSE in 1979. The impact of the provisions for safety representatives in terms of the numbers appointed thus appears to have been minimal and was generally considered by informants to be, as one inspector phrased it, 'past its little peak already'.

In order to appreciate the factors affecting the limited take-up of the provisions it is necessary to locate where safety representatives have been or were appointed and to examine the characteristics which distinguish these worksites. Informants were therefore asked to enumerate and describe the worksites in their various constituencies where they had had contact with or knew of the existence of safety representatives, and to relate the details of any arrangements concerning use of the SRSC Regulations which they knew about.

Locations

The geographic distribution of safety representatives appears, not unnaturally, to reflect the varying levels of construction activity in the Area, with the UCATT ROs quoting figures ranging from 6-40 for the number of men in their respective 'patches' whose safety representative credentials they had processed. Each reported that 'all but a handful' of these safety representatives were in settled employment : with Local Authorities, the NHS, in dockyards and 'factory' environments such as the DLOs and building maintenance departments of large firms - including national manufacturing companies and multinational petro-chemical corporations. As regards private contractors' sites in the Area, the ROs could between them name only 8 where UCATT safety representatives were known to exist. Apart from one large housebuilding site, these sites were all major CE projects. These same CE projects

were listed by inspectors as being the only places where, apart from 'the odd one or two encountered in country areas', they had come across or heard of safety representatives having been appointed.

Some of the UCATT ROs stated that the union was working towards a two-tiered system of safety representation with company-based as well as site-based representatives. (The policy did not carry an 'official' tag). The idea is that company-based convenor safety representatives, on a par with the employers' safety officer, cover all the sites worked by one company or by a group of small contractors, acting as a liaison link and servicing the activities of the various site-based representatives. This relatively sophisticated form of organisation holds an appeal in that company-based arrangements enable a degree of continuity beyond that possible where the domestic organisation is defined as site-based. But it is evident that in practice such arrangements are the exception rather than the rule. Only one example could be found in the whole Scottish Region and this related to the firm referred to previously (Chapter 4) as having a 'set-up' which in itself was regarded as exceptional; a multinational B and CE corporation where an agreement between UCATT ROs and the company's regional director had already been reached for a company-based convenor. This convenor, included among the union representatives interviewed, had 'doubled on safety' and as such described himself as acting as 'senior safety representative' and 'health and safety co-ordinator'. Given the uniqueness of his position it is worth noting here some of the distinctive features associated with it:

- (1) Union-management relations were seen as being 'very good', much better than the average, and the company was described as a progressive employer in this respect.

- (2) The convenor himself had been in stable employment with the company for many years (15) and for the last six had been engaged full-time on union business.
- (3) The convenor reported receiving the 'full co-operation and backing of senior management' and being afforded all the facilities he needed to perform his functions; i.e. all the site access, information, office, and other facilities he considered necessary, including a company car!
- (4) Senior managers, from the company's Head Office as well as the Scottish Director, and UCATT Regional Officials had been involved in mapping out and agreeing on the arrangements for safety representation shortly after the introduction of the 1974 Act; arrangements which had taken effect from that time and continued to operate to date.

On this last point, union informants either could not or would not say which party had initiated negotiations but this was, incidentally, the only case of a company agreement on safety representation referred to by UCATT RO informants.

In relation to safety, the convenor described his primary functions as being to travel between the various sites throughout Scotland where the firm was undertaking work, of which there were approximately 50 at the time of the interview (varying in duration, and in size from 3-4 up to 300+), acting as a 'visiting safety rep' on small sites and on larger sites seeing to the appointment and servicing of steward-safety representatives. He reported that at the time of the interview there were 'about 30' such site-based representatives on the company's sites in Scotland. When asked to locate or name the sites in East Scotland where such safety representatives had been appointed, apart from the few said to be scattered individually or in pairs on sheltered housing and industrial building sites, the convenors' responses revealed a concentration of activity on those of the half dozen

major CE projects in the Area where the company was acting as a sub-contractor.

Further confirmation that the appointment of safety representatives in the private sector has been confined primarily to large companies and long-term sites was provided by the safety officers interviewed, who stated that none of the (51 'small') companies in their respective Safety Groups had at any time had a safety representative. Moreover, all three reported that none of their companies had ever been approached by the few union members amongst their various workforces or by union FTOs regarding the appointment of a safety representative. Only one of the safety officers had ever met a safety representative on a site where one of his Group's companies was working as a sub-contractor - and this had been in 1976. The SBEF officer interviewed reported that he had had no feedback or queries from member firms concerning the appointment or activities of safety representatives. Although he considered it likely that some of the larger companies had 'been faced with the issue of safety representation and dealt with it themselves', he viewed the absence of any feedback as evidence indicative of the absence of safety representatives and on this basis concluded that 'the passage of the SRSC Regulations has not been the problem we feared it was going to be.'

Amongst the site representatives interviewed, the steward employed in a 'static' workplace, the building maintenance department of a large petro-chemical plant, reported that safety representatives were established throughout the plant⁵ but that he knew of none operating on private sector sites except one of his (regularly attending) branch members. This man, the lone safety representative employed on the housing site referred to by ROs, was the only appointed safety representative among

the steward informants. His employer was one of the largest building companies in the U.K., and the site itself was expected to last for two or more years depending on house sales on the estate. He had been acting as a safety representative for about six months and at the time of the interview, having yet to attend a training course, knew of no other safety representatives. Indeed, he expressed keen concern as to how his anonymity could be guaranteed for 'when I got my safety reps' credentials I was told that I'm one of the few in Scotland and the only one this company has on any of its' sites north of the Border'. Given both the formal and informal contacts and information networks existing outwith sites, between lay activists in particular, the site representatives' contact with or knowledge of safety representatives can be expected to extend beyond their own immediate employment experience. It is thus significant to note that the majority of these informants had never heard of safety representatives having been appointed under the SRSC Regulations (although most speculated that, if not on building sites, such representatives probably existed on the large CE projects).

Although most of the site representatives were unaware of appointments made under the SRSC Regulations, it is interesting to note here that three of the stewards interviewed referred, independently, to a particular building project where a system of safety inspection was said to have been firmly established. As this is a case of safety specialism among site representatives which pre-dates the SRSC Regulations (the project having been completed in 1977), and as the provisions were designed to promote such activity, it is worth noting a number of points to emerge from their (corroborating) descriptions of this site:

- the main contractor was a medium-to-large company and the project, a commercial building, had lasted three years;
- following an initial dispute concerning union recognition and the re-instatement of the stewards after an $8\frac{1}{2}$ week 'lock-out', the site was well organised in union terms and relations with the site management team (largely replaced by the company after the dispute) were described as having been 'fairly good';
- an 'unofficial safety rep' had been elected by the site shop stewards' committee to undertake 'the daily walkabout inspection of conditions';
- he was ~~not~~ himself a steward but he worked in close co-operation with them, reporting back daily to the site convenor on any matter he had taken up or was proposing to take-up with management.

The 'daily walkabout' is evidently more appropriate to the constantly changing conditions inherent to construction site activities than the quarterly inspection provisions of the SRSC Regulations. The manner in which the arrangements were established contrasts dramatically with the case of the company-based convenor in that in this instance the modus operandi emerged through a process of direct confrontation over recognition followed by site negotiations. Concern for safety and health seems to have become 'an issue' for the site stewards on the question of handling asbestos products on site, and it is certainly plausible that the passage of the 1974 Act was a suggestive influence affecting the safety specialism and inspection practices which were established.⁽⁶⁾ Nonetheless, in practical terms, as the site representative who had been convenor or that site stressed,

It had nothing to do with the Health and Safety Act or any of that - we'd started on that site before the Act came in. We could make those arrangements for safety because we were militant and we had the site well organised.

Reference was also made to one other site with similar characteristics, completed in 1974/5, where a steward had been assigned particular responsibility for safety conditions by the site's convenor. In this case it had been 'mainly a matter of looking into men's complaints' rather than any form of regular inspection.

While instances of strong union organisation as those described above are relatively rare and remarked upon by informants as exceptional, these cases indicate that trade unionists on well organised sites can and do act without reference to legislative provisions. Moreover, these cases suggest that at times prior to the new legislation, when in a sufficiently strong bargaining position to do so, site stewards have made their own arrangements for actively participating in the regulation of site safety. Evidence of this nature is inherently anecdotal but, particularly when taken together with references made by other informants to safety representative activity prior to (October) 1978, the operational date of the SRSC Regulations, it nonetheless serves to highlight the negligible impact of the legislative provisions.

In sum, the evidence presented so far indicates that such safety representative activity as has been promoted by the passage of the 1974 Act and the SRSC Regulations has been confined primarily to those in the public sector, while in the private sector the effect has been 'top heavy'; limited to those in stable or settled employment with large companies and/or on long-term sites. The concept of a 'two-tiered' system of safety representation with company-based as well as site-based representatives, mooted as a way of overcoming the lack of organisational continuity beyond the life-cycle of any one site, is a positive development but, again, experience of this in

Scotland has been confined to date to one large company with a reputation as a receptive and 'progressive employer'. On the vast majority of small and poorly organised sites, where the need for some form of workplace safety organisation is arguably greatest, the SRSC Regulations have not been utilized.

Corroborating references by informants indicate that the appointment of safety representatives on private contractors site has been concentrated on a few major CE projects in the Area. Although the number of such sites may be insignificant when compared with the total, they tend to be the focus of very large, albeit shifting, labour forces. This raises the question of how widespread the impact of the provisions has been in terms of workforce coverage.

Workforce Coverage

The HSE's 1979 survey reported that the 4% of construction workplaces (public and private) where safety representatives had been appointed accounted for 58% of the 43,181 employed in all the construction workplaces surveyed. This indicates the concentration of employment and confirms the fact that safety representatives tend to be found in large workplaces.⁷² Unfortunately, the report gives no indication of workforce coverage on those worksites where safety representatives were reported to have been appointed. The only reference to this issue is made in general terms relating to all the industries surveyed; that 96% of all those employed in workplaces where safety representatives had been appointed were included in these representatives' constituencies. As the report gives no indication of the distribution by industry of those outwith the safety representatives' constituencies, it is at best uninformative on the

question of workforce coverage in construction and, by omission, liable to misinterpretation. Given the low density of trade union membership one certainly cannot assume that the safety representatives on construction worksites represent 96% of the workforce employed on those sites or even, an alternative interpretation of the data, that they represent 58% of the labour force on these sites, and to do so stretches credibility. Evidence obtained during the course of this study through observational visits and subsequent monitoring of activity on two major CE projects in the Area suggests the contrary; that the safety representatives appointed represent only a small proportion of the total workforce employed on such sites.

The two CE projects were visited (in the company of an HSE inspector) mid-way through the interviewing programme and monitored through informal contacts for a period of six months thereafter. The sites had been selected purposely because a number of the informants interviewed had referred to these projects by name as being the locale of safety representative appointments and activity. At the time of the observational visits⁸ one project was employing 1,190 men and the other 562. Verification as to the existence of safety representatives was sought through questioning the managing contractors' safety officers, the clients' site personnel, and all the workmen, supervisors and other site personnel encountered at random throughout the sites individually and in groups. None were aware of any union safety representative on site.

The managing contractors' safety personnel on both projects reported that they had not been approached by the trade unions on site concerning safety representation, nor been notified of any appointments. Interestingly,

both anticipated such notifications when the specialist contractors started work on the sites. These contractors (involved in pipe-laying and refractory work) were said to retain their skilled men 'between jobs' and as a result their labour forces were normally better organised in union terms than 'the heavy boys' doing preparatory work. In the meantime, given categoric assurances by the company-based UCATT convenor interviewed that he had appointed three steward-safety representatives on one of these sites, the first of them two years previously, one can only assume that the process of notifying employers had been confined to his own company; one of the 45 sub-contractors working on the project at that time. Certainly, the fragmentation of employment relations on such large projects poses serious difficulties to the development and co-ordination of safety organisation (and in this sense the significance of the fact that the managing contractors SO was unaware of these safety representatives should not be over-rated.) The existence of a site safety committee was evidence of attempts to circumvent such problems, but this committee was 'management only' - attended by the sub-contractors' safety officers or other nominated management representatives.

Evidently, the situation on such projects is subject to rapid change. By the end of the six month monitoring period, by which time the workforce on the two projects had swelled to approximately 2,300 and 1,400 respectively, site management were not only aware of safety representatives having been appointed, but these representatives on both projects were scheduled to attend ten-day T.U.C. health and safety construction sector courses. Nonetheless, given that the sites had been operative for one and two years respectively at the time of the observational visits and that on one site alone can it be assumed that safety representatives had in fact been appointed (representation

being confined to the workforce of one of the sub-contractors), the impact of the provisions in terms of workforce coverage hardly appears to be widespread.

On another of the major CE projects in the Area (a nuclear power station) contacts indicated that there were seven safety representatives from two unions (UCATT and T&GWU) on site. These representatives were reported to cover the whole site when making their regular quarterly inspections and also to be involved in a joint union - management safety committee which had been established by the managing contractor. Such arrangements imply total coverage of the workforce in terms of safety representation. However, it seems likely that these representatives were drawn from and acting for those employed by the main contractor. As such, the size of the workforce together with the turnover amongst the multiple sub-contractors and their respective labour forces suggests that, for the majority of men on this CE project also, representation will be purely nominal.

In short, it seems that even on those large private sector sites where the legislative provisions for the appointment of safety representatives have reportedly been used, workforce coverage is at best partial.

Preparations, Plans and a Non-Event

The implementation of the SRSC Regulations was described by one inspector as having been 'a non-event in industry generally and in construction particularly so - as those closer to the ground had anticipated'. Indeed, there was found to be a general consensus among informants that 'nothing much had happened' in construction, with many also giving voice to beliefs that the concept of safety

representation was inapplicable and the provisions 'a dead letter' in so far as the realities of private sector construction sites are concerned.

Such reactions are in pointed contrast with the expectations and general flurry of preparatory activity which surrounded the introduction of the SRSC Regulations, when the construction trades' unions and employers federations were among those making contingency plans. The industry's national industrial relations machinery was utilised and a National Working Rule was issued concerning the implementation of the SRSC Regulations in the building trades.¹¹ From the employers side, the SBEF official interviewed echoed public pronouncements in stating:

We were worried then that the regulations would stir up a hornets nest; that those bent on trouble could use the regulations as a political tool to hit management and firms.

From the unions perspective, extracts from the 'Safety Representative Handbook' produced by UCATT can usefully illustrate the range of opportunities and expectations 'officially' associated with the new provisions.¹² Four main themes can be identified. First, in providing opportunities for participation;

'These Regulations will enable the ordinary Worker to become involved in what is essentially a Worker's problem.'

Second, the response in terms of a re-assessment of traditional strategies;

'In the past Trade Union activities have normally taken place in a reactive situation...the right to appoint Safety

Representatives will now give the Trade Unions the opportunity to participate in Health and Safety matters in an anticipatory and preventive role.'

Third the expectations of safety representatives,

'as key persons in anticipating hazards in the working environment and having them removed, or the necessary precautions taken...'

Finally, the general policy statement concerning union involvement in safety regulation, with the handbook having been produced -

'to assist the shop and job stewards, safety representatives and full-time officials of the union in carrying out their job of maintaining a high degree of safety on the many thousands of construction sites in Great Britain... to help them understand their rights and responsibilities,...to aid them in the worthwhile task of accident prevention, and in becoming effective 'Watchdogs' in monitoring the Health, Safety and Welfare performance of the employer.'

There were related expectations underpinning the HSW Act and the SRSC Regulations, as articulated by the HSE, that participative provisions would entail 'the development of a closer working relationship',¹³ and thereby promote workforce - management co-operation in 'self-regulating' systems of occupational hazard control.

The evidence presented on the pattern of activity indicates that such expectations have yet to materialize; that if the preparatory activity surrounding implementation of the SRSC Regulations can be termed a wave of interest then the response in construction, particularly on private sector sites, has been a ripple. Moreover, this initial

interest in using the provisions does not appear to have been sustained. In the light of this, consideration is given next to the reactions and beliefs of informants concerning the use of such provisions for worker involvement in occupational hazard control in the construction context.

INTERPRETATIONS OF USE

The fragmented characteristics of the construction industry's labour and product market, the associated trait of low union membership density and an antipathetic industrial relations environment were all elements implicated by informants as 'reasons' why the take-up in the provisions for safety representation was lower in construction than most other major industries. Indeed, the pattern of activity points to the basic organisational conundrum of statutory rights designed to promote improvements in occupational hazard control through worker involvement in an industry where the base of nominated representatives' power, trade union site organisation, is either lacking or subject to serious constraints. The question thus becomes one of the 'use' associated with statutory rights to safety representation on the part of those operating within these environmental and organisational parameters. As indicated, diverse interpretations of 'use' were being proffered at the time the SRSC Regulations were introduced. But this section focusses on three inter-related themes to emerge from the interviews in terms of the meanings imputed to the existence and take-up of these statutory rights in the construction context. First, the 'use' of statutory rights conferred on trade unionists as a means of extending or establishing the union's sphere of influence. Second, the scope for action on the part of site-based representatives associated with beliefs concerning accident causation and control, and third the use associated with discretionary statutory rights as a means of furthering articulated interests in relation to

occupational health and safety.

Recognition and Organisation

One theme to emerge clearly from the interviews with trade union informants was the significance associated with the legitimating effects of statutory rights. That is, most of these informants considered the rights to safety representation as having been enacted in response to trade union pressure and as being valuable in the sense of recognising traditional trade union concerns with health, safety and welfare as part of 'looking to members' conditions'. This emphasis on recognition of trade union concerns has a direct bearing on the 'use' of the provisions in an industry where the unions exert little direct influence over members' pay packets and 'conditions' are the primary organisational plank used in recruiting and retaining members. It was on these lines that the UCATT Regional Secretary interviewed commented on the initial optimism with which implementation of the SRSC Regulations had been greeted by those concerned with 'the nitty gritty of maintaining a presence'. That is,

We hoped that these new rights would lead to a greater realization of the part trade unionists have to play in in the industry and that this'd stimulate a greater number of people to join the union.

The potential benefits associated with discretionary statutory rights conferred on trade unionists as a means of overcoming the traits of institutional 'marginality' and extending the union's sphere of influence could hardly be expressed more clearly.

The fact that this desired effect 'hasn't happened'

was associated by some of the union informants with 'the war on just now with the T&G' and allegations by a few that the provisions 'helped' the general unions 'in poaching members'. Although allegations of this character cannot be substantiated¹⁴ such articulated beliefs point not only to the antagonism felt for more powerful rivals but also to an implicit appreciation of the greater financial and organisational resources available to such unions in promoting use of the safety representatives' provisions and the 'credibility edge' gained accordingly in the 'what the union can do for you' business of recruitment. Certainly, when questioned on the theme of specialism among full-time officials along the lines adopted by GEMBAT, which has a network of full-time officials concerned solely with health and safety in the provinces as well as a national officer, the typical reaction was akin to that of the RO who observed

There are arguments for and against... any officer who concentrates on one area is bound to be able to provide a better service for members than a man split a hundred ways...but while it might well be a boon, it'd be a luxury and a bit of nonsense really given the straits the union's in now - with the Region counting pennies and cutting down on the number of organisers we've got now!

Views on the subject of specialism per se were ambivalent, but reactions to specialism in the provision of safety services contrasted with the positive value attached by all but one of the ROs interviewed to specialism in the form of the Region's 'Organising Team'; two ROs assigned 'roving commissions' with the sole concern of negotiating union-membership agreements. Intra-union conflicts over priorities in the allocation of scarce resources thus play a part. And the UCATT national officers assigned particular responsibilities for safety and educational services respectively, interviewed informally, both evinced a keen appreciation of their weak bargaining position on this score.

It seems reasonable to link such reactions to the provision of specialist union safety services (other than in the traditional realms of compensation) with both the cause and effects of the failure of the anticipated recognition spin-off of the HSW Act and the SRSC Regulations to materialize. In this context the 'feel' of informants can usefully be set against recent analysis by Price and Bain (1983). These authors point to labour legislation enacted over the period 1969-79 as significant elements in 'the interplay of economic and political determinants of union growth'. However the effects, as indicated by the pattern of trade union growth over this period, were 'to underline the duality which exists in the pattern of union organisation in Britain'. That is, 'public support for union recognition' (through the proxy of labour law) combined with other factors to produce a major expansion and consolidation of union membership and organisation in the well organised sector' of public services and manufacturing whereas in the poorly organised sector, to which construction manifestly belongs, union density was 'below the level at which a "virtuous circle" between union growth and union recognition could begin.' (Price and Bain, 1983: 60-1). Whether or not it is the pragmatists' appreciation that public support for union recognition is insufficient to override 'hostile employer policies and such unfavourable structural characteristics as the small size of establishments' (*ibid*), the net effect is that none of the union informants considered the HSW Act or the SRSC Regulations to have significantly affected the union 'strategies' for safety and health, or the work of the union's full-time and lay officials. The refrain in response to questioning on this issue was that of the RO who stated

It was just an extension of what we'd already been doing. And whether he takes it on or not, all stewards are the site representatives for safety as far as the union's concerned.

Whether a steward does take on the additional rights and responsibilities of appointed safety representatives was considered by most ROs to be a matter of individual preference. However, the traits of steward organisation together with the newness of the statutory rights also play a part in the low take-up rate among stewards.

The dual influences of management policies and perceptions of membership interests as resources and constraints affecting the form of steward organisation and the roles adopted have been the subject of a number of recent studies on shop stewards.¹⁵ In the construction environment the picture is predominantly one of antagonism or indifference on both sides. The immediate effect is difficulty in 'establishing a presence' on site in the first place. On this point union informants concurred with the observation made by England (1979) that 'where it does exist site organisation is often the result of determined militancy on the part of the few'. 'Activists', men 'committed to trade union principles', were commented on as playing a key role. Four of the site representatives interviewed described themselves in these terms, and as one observed

You find yourself acting as a steward on most jobs - because the man who stands up and says he thinks there ought to be a steward on site usually winds up with the job!

In other instances, the presence of a steward on site was associated with the intervention of full-time officials. As one RO put it,

You get cried on site by a member to sort out some grievance and when you're there you try and talk one of the lads into acting as steward...Normally one of your hard core men can be persuaded to take it on - not you're day-and-a-dinner types, but the ones who stay in the industry. Even so, I've never yet had a volunteer!

The other four site representatives interviewed, who described themselves as 'non-political' or 'moderate', had first been nominated as stewards in this sort of situation. Yet despite differences in how their activity as stewards had been initiated and differing self-images, there was a common response among all the site representatives interviewed when asked why they acted as stewards. As one 'moderate' put it,

Somebody's got to stick their neck out and do it because otherwise the employers'd run all over you!

In effect, the primary motivation to act as steward seems to stem from a basic felt need for protection from the arbitrary use or abuse of employer power and management inefficiency,¹⁶ with those who do act as steward often being self-selected. The phenomenon of 'reluctant representatives', in the sense that many stewards need to be persuaded or at least asked to take on the job, is not confined to construction.¹⁷ But the perceived isolation of stewards between members' indifference and management intolerance can produce extremes. As one site representative related -

I've seen men cut the cards when nobody'd take it - the one that got the lowest card was to take on the steward's job!

In terms of the take-up of the safety representatives provisions, ROs considered the sequel to be that 'a lot of the boys think they've taken on enough as it is with the steward's job'. Yet the fact that many stewards and most members were considered to be unaware of the existence of these discretionary statutory rights to safety representation is clearly also significant. All the site representatives interviewed expressed a willingness 'to take on the job', but it was only 'if asked' or 'if the question ever came up on site'. 'The question'

thus needs to be posed in the first place and repeatedly thereafter as both the potential and 'nascent' candidates for the post of steward-safety representative move between sites. If interest in the provisions has waned among ROs, then it is probable that the question is being posed less often now than it was when the SRSC Regulations were a novelty, which may well contribute to the noted 'drop-out' rate among appointed safety representatives. But the fact remains that whether the question of safety representation is being raised in practice or not, all of the site representatives interviewed considered that 'stewards do the job anyway' and 'we're all unofficial safety representatives'.

Interests in Occupational Hazard Control

With the role of steward and safety representative seen as being essentially similar, safety is encompassed in the broad definition of steward functions. Informants described these along the classic lines of shop steward as populist spokesman; 'representing members interests and taking up their complaints and grievances'. 'Use' associated with statutory provisions for safety representation thus revolve around how these interests are defined in relation to safety matters and what the scope and appropriate courses of action on the part of site representatives are seen as being. Consideration is given here to perceptions of contractors and site workers' interests and underlying beliefs concerning the problem of occupational hazard control per se.

(a) Contractors

In an industry where men are exposed to the vaguaries of weather and work is often dirty, basic amenities are inevitably the subject of immediate felt needs and the focus for comparisons between sites and with other industries. The provision of basic welfare facilities

are accepted as crude barometers of contractors' commitment to safety. For the union informants they also acted as proof of employers' attitudes to the site workforce, and these informants spoke of men 'being treated like animals'; a variety of more colourful bestial analogies being used to stress the point.¹⁸ But with the refrain among union informants being 'the current indignities and discomfort endured by construction workers on the vast majority of sites', where basic amenities are inadequate or non-existent, there were few doubts as to most contractors priorities. As one site representative put it,

What can you expect when in winter it's common for them to protect their materials better than they protect the operatives. Bricks and cement come first and the safety and welfare of the men is an afterthought.

There was general agreement between informants that the standards maintained on large, long-term projects tended to be 'exceptional' or at least much better than the average, particularly on those projects managed by major civil engineering contractors. A number of influences were held to be significant, not least being concerns on the part of some clients (such as petro-chemical companies) and/or the managing contractors with maintaining a good corporate image and, or at least, avoiding the adverse publicity which can be associated with accidents. But union informants referred to 'visibility', or accountability, as being probably the most significant factor. Compliance with statutory safety requirements was seen as being analogous to adherence with National Working Rule Agreements in that, as one full-time official observed -

The large companies can't get away with dodging it as easily as the small companies and the wee fly-by-night subbies, because they can be watched and more pressure can be brought to bear on them.

The corollary is that the vast numbers of contractors operating on small, short life-cycle jobs can ignore their responsibilities for ensuring safe systems of work with impunity.

It is to be expected that most contractors, sharing dominant social values, will not intentionally conduct business with reckless indifference to those working on site 'coming to grief'. It is therefore reasonable to assume that the statutory standards for safety, health and welfare will be accepted as legitimate restrictions to management prerogative in the conduct of site activities. Yet views such as those cited above, which suggest that voluntary compliance is more notable in its absence than observance, strike at the basic tenets of 'self-regulation'. The limited interests in safety exhibited among contractors stems essentially from the fact that widespread ignorance and misunderstanding among contractors as to the nature of their responsibilities as employers co-exists with entrenched beliefs that compliance with formally defined standards and procedures is detrimental to their economic interests.

The HMEI Construction Group inspectors interviewed referred to the basic technical and logistical problems associated with disseminating information in a diverse, dispersed and highly fragmented industry as playing a significant part in contractors' failure to appreciate their statutory duties. These problems were noted as being compounded by the high turn-over among small contractors particularly and the ease of entry to trade, whereby 'new-comers' could set-up in business in total ignorance of their responsibilities concerning safety and health. Experience in construction business, however, is not associated with some sort of osmotic awareness of statutory requirements and informants cited a number of examples of long-established firms who were equally ignorant of their duties. Indeed, inspectors reported that it was not

uncommon for directors and managers of such firms, on being instructed to comply with particular statutory requirements, to ask whether these were new - and that such queries more often than not related to regulations which had been in existence for 20-30 years or more. Thus ignorance is not the province of the industry's 'cowboy' operators. But nor is it the prerogative of small firms. The inspectors interviewed cited cases concerning managers of 'quite sizeable firms' employing upwards of 100 men who, as one put it, 'claim they've never heard of the 1974 Act, let alone the content, and haven't even approached square one in terms of compliance'. Pleading ignorance in order to mitigate or forestall anticipated sanctions is fairly common, but inspectors considered that, other than 'a vague general notion that they should be doing the job safely', an alarming large proportion of contractors were genuinely unaware of their statutory responsibilities.

The system of tendering for contracts in the construction industry's highly competitive market environment means that most construction employers are keenly 'cost-conscious'. Informants commented at length to the effect that the costs of implementing safe systems of work, when they are incorporated in the tender price, place firms at a disadvantage in bidding for contracts. The inspectors interviewed reported that it was standard practice on instructing contractors to comply with particular statutory requirements to point out that the actual financial and resource costs involved were substantially lower than a contractors' speculative calculations suggested but that, especially in instances where inadequate pricing would prove costly, 'plea bargaining' was a common reaction among small contractors particularly. As one inspector put it,

'The favourites for inadequate pricing are scaffolding and roof-edge protection. And when you come across that sort of thing -

which is pretty common - you'll get the man greeting that he'd never have put in for the job if he'd known it was going to cost so much and that he's going to make a huge loss now - but it's his own fault'.

Inspectors may have sympathy for such reactions when it comes to requirements prefaced with the 'reasonably practicable' qualifying clause, but not in instances where there is an absolute duty placed on contractors; the dominant reaction among the inspectors interviewed being that the contractor 'shouldn't be in business if doing a job properly is going to send him to the wall'.

Most of the trade union informants considered inadequate pricing at the tender stage to be a deliberate ploy, but inspectors pointed out that this could also be the product of ignorance and habit, and commented on the geographic remoteness of certain regions within the HSE's East Scotland Area as helping to perpetuate archaic practices, such as over-hand building, which directly contravene the existing regulations. However, whether or not the product of shrewd calculation or intentional contravention, the net effect of insufficient costing for compliance at the tender stage is summed up by the safety officers' complaint : 'it's always been the case that the safety conscious firms are penalized by losing the job'.

The paring down of tender prices associated with the recession conditions was generally considered to have accentuated the problem. As one full-time official put it,

With fewer jobs around the smaller contractors in particular are pricing each other out of the market - and inevitably safety goes by the board when it becomes a question of survival.

But apart from those marginal firms for which obtaining the next contract is seen as synonymous with 'survival', intense competition at the tender stage has further repercussions at site level in the age-old tradition of 'scamping'. As might be expected, cutting corners on safe working practices in order to make low tender prices profitable is prevalent in precisely those sectors of the industry responsible for the vast majority of accidents ; medium and small sized contractors engaged particularly in demolition, roofing, steel erection, painting and decorating. The pervasive nature of such practices as a means of augmenting profit margins is summed up in the oft-quoted 'business' adage - "that a contractor makes money not on what he does but on what he doesn't do". With the financial advantages of ignoring safety considerations being more immediate and tangible than the benefits, then, as a safety officer put it,

No matter what it's going to cost them the difficulty is in convincing companies that it's money well spent because you're up against entrenched attitudes that they can't afford it.

Moreover, as an HMFII inspector lamented :

We'll always peddle the view that safety will save them money in the long term, but the environment in construction is such that a lot of contractors just aren't concerned with the long term.

In light of the above it is hardly surprising to note that the HMFII inspectors interviewed stressed management attitudes as being 'perhaps the most significant determinant of site safety'. Intentions as stated in a company's safety policy and even as demonstrated in the allocation of resources to safety were commented on critically as being insufficient, for as one inspector observed -

Most (contractors) will go through the motions (of compliance) but you can tell they're not convinced that safety's going to pay them. Others are convinced and it goes all the way down - site management and the men know that the boss is watching and that he's hot on safety and that's what counts. A sort of benevolent autocrat (the will of the company) is far more valuable than anything else - than a thick safety policy, for example, which stays in the drawer.

Management 'convictions' is something of a double entendre for, as one senior inspector observed :

'It's easier now to prosecute the MD rather than just bringing a case against the 'body corporate' and that, together with the fact that penalties have gone up, worried a lot of company directors. The 2 year imprisonment clause especially was one item which caught their eye and in the first six months (after the Act came into effect) we got a lot of queries about that'.

The only case of a contractor in East Scotland actually being imprisoned was ironically for contempt of court,¹⁹ and he was held only overnight. Nevertheless, whether utilised or not, the existence of such personalised sanctions undoubtedly encourages compliance. Thus safety offices expressed reservations about defining responsibilities in a firm's safety policy in the belief that 'it eventually becomes a hanging document for somebody'. More basically, however, evidence obtained in the course of the survey suggests that the formation of Safety Groups by and for small companies, which have been lauded as examples of 'self-regulation' signifying 'responsible attitudes' to safety, is directly related to this 'personal-threat' effect.²⁰

There are, however, very few firms which can be considered immune from criticism concerning the mismatch between 'evidence of good intent' and commitment on the part of site managers in ensuring that safety standards and procedures are actually observed. As one inspector, referring to 'one of the best' sites in the Area (managed by a civil engineering contractor) observed -

On the surface it looks great - they've got a telephone directory of a safety policy and on that site they've got half a dozen safety officers. But when you start digging you soon discover that the back-up isn't there - the message just isn't filtering through in practice to site management. Last time I was on that site I found at least a dozen basic contraventions of the Construction Regulations - so, we could still throw the book at them.

It is reasonable to assume that the technical complexity and capital investment involved in major CE projects affect perceptions of safety 'costs' in the sense that, where there is a risk of a major structural collapse or a 'Construction Flixborough',²¹ planning and provision to avert such a disaster is necessarily part of the construction management process, with resources being allocated and costs absorbed accordingly. Yet these are projects at the frontiers of advanced production technology, and the labour intensive nature of much construction work is not conducive to such views. Inspectors and safety officers alike commented on the 'typical' building contractors' view of safety as being an 'optional extra'. Site representatives appeared to have assimilated such views the refrain being, as one steward put it, 'safety is always the last thing to be brought on site and the first to go when the rush is on'.

Commensurate with this tendency, compliance with formally defined safety procedures inevitably becomes a matter of conforming with 'a set of rules imposed by an external agency',²² rather than a normal management function. The realities of small business management are undoubtedly important elements in this respect in that, as the SBEF official pointed out,

The typical set-up for your small operator is that he's got his wife working part-time as book-keeper/wages clerk and handling the office work too - and neither have got a clue about all this legislation.

And when it comes to the actual practice, as one safety officer observed,

The fact is that they get bothered on site by the clerk of works, the architect, building (control) inspectors - and the safety officer is just another thorn in flesh... Because a lot of operators are too caught-up in the nitty-gritty of work to 'manage' - they're busy watching the clock and running 'round ordering materials and the like, and safety just doesn't come into it...

HMFI inspectors and the SBEF official interviewed reported that few contractors actually seek information and advice concerning their statutory responsibilities. Ford (1982), commenting on the poor record amongst small businesses in accepting their responsibilities under the Employment Protection (Consolidation) Act 1978, records a similar reluctance in seeking out information on compliance from 'bureaucratic contacts' and other channels. She suggests a number of possible factors contributing to this related to the proprietors' reasons for entry to trade and attitudes to running a business (such as independence, 'being own boss', and 'self-reliance') which entail the rejection of external regulation as 'interference'. While it is beyond the scope of this project to examine these factors,

the reasons seem equally plausible in the context of small contractors seeking clarification of, and accepting, their statutory safety duties.

'Self-exemption' rationalisations and techniques probably play a part in explaining why many small operators fail to act on the requirement to appoint a safety officer. Yet if he is seen as being 'another thorn in the flesh' then it seems probable that the requirement itself may serve to reinforce views of safety as being peripheral to the construction process and the management tasks thereby dictated. Certainly, the reception given to specialist advice is not necessarily welcome. This, together with the effects of the 'hard man' ethos customarily ascribed to construction, is illustrated in the case of a particular managing director referred to by a safety officer :

As far as he's concerned safety is just a bind and I'm talking a load of eye-wash which only a timid old wifey would take seriously. Whenever I get on at him he just mutters on about having a business to run, not a holiday camp, and that his men don't need mollycoddling. He doesn't give a toss about safety and his men are the same mould.

But perhaps the most significant elements are - (1) the fact that accidents are relatively rare in the experience of individual contractors and (2) a tendency to attribute such accidents as do occur to workmen's behaviour or similar 'uncontrollable' phenomenon rather than to unsafe systems of work. While a natural fault-rejection mechanism, the popular views on responsibility for accident prevention summarised crudely by the safety officer who gave his job description as being -

'to keep the managing directors out of jail and to keep the operatives from committing suicide'.

A Worker's Problem?

An emphasis on the unsafe behaviour of workmen is understandable in the context of the labour intensive nature of the construction process, for the site worker has greater freedom of movement and more choice as to how he sets about a task than his counter-parts in manufacturing industry. The implications of this autonomy have been stressed by the HSE²³

'He digs the hole which undermines the wall; or removes the coupling which causes the scaffold to fall. In other words, at the centre of the problem of safety on a building site, is the question of the behaviour of the individual workman and of his motivation.'

'The fullest answer', according to the HSE, 'must lie in the development of the approach which controls the behaviour of the individual'.²⁴ Co-operation between management and worker is viewed as essential on the grounds that while the onus of responsibility for ensuring safe systems of work rests with the employer, the effectiveness of any provision is seen to depend ultimately on workmen recognising that 'they often have the final choice as to whether there is an accident or not'.²⁵ and accepting their responsibility for taking precautions and complying with safe working practices.

The character of these obligations and the scope for preventive action assigned to managements and workmen respectively are illustrated in a negative sense in the HSE's 'Black Spot' reports on fatal accidents in construction. Thus the HSE's 'cause analysis' for 1977 indicated that 67% of the fatal accidents in construction that year 'could have been foreseen by a member of management and precautions could have been taken to eliminate the hazard before the accident occurred'.²⁶ Another report on one hundred fatal

accidents in construction details responsibility more minutely as follows.²⁷

Management	68
Deceased	18
Fellow Worker	2
No clear responsibility	12

The interpretations of cause and control proffered by other informants, and associated beliefs concerning responsibility for preventive action, differed quite markedly from the carefully measured definitions of duty outlined in the HSE's reports and evinced by the inspectors interviewed. The popular views expressed on causation, with 'carelessness' and unsafe behaviour on the part of site workers being the most frequently cited elements contributing to accidents, were almost invariably followed by the explicit imputation of 'fault' or 'blame' as resting primarily with the victim. In discussing the relative scope for preventive action on the part of managements and workmen, responsibility was apportioned accordingly. For example, the view that 'men have only got themselves to blame' was frequently volunteered. More specifically, responsibility for preventive action was frequently apportioned with spurious statistical accuracy. The following, proffered by a site representative, is typical -

I'd say the biggest part of the blame as much as 70%, falls on the lads themselves if they come to grief - because men bear the main responsibility for unsafe situations on site once the job actually starts.

As the above example indicates, there was a tendency to see safety in discrete, situational terms rather than as an aspect of systems of working. Associated with this is the dichotomy whereby management are seen as being responsible for providing a safe place of work while the organ-

isational responsibilities for ensuring that work is done safely falls primarily on the men themselves.²⁸ Indeed, only two of the trade union informants expressed dissenting opinions when asked directly whether they agreed with the view that 'the workman could do most to prevent himself from having an accident'.²⁹ The corollary was that trade union informants, time and again, gave voice to views that 'men need to look out for themselves on site', and 'they need to be their own safety reps'. Among the safety officers, the popular phrase was 'self-discipline'.

While there are undoubtedly men who pride themselves in inordinate risk-taking and have a cavalier attitude to danger, risk-taking also appears to be an accepted part of systems and traditions of work in construction. Conventional wisdom on this point is summed up by the inspector who observed -

'Contractors will cut corners and scamp on safety to get the work out and make a bigger profit. But the men are involved in it too - and although they don't necessarily condone what management's doing, it's done with the collusion of the men on the job.'

The pressures and incentives associated with routine site activities which give rise to and encourage workers' involvement in creating and perpetuating unsafe systems of work are essentially similar to those discussed with reference to mineworkers interests in occupational hazard control insofar as these relate to perceptions of 'risk', beliefs as to the controlability of danger and an individual's personal immunity from harm. The underlying beliefs were also similar insofar as compliance with formally defined safety procedures was seen as being incompatible with mutual interests in speed. When questioned directly on this point, 60% of the union informants agreed

with the view that safe working practices and procedures would 'slow down the job', 27% considered that this was 'inevitable in some cases', and only two of the fifteen totally disagreed. Of the safety officers interviewed, only one considered that safe working practices would not adversely affect contract completion times. Among the majority, opinions as to the 'extra time' impact of safe working procedures varied, but most of the site representatives interviewed spoke of compliance with safe procedures and methods as a sanction v. managements in the form of 'working to rule' - and in this sense their responses concurred with that of the union official who considered 'you'd be building at a snail's pace'.

There are three distinctive elements which should be mentioned as actively fostering risk taking on the part of construction workers. First, the individual or small group PBR bonus systems favoured in construction were considered by most informants (71%) to act as a major incentive for speed, and as such were condemned in emotive terms; in the vein of the full-time official who declared that 'the bonus system has killed more men than bullets'. Second, site informants claimed that it was not uncommon for a man to be 'threatened with his books' if he complained or otherwise objected on safety grounds to a task he had been directed to perform. Coercive management pressures may well be articulated but management pressure in a diffused sense as an internalised or socialised element affecting site workers behaviour is probably more significant. That is, ingrained beliefs that 'it'd go against a man' if he raised objections or worked in a manner contrary to received management expectations. Examples of this ranged from references to particular managers through to opinions expressed on management interests generally. From

'that agent was a right midden - he'd have gone off his head if we'd stopped to fix it (a malfunctioning piece of equipment) properly'.

To,

'the attitude of managements on most sites is that those are the hazards of the game take it or leave it - and if you don't like it there's the gate.'

The currently high levels of unemployment among construction workers was frequently referred to by trade union informants as 'giving contractors all their own way'; with the sequel being, as one steward put it, 'men're taking chances nowadays which their experience tells them not to take'. The recession, however, was seen by most as merely aggravating employment-related incentives to risk-taking for, as an RO observed,

The turnover of labour through a site and the casual hire-and-fire employment practices mean that every man's job is in jeopardy all the time - so that despite all the supposed regard of employers for health and safety, anyone who concerns himself too much with it is liable to find himself paid-off with the early group when the contract's running down.

The third point, related to the above is that beliefs as to the options open to site workers would seem to determine not only the character of an individual's response when his personal 'threshold' of tolerance or acceptance have been surpassed but also deter reaction per se. For example, trade union informants referred to one or other of three main options as being open to a site worker who considers coercive management pressures to entail unacceptable risks; (a) to leave the job, (b) sabotage and (c) reporting. As regards the latter, the Construction Group

inspectors' interviewed reported that the vast majority of phone calls and letters received from individuals on sites are anonymous; a phenomenon attributed most often to the individual's fears of management reprisals and victimisation;³⁰ Yet it seems likely that the 'hard man' social ethos proscribes the option of reporting to authority per se. Moreover social and peer group pressures can exert a powerful influence towards conformity with speed/risk-taking norms in that, as one union official put it, 'the men don't look kindly on anything they think will interfere with their pay packets.'

In short: there are a number of mutually reinforcing motivational and perceptual variables which sustain popular views of accident causation and prevention on construction sites as matters falling primarily within the individual's ambit of control and cast greater reliance on the individual's actions in ensuring his own safety and that of those around him than the formal and pragmatic obligations stemming from the law and site workers' control over the work-risk process would appear to warrant. Moreover, it seems that 'speed norms' and the effects in terms of 'risk-taking' are fostered and reinforced as part of the work contract per se; rewarded through the wage-related incentives of bonus payment systems, tolerated through the legitimacy accorded to management interests in reducing completion times, and reinforced through a combination of coercive management pressures (direct and internalised) and social and peer group pressures.

What then, is the outcome of evaluations as to the use of the SRSC Regulations when tailored to the scope and forms of action considered appropriate on the part of trade unions representatives?

The Steward as Safety Representative

The 'watchdog' role ascribed to safety representatives of monitoring employers' compliance, interpreted in situational terms of technical provisions and facilities, can be seen as an extension of 'getting conditions'. Inspection and investigative activity in this sense dovetails with the steward's defined functions and with the ROs 'servicing' role in 'seeing that men are getting what they're entitled to'. The fact that trade union informants considered the site representative's contribution to safety as resting almost exclusively in this direction contrasts somewhat ironically with the views expressed on this topic by the HSE inspectors interviewed, most of whom considered the site representative to be able to make a unique contribution to safety stemming from his 'psychological advantage'. As an inspector observed,

The men'll be more inclined to hear about safety from him than they will from the foreman, who they hate for work reasons anyway, so the safety rep is in the best position to get the message over about safe working practices.

The will and ability of full-time and lay union officials to capitalise on their 'psychological advantage' seems to be limited. First, the popular views on accident causation and control question the need for anyone apart from the site worker to act in anticipating and protecting himself from the risks associated with his own behaviour. Second, if safety is seen primarily as a matter of ensuring men's "observance of safety rules and the inculcation of caution towards danger",³¹ then the safety

representative's role has unpopular disciplinary connotations. 'The snag', as one safety officer put it, 'of getting on to their own workmates'.

As it stands, trade union informants referred to intervention in situations where a man's actions were seen to place others at risk as being 'standard practice'. The cases cited, however, related to fairly extreme instances where men were 'larking about'. Most of the ROs and site representatives interviewed could also cite instances of intervention in circumstances where individuals were seen to be jeopardising their own safety, normally in the form of 'having a quiet word'. Such 'educational' initiatives were described as occasional rather than routine or, as one RO put it, 'the spasmodic response to campaigns'. None of the union informants considered there to be much scope for a more active role in this direction.

The scope and forms of action which are considered appropriate on the part of a site steward are discussed here in terms of (a) his interests in maintaining a presence and (b) the issues actually raised.

(a) Maintaining a Presence

As indicated, the status and influence of a construction site steward in the representational relationship with members is often founded on a tenuous base of support. An elementary concern for the viability of his position thus determines the scope and forms of action which a steward is willing to countenance in the realms of occupational health and safety. Yet in an industry which both attracts and fashions workers to be individualistic, independent and physically tough, the social ethos is hardly conducive to steward initiatives in a preventive capacity; particularly where such actions could be construed as proscribing the site worker's autonomy. As one steward observed,

Most men in this game feel they can look out for themselves - work, union and safety. Even the union minded boys don't take kindly to telling - I know I'd not be keen on a do-gooder telling me how to do my job and what was or wasn't in my own best interests.

Not only are site representatives themselves likely to be imbued with the 'hard man' ethos, but the kudos to be gained vis-a-vis members from being identified as 'safety conscious' appears to be pretty minimal. This much is evident from the responses given by trade union informants when asked how they thought a man who insisted on wearing protective headgear would be viewed by his fellow workers. All answered with phrases such as 'they'd look on him as a bit of a nutter', 'a fusspot', 'eccentric' and 'a joke'. The poor incentives for steward action by this score are reinforced by the common reactions to such educational initiatives as are taken, with trade union informants reporting that the advice and information

proffered is often ignored or rejected, and even some instances of the 'offending' steward being 'warned off for interfering'. With membership support for such initiatives being rated low, the options open to a steward by way of back-up may act as a further brake. As an RO observed,

The only thing a steward can do if a man won't take it from him is to go and report him to the site agent, and the average man would find that course of action repugnant.

Responses to questioning on 'critical situations' such as referral to management and disciplinary action brought to light the conflict sharply felt by some of the site representatives interviewed between compliance or co-operation with management on safety matters and the tenability of the steward's position as workforce representative. Only one of the site representatives interviewed had actually 'had occasion to report a man',³² but half were unwilling to even contemplate such referral action under any circumstances. Moreover, most felt obliged to defend any member subject to disciplinary proceedings 'whatever he's done'.³³ The typical reaction among site representatives to questions on this point was:

Safety is one thing and discipline is another! The steward's duty bound to try and protect any man picked out by management.

Indeed, one steward's reactions to the concept that management could, let alone should, institute disciplinary proceedings against men (the example being persistent refusal to wear protective headgear in designated 'hard hat' areas) was overtly retaliatory:

If site management started disciplining men about things like hard hats it's not going to be all one way! We'd need to discipline them about putting their own house in order by insisting on all the things we should have but wouldn't normally bother with, and by refusing to do anything except by the book!

All the site representatives' evinced concern that identification with management could damage a steward's credibility in the eyes of members. Ambivalence on this point is understandable given that (on the 'trust - distrust' spectrum of union-management relationships) the characteristics of casual employment and industrial relations are not conducive to the development of strong informal bargaining relationships based on mutual trust. As such the union representative whose relationship with management does not appear to conform to the oppositional 'norms' of steward behaviour can be viewed with suspicion. The company-based convenor, for example, was keenly aware of the repercussions -

The men'll see you talking quietly with the site agent and there's many that think that's all wrong...They think the only way you can be effective is to go into the agent's office shouting and banging your fist on the desk... I know some of them look on me as a 'management's man' because of that - and what with the company car and all, well that's 'proof' as far as they're concerned that I'm sold out.

A felt need to visibly demonstrate independence from management is not readily compatible with co-operative effort on safety matters for, even in those situations where employers are amenable to active safety representatives, those in less secure circumstances than the company-based convenor are unlikely to countenance the risks of creating a 'credibility gap' with equanimity.

The combined effects of the 'hard man' ethos, the unpopular supervisory connotations associated with safety and the traits of steward organisation would seem to inhibit 'participation in health and safety matters in an anticipatory and preventive role' (UCATT Handbook, op cit). Indeed, the possible consequences of such initiatives in terms of eroding the steward's status and influence vis-a-vis members may well be central to the 'disillusion and isolation' on site which some informants associated with the drop-out rate among appointed safety representatives. Whether nominated as safety representatives or not, these influences would seem to deter stewards' involvement in health and safety matters beyond the traditionally 'reactive' representational role of acting on voiced interests, complaints and grievances.

(b) Compensatory Issues and Resources

Union informants considered that 'health and safety matters' were raised and settled on sites 'fairly regularly'. In some instances these were matters raised by workmen wanting a second opinion as to the adequacy or otherwise of the facilities provided for performing a particular task, but more frequently complaints and queries of this genre were said to relate to site welfare facilities. According to most of the site representatives interviewed, the 'typical' occasions when such issues are raised are, as one put it,

When the men are sitting in the bothy
and not earning good bonus - it's only
then that they'll think on all their woes!

All the union informants referred to a tendency among site workers otherwise to 'accept whatever there is', with site welfare facilities being considered as routine 'bread-and-butter' issues which stewards will raise with

management on their own initiative. However, all the union informants considered that the most 'popular' of all articulated concerns with health, safety and welfare were those defined in monetary terms : the refrain being that 'men expect to receive plussages'.

It should be noted here that in questioning union informants as to the criteria used in initiating or acting on health and safety issues of a compensatory character, all except one drew a distinction between 'dirty money' and 'danger money'. 'Dirty money' or plussages' were seen as legitimate demands to compensate for working in unpleasant or uncomfortable but not overtly hazardous conditions, whereas 'danger money' was given the connotations of a direct trade-off between 'the right price' and the acceptability of particular risks. The latter was condemned in emotive terms as being 'unacceptable', although most of the union informants conceded that in practice the point at which 'dirty money' shades into 'danger money' is not at all clear. But while the examples of 'dangerous situations' varied, the majority stated that they would 'try and get the best of both' in terms of protection and compensation. The one common example in this context was asbestos, with ROs and site representatives alike stating that they do/would 'go for both'; for the necessary precautions and the provision of masks and other protective gear together with 'plussages' for having to work in such uncomfortable garb. The invariable rider, however, was that 'the men are more interested in the money'. As one steward put it,

'If you've a man working with asbestos, or anything else for that matter, he's more likely to ask you what he can get for it than what it can do to him.'

There was found to be a consensus among union informants that such health, safety and welfare matters as are raised are 'easier to win', with managements generally being considered more receptive on this score than on bonus, overtime and other issues. Most stressed that the difference was one of degree rather than kind in that, as one RO observed -

Most'll promise you the moon for dinner on safety - tomorrow that is! But there again, there's none that're too keen on anything that looks like it's going to cost them.

And a steward's opinion -

If it's bonus you're on about you're greedy, but if it's safety you're just trying to make waves on site.

Union informants attributed employers' (relatively) greater willingness to settle any safety grievance to the fact that, as one succinctly put it, 'it's not only common sense, but you've the backing of the law'.

The trait of a high rate of referral to the authority of the larger union on the part of both members and some stewards as a means of resolving site grievances and problems was commented on in the last chapter. Of interest here is that both ROs and site representatives seem to use 'the law' in general, and HMFI inspectors in particular as referrent resources in relation to health, safety and welfare matters. That is, 87% (13) of the union informants stated that they had at one time or another referred to HMFI inspectors during negotiations with site managements, and most stated that reference to the HMFI was 'pretty routine'. 'Reference' should not be taken to mean actual referral, for in practice most of the site representatives

had never had any form of contact with HMEI inspectors and those who had described such instances as rare. Nonetheless, questioning as to the circumstances and efficacy associated with verbal referral tactics gave rise to responses of which the following, by an RO, is typical:

'It depends on the temperament of management and how far they're prepared to dig their heels in...and sometimes we're called in just to save face because the site agent doesn't want to show he's conceded to the steward. But if you start threatening them with the Factory Inspector, like saying we can call in the government boy and let him decide - well that usually has the desired and necessary effect of frightening them into seeing sense!... Because they'd prefer to sort out any problem with us on site rather than have the government boy on the doorstep picking up on a hundred-and-one other things.'

The HSE Construction Group inspectors interviewed confirmed that they were rarely actually contacted by trade union representatives. Moreover as an inspector observed, in following-up such calls as are received with a site visit, ostensibly to act in an arbitrational capacity over a particular safety matter, 'you'll usually find there's something else "under the table" which is the real bone of contention - and nine times out of ten it boils down to money'.

With the law and HMEI inspectors emerging as powerful referrent resources, valued by the trade union informants for the salutary impact on management attitudes, it is unsurprising that the SRSC Regulations should be viewed in the same light by some of the informants. Indeed, half of the site representatives interviewed were under the

(misguided) impression that appointed safety representatives were somehow formally linked with the H.S.E.; as one put it, 'the site agent for the Factory Inspectorate'. Moreover, whether as a vicarious or derivative source of authority, these same site representatives considered that the SRSC Regulations could be 'useful' not simply in gaining leverage for the resolution of site safety problems, but also as a means of 'softening up' intransigent managements. As one graphically put it,

If you wanted to put the boot in because management wasn't playing the game...by refusing to even talk about making-up the men's bonus when we're idle, or about plussages for wet weather working-that sort of thing.

Options and Expectations

Moralistic condemnations and rhetorical calls for 'a fundamental change in attitudes' may have their place. But they do not alter the fact that those individuals who have chosen or adopted a promotional role, particularly union appointed safety representatives and employer appointed safety officers, are more often than not operating from a low baseline of status and influence. Nor the fact that the influence exercised over their respective 'constituencies' by employers federations and construction trade unions is hampered as much by institutional marginality as by organisational inertia. And with best trade practices and the accommodation of some form of workers' safety representation generally considered to be exceptional in the industry's private sector, it is unsurprising to note that informants' views on appropriate strategies for improving site safety involved fundamental and wide-ranging reforms. Indeed between them, the trade union informants, SBEF official and safety officers interviewed advocated control measures

related to systems of tendering for contracts; controlling contractors' entry to trade and/or establishing systems of accountability; decasualisation; reforms in the industry's wage payment systems, and so on. That is, measures which in effect amount to prescriptions for 'orderly industrial relations' with safety being a spin-off.

With the combination of market pressures, vested interests and institutional and organisational constraints militating towards maintenance of the status quo, discussion on appropriate means of improving site safety necessarily focusses on the role of the law and the ability of the state inspectorate to curb the socially unacceptable trade-offs between safety and competing interests. And it is worth noting that a few informants voiced cynical views in this respect in relation to the conferral of discretionary statutory rights to safety representation as a means of improving site safety. Like the safety officer who considered the provisions to have been 'a political sop to placate the trade unions at that time', and the SBEF official who volunteered a classic cost-saving interpretation -

'The government knew they couldn't enforce the new Act without the personnel and with hindsight, seeing the cutbacks in factory inspectors that are being implemented now, it seems that these regulations for safety representatives were put through instead of more factory inspectors!'

Observations of this kind were being made by critics of the first Factory Acts. In the same traditional vein, when trade union informants were asked what they considered to be appropriate forms of workers' safety representation in construction, a third volunteered participative arrangements in relation to the Inspectorate : that trade union representatives should 'travel' with inspectors or that nominated union representatives should be seconded to

or directly employed by the Inspectorate. In short, an echo of those forms of worker representation advocated in the petitions of the miners' unions more than a hundred years ago.

The policy intentions embodied in the HSW Act 1974 and the SRSC Regulations were to shift the balance from regulation and supervision by the state to greater 'self-regulation', with workers representatives having a key role in the making and monitoring of arrangements for hazard control at the workplace. In practice, with the SRSC Regulations having little more than symbolic significance ten years on and a de facto reliance on the state inspectorate in the current construction environment, it is perhaps inevitable that there should be wide-ranging and contradictory expectations of the HMEI Construction Group inspectors. That they should be acting as advisors and that their job is policing; that they should be protecting bona fide firms from the unfair competition of rogue employers as well as protecting workers; that they should make more/less use of their available discretionary powers. Popular views and traditional prescriptions together with details of the ways in which HMEI Construction Group inspectors actually exercise their regulatory functions are reviewed in Appendix B. The contrast with the M&QI in terms of the efficacy associated with formal sanctions particularly is dramatic, and aptly summed up by the inspector who observed -

'It would be nice to shift the balance more to (working in) an advisory capacity but as it is we don't have the time and most of the companies only appreciate muscle - it's sheer dint of enforcement pressure that counts in construction.'

The state of contemporary organisational arrangements for occupational hazard control in the construction industry's private sector call for more rather than less muscle in the way of manpower resources allocated to the HMFI. For as it stands, the outcome of the current balance between state regulation and 'self-regulation' is, as one informant put it, that

'It appears to be acceptable that about 150 men are killed in construction every year and countless others maimed and injured.'

CONCLUSIONS

The impact of the SRSC Regulations in the construction industry's private sector has been negligible, with the initial flurry of interest and activity with surrounded the operational date of the statutory provisions having since waned. The current pattern of activity indicates a concentration of appointments among trade unionists in stable and settled employment with large firms, or covering steward-safety representatives' constituencies on long term sites. The traits of steward organisation together with the newness of the statutory rights highlight the key role of full-time officials in promoting take-up of the safety representative provisions on private sector construction sites. Yet the pattern of activity also underlines the fact that for a union exhibiting the traits of institutional marginality, the financial and organisational resources necessary to promote and sustain use of the SRSC Regulations are not readily forthcoming. Company-based union-management agreements for a two-tiered system of 'depot' convenorship and site-based representation

offer an alternative in facilitating continuity of organisation and safety representative activity beyond the life-cycle of any one site. But with only one case involving UCATT having been established in Scotland the norm is, as one RO put it, 'too many suspicions on both sides as to the motives behind such a set-up'.

Given the pattern of activity, the focus of this chapter shifted to consideration of the inter-related organisational and motivational influences affecting the limited use made of the SRSC Regulations on private sector construction sites. Drawing the various strands together, the main line of argument has been that the 'use' associated with statutory rights to safety representation as a means of improving the industry's accident record depends in essence on the will and ability of full-time and lay union officials to countenance a more active role on health and safety matters. Currently the appropriate scope for action seems to be defined primarily in terms of a situational 'watchdog' role of monitoring employers' compliance in the provision of 'hardware' and site facilities. However, the combined effects of (1) popular views concerning accident causation and prevention as matters falling primarily within the individual's ambit of control, (2) the 'hard man' social ethos and (3) the traits of union organisation would appear to inhibit not only 'educative' initiatives on the part of a lone site steward, but also his interests in invoking the formal inspection and investigative rights of the SRSC Regulations. The take-up of these statutory rights thus seems to be affected by a double bind, for those site representatives in a position to go beyond the traditionally reactive role in health and safety matters are the least likely to need or rely on the minimal 'watchdog' rights of the legislative provisions. That is, where a sufficiently strong base has

been established, the site convenor-steward organisation can make monitoring arrangements more suited to the construction environment (such as 'daily walkabout' inspections). Associated with this conundrum, promotion and use of the provisions among stewards on private sector sites would seem to depend on such action having 'uses' in terms other than safety; as a means of legitimating or extending the union's sphere of influence and/or as a source of leverage in furthering articulated interests and concerns. It seems that questions of safety and the issue of safety representation are thus most likely to be raised in conflict situations; with the SRSC Regulations being invoked when management prerogative and power is being challenged (possibly in the process of establishing site steward organisation) or as a means of ensuring employers' conformity with accepted norms and practices. As with use of the law and the HSE as referent resources, it seems that the SRSC Regulations can be considered 'useful' in providing leverage during negotiations not only over the adequacy of managements' site provisions and facilities, but also in those compensatory dealings which trade acceptance of unsafe or 'dirty' conditions for higher wages. Moreover, they may be used as a generalised sanction against managements who are 'not playing the game'.

With accident prevention defined as 'a worthy cause' and with the trade-off between safety and compensation forming part of the wage bargain, there are emotively schitzoid 'missionary - mercenary' connotations to the steward-safety representative's relationship with members. But the work-risk 'contract' is dictated by employers' needs and the terms defined accordingly; a point underlined by site representatives reliance on the authority of the larger union and the value associated with the HSE as a referent resource. In this context, a real possibility

that the SRSC Regulations may be used to perpetuate rather than challenge the acceptance of unsafe systems of work is not inconsistent with the traditional functions of workforce representatives in acting on defined and articulated priorities. It is, however, clearly at odds with the intentions of those who drafted the provisions as a means of encouraging worker involvement in 'self-regulating' systems of occupational hazard control.

CHAPTER 10

CONCLUDING COMMENTS

CONCLUDING COMMENTS

This chapter draws together the main findings of the research on the use made of statutory provisions for safety representation in the mining and construction industries. The compatibility of evidence obtained on the patterns of safety representative activity with the premises and policy intentions underpinning the conferral of discretionary rights to this form of worker involvement is briefly commented on, together with the implications in terms of the efficacy of 'self-regulatory' approaches to occupational hazard control in diverse work settings.

Significance of the Provisions

The primary significance of the provisions for safety representatives simply lies in the formal recognition that workers have the right to exert some direct influence on the occupational hazards to which they are exposed through involvement in the arrangements for health, safety and welfare at the workplace. But as this right encroaches on managerial prerogatives to determine systems and methods of work, its significance in the eyes of employers, managers, workers and their trade unions depends on the particular contingencies of hazard control and industrial relations operating at the point of production. The limited and patchy pattern of safety representative activity in construction, which parallels the early use of the provisions in mining, points to wide variations in expectations and beliefs concerning this form of worker representation.

Forms of Action

If one of the functions of social legislation is 'to spread good practice' (Robens Report, 1972, para.69) then the HSW Act 1974 and the SRSC Regulations can be regarded as successful in having focussed attention on the organ-

isational aspects of occupational hazard control; in prompting trade union activity in the realms of promotion and prevention beyond the traditional pre-occupations with compensation; and in involving trade unions and employers' federations more fully in the business of identifying occupational hazards and in determining and developing 'acceptable' standards and means of tackling the problems. An appreciation of common interests and the achievement of consensus through consultation may be possible at national level and, arguably, particularly so in industries such as construction where the trade unions and employers' organisations exhibit the traits of institutional marginality. But employer and trade union representatives dealing with strategic/business decisions affecting health and safety and job/task related campaigns at an industry or national level are inevitably remote from the day-to-day pressures and constraints of the workplace which militate against safe systems of work.

In a limited number of work situations there may be sufficient mutuality of interests for safety issues to be resolved through joint consultation and sufficient agreement concerning appropriate forms of worker involvement for arrangements for safety representation to be accommodated. However, evidence of contemporary conditions in construction and those prevailing in mining prior to nationalisation suggests that promotion and take-up of the statutory provisions depends on such actions having 'uses' in terms other than safety: as a means of legitimating opposing definitions of appropriate spheres of influence and/or as a source of leverage in furthering articulated interests and concerns. It seems that workers and their unions are more likely to invoke the statutory rights when management prerogative and power is being challenged; as a means of establishing or extending the union's sphere of influence or as a means of ensuring employers conformity with accepted norms and practices.

Issue Definition and Role Demarcation

Perceptions of management and workforce interests in occupational hazard control are critical influences affecting the scope and forms of action considered appropriate on the part of workforce representatives. Managerial sensitivity to the safety dimensions of task decisions and their responsiveness to matters raised by safety representatives are associated with the centrality of the 'safety function' to the achievements of other business objectives, clearly defined responsibilities for hazard control, and individual managers perceptions as to the relationship between operational efficiency, compliance with formally defined standards and procedures and ability to absorb or pass on the resource costs of compliance together with assessments of the relationship between compliance and risk per se. Where management authority and decision-making is legitimated in technocratic terms and where promotion paths and the personal exposure of line managers and supervisors to the occupational risks of injury and ill-health are held to demonstrate an identity of management and workforce interests in occupational hazard control, managerial definitions and decisions are unlikely to be challenged by workforce representatives. Acceptance of a role which revolves around the implementation of management decisions is likely to be reinforced by workforce interests in immediate task-related matters and the availability of alternative channels for the spontaneous expression of concerns and grievances over safety matters. In turn, the 'accidental' character of (management and) workforce interests in safety stems from an acceptance of conditions of work, toleration for 'minor' injuries, and the co-existence of fatalistic views on accident causation with beliefs in an individual's own immunity from harm.

At coal mines, the pressures of competing business interests and concerns which militate against safe systems of work are, in being transmitted through the middle

management of a single multi-plant corporation, transmuted and expressed in terms of production targets and budgets. But the direct expression of competing pressures in terms of profit margins and competitive position are the norm on private sector construction sites. For many contractors the financial advantages of ignoring safety considerations are more immediate and tangible than the benefits and time horizons are too short even for the crudest cost-benefit analysis. Clearly defined line management and supervisory responsibilities for safety and a system of personal accountability both within a corporation's managerial structure and to law enforcement agencies act as the principal buffers and constraints to the subordination of safety considerations to competing concerns.

The accommodation of arrangements for safety representation in mining has been accompanied by a process of increasing specialisation: a progressively narrowing focus on the maintenance of technical controls and management and workforce compliance with formally defined procedures, and demarcation between union officials in the handling of 'objective' monitoring and investigative functions and the compensatory issues of accident claims and bargaining over conditions at work. This has the advantage of positive discrimination at the workplace in favour of promotional and preventive activity. It can also be viewed as a form of 'de-politicisation' which, in dividing the collaborative from the conflictual aspects, serves the ideological orthodoxy of consensus and co-operation on safety matters and reinforces the view of safety as being distinct from 'industrial relations'.

In poorly organised industries, such as construction, where safety representatives are able to obtain recognition and exercise their functions bargaining is likely to remain the basis of site safety regulation. Moreover, far from

necessarily supporting the adoption of safe working practices, site bargaining frequently results in condoning the acceptance of unsafe conditions. There is a real possibility that such 'self-regulating' systems of accident prevention as do emerge will merely institutionalise the acceptance of unsafe working practices. Compensatory dealings may serve indirectly as a stimulus for employers to develop safer working methods but this is not the kind of 'cost-control' posited as the basis for developing management safety organisation.

Stability and Change

Historical analysis of the take-up of statutory rights to safety representation in mining together with the fall-off in the initial flurry of activity in construction which accompanied the introduction of the SRSC Regulations indicates the inherent instability of workplace based forms of organisation. The use of the statutory rights depends on individual motivation and initiative and the maintenance of any arrangements established relies heavily on the bureaucratic support structure of the larger union organisation. Promotion and activity on the part of full-time union officials and the development of back-up and advisory services for workplace representatives alternative or supplementary to that available from the state inspectorates is a crucial element. In turn this is dependent on the institutional position of the union and an ability to achieve consistent workplace pressures.

These features pose serious problems for workplace health and safety organisation in industries where the workforce is widely dispersed geographically and fragmented between a multitude of small employers; where there are established systems of sub-contracting, a high degree of labour mobility and casual employment is the norm; and where trade union membership density is low. Contemporary

conditions on private sector construction sites and those prevailing in mining during the first half of this century point to constantly changing conditions and an accompanying turn-over of personnel as demanding not only organisation but continuous re-organisation to support even the most rudimentary capacity to investigate and deal with safety problems. Although full-time officials can represent a source of continuity between different sites and beyond the life-cycle of a single contract, lack of manpower and resources result in only intermittent contact and support on site. Yet in the face of the threat of black-listing, victimisation and unemployment, dependence on full-time officials is reinforced by the weak bargaining position of representatives, on poorly organised sites, who are attempting to exercise their legal rights in the first place. Trade unionists on poorly organised sites are therefore faced with something of a 'Catch 22' situation in trying to organise for safety for, although the statutory provisions were instituted to encourage workplace organisation, only those representatives on already well organised sites are in a bargaining position to avail themselves fully of the provisions.

Safety Representation and State Regulation

The state inspectorates have, historically, shed most of their labour regulation functions with the development of trade unionism. Progressive specialisation and the adoption of a role as professional advisors to industry rather than as enforcement officers per se is a fundamental tenet of current policy and seen as the only viable way of coping with the rapidly changing magnitude and ever-growing health dimensions of occupational hazard control associated with developments in the type and complexity of modern work processes. The ability of the inspectorates to adopt a more problem-orientated approach to safety regulation depends essentially on devolving the routine tasks of

monitoring workplace arrangements to an effective system of safety representation.

The monitoring activities of workmen's inspectors at coal mines and the development of primary back-up and support services by the NUM has enabled the M&QI to adopt a consultancy-type approach. But the type of relationship and interaction between state regulation and 'self-regulation' which exists in the mining industry has taken over a hundred years to evolve. Moreover, it functions in the closed corporatist structure of a single major employer, a single major union, and within a framework of intensive regulation and supervision by the state inspectorate.

In construction there is a de facto reliance on law and the regulatory activities of the state's inspectorate to ensure that employers conform with socially acceptable standards of health and safety at work. They are acting much in the same way as the early factory inspectors and are similarly the focus of contradictory expectations. For many bona fide firms they are looked on almost as 'officers of fair trading' and expected to remedy the absurdity of a safety conscious firm being at a competitive disadvantage as well as acting for the protection of life and limb. Yet the HMFI Construction Groups' ability to ensure compliance, let alone 'equity in compliance' is hampered by resource constraints and the fragmented and fluid characteristics of the construction industry. Unless there are radical changes in the management and organisation of the construction industry and/or a significant increase in the number of inspectors assigned to construction regulation, there is unlikely to be a significant improvement in the industry's grim toll of work-related death, injury and disease.

There is little evidence to support the development towards advisory codes of practice in place of detailed statutory standards. Rather, law and the activities of the

state inspectorates would appear to be critical elements defining management interests in safety and the allocation of resources to occupational hazard control, and the critical referrent resource for effective action on the part of worker representatives. As such there are good arguments for making the link between the regulatory activities of the state inspectorates and the activities of workplace representatives explicit through formally defined reporting procedures.

Retrospect and Prospect

Tradition, custom and practice and the "collective memory" of mineworkers and their unions provide the best guarantee that the institution of safety representation in mining will be maintained in some form. There will evidently be variations in the arrangements for worker involvement in mine safety regulation which this study describes, both between mines and over time. Alternative or future forms are a matter for speculation. Yet the rapidity with which established arrangements can change has been amply demonstrated by the formation of a breakaway union in the aftermath of the 1984-5 national strikes. And it seems probable that severance from the back-up and support facilities of the NUM will affect the role adopted by workmen's inspectors in those mines where men are no longer members of the larger union, and that their ability to maintain a role independent of mine management will be that much more difficult than elsewhere.

As regards construction, the innovations introduced by the HSW Act 1974 and the SRSC Regulations for workers' involvement in health and safety can only produce significant improvements in the industry's appalling safety record if there are improvements in trade union site organisation, for without it safety representatives have very little real power or authority. The recession which has bedevilled the

construction industry over much of the last decade shows signs of alleviating but the pressure on managements to cut all possible costs remains severe. Aided by the general 'roll-back' of union power witnessed in this country over the last few years, trade union organisation continues to be resisted and undermined by reductions in contractors, core labour forces, the extended use of sub-contracting and an alarming revival in 'lump' working. With a declining membership and increased fragmentation of employment relationships on site, the construction unions will have only limited resources available to encourage the development of safety representatives' activities. For the foreseeable future, construction unions are much more likely to concentrate their health and safety organisation at national level with the accompanying tendency to divorce safety from traditional bargaining issues and agreements.

APPENDIX ACOAL MINING IN BRITAIN, 1947-84.

Since its nationalisation in 1947, the coal mining industry in Britain has undergone a fundamental structural and organizational transformation. Notable features have been changes in the industry's product market, its wage payment systems, its collective bargaining structure, and in the technology of deep-mining. As noted in Chapter 4, it is axiomatic that these developments have had a profound impact on the form and character of workplace industrial relations. As such, in reviewing the primary developments which have shaped the current corporate environment in mining, this appendix provides background information to the study of safety representation at Scottish collieries presented in Chapters 5-7.

The NCB's performance in the management and control of deep-mine operations and the history of labour relations in mining since nationalisation have been the subject of numerous publications. These range from the anecdotal (e.g. autobiographical reviews by ex-NCB Chairmen such as Robens and Ezra, and by ex-NUM Presidents such as Moffat and Gormley) to the analytic (e.g. the Monopolies and Mergers Commission Report of 1983; McCormick, 1979). Two studies from differing standpoints, which together give a fairly comprehensive review of developments, have also been produced relatively recently by Hall (1981) and Allen (1981). Part I of this appendix therefore simply outlines the major changes in the industry and in the NCB's corporate strategy and Part II sketches the changing characteristics of industrial relations. Part III of this appendix is essentially a postscript reviewing recent events.

Unless otherwise stated, all the statistics cited in this Appendix are drawn or derived from the NCB's Annual Reports, the Digest of U.K. Energy Statistics, and/or the Monopolies and Mergers Commission (M&MC) Report of 1983.

PART ITHE INDUSTRY : STRUCTURAL TRANSFORMATION.

As an extractive industry coal mining is essentially dominated by a cycle wherein new capacity has to be continually created in order to replace the depletion of reserves. Within any given colliery this means that capital has to be committed to the planning and development of new faces as existing faces, and eventually, seams, are exhausted or become unworkable. More generally, the life-cycle of a colliery will depend upon a host of factors, the most significant being the quantity and quality of accessible reserves, geological conditions, and the market demand for the type of coal produced. The long lead-in period and heavy capital investment involved in sinking new mines and developing new capacity mean that, as the M&MC (1983:para 2.31) observes,

the state of the industry at any time is fundamentally determined by decisions to invest in new mines or make major improvements to existing facilities that were made a decade or more previously

Under the Coal Industry (Nationalisation) Act of 1946 the newly created NCB was charged with the duty of 'securing the efficient development of the coal mining industry' and with conducting its operations in accordance with 'the public interest'. The political and commercial criteria used in interpreting these goals has varied considerably over time and accordingly affected the NCB's operating results. But at the outset of nationalisation there was a general consensus that the Board faced a massive transitional task, for on Vesting Day in 1947 it had inherited among other assets a mixed collection of 980 deep-mines where the legacy of 'a decade or more previously' was predominantly one of inefficiency and neglect.

The Early Years.

In its first decade the NCB undertook an extensive programme of rationalization and re-construction. Colliery closures were selective and concentrated on phasing out the smaller, uneconomic units in the older coalfields. Many of the pits closed in this period were in Scotland where, at the end of 1947, the NCB had 190 collieries ranging in size from the Michael, which

employed just under 2000 men, to the tiny Swinstie pit near Airdrie which employed only 8 men. (Coal Trades Diary for 1948). A process of concentration was planned whereby about 80% of the Scottish Divisions' output would come from new collieries and major re-constructions ('High-Tech' pits) and similar plans were drawn up for the other NCB Divisions. The life of many high-cost units scheduled for closure was, however, protracted owing to the high and rising demand for coal created by the post-war boom which in turn was exacerbated by the cheap coal policy adopted by the Board at that time. Acute shortages of coal led to rationing and major industrial users such as the railways were being encouraged to convert to alternative fuel sources (diesel and electric) in order to secure their supplies and ease the pressures on coal. In addition, although the industry was producing approximately 220 million tonnes annually by the mid-'50s, large amounts of coal were being imported (17.1 m tonnes over the two years 1955 and 1956).

Throughout the first decade of nationalisation coal's traditional monopoly of the inland energy market seemed secure, having been only marginally eroded from 90.8% in 1947 to 84.1% in 1957. Reflecting this and the escalating demand, market projections and capital investment plans as outlined in the first 'Plan of Coal' (1950) and revised in 'Investing in Coal' (1956) were expansionary. The fall in demand which began in 1957 did not prompt an immediate re-appraisal for it was initially treated as a minor trade depression. But as the fall in sales continued and coal stocks mounted the Board responded with a 'Revised Plan for Coal' (1959). This new strategy provided for a reduced output level of 200 - 215 m. tonnes by 1965 compared with the 240 m. tonnes projected in earlier plans. Even so, it did not anticipate the dramatic displacement of coal's dominance of the energy market by oil and subsequently by natural gas which was to occur between 1960 and 1970, when coal's share of the total inland energy consumption fell from 73.7% to 46.6%. Nonetheless, by 1960 the industry's expansionary plans of a decade earlier were set firmly in reverse under the Chairmanship of the ex-Labour minister Alfred (later Lord) Robens.

Contraction and Mechanisation.

Pits which had won a reprieve owing to the market situation were the first to be closed in the initial phase of contraction in the late 1950s. This was severe by earlier standards, involving a net drop of 124 (15%) in the number of NCB mines between 1957-60 (from 822 to 698) and a 17.2% net reduction in the size of the mining workforce (from 703,700 to 583,000). During the early 1960s the pace accelerated with the older areas such as Scotland,

Lancashire and Durham being prime targets. In the six years period 1957-63, 39% of the pits in Scotland were closed (Allen, 1981:41). Production was increasingly concentrated in the high-productivity areas such as Yorkshire and, within each area, in the new and modernized units. Yet even the latter did not seem to be immune in Scotland where two new mines, Glenochil and Rothes, which had been opened in the late 1950s with projected life-spans of 100 and 40 years respectively, were closed in 1962. The drive to reduce capacity^{brought} about by changes in the industry's product market was accompanied by a drive to improve efficiency and lower costs through mechanisation.

During the 1950s, by which time the vast bulk (85%) of U.K. deep-mine output was being won by longwall methods, most modern faces were equipped simply with a coal cutter and a face conveyor. This degree of face mechanisation, and analogous developments in the mechanisation of haulage and transport systems, represented a considerable advance over the 'hand-got' methods which had prevailed prior to nationalisation. Nonetheless, bound within a three-shift cycle involving a whole series of labour-intensive operations, the benefits were limited as long as the coal cut by machine had to be manually loaded (hand-filled) onto the face conveyor. The introduction of powered cutter-loaders, capable of performing both operations simultaneously, signalled the end of this conventional cyclical system.

In 1955 only 9.8% of total output was power-loaded. Introduced initially into the newest mines and the most productive faces, the proportion had risen to 23% in 1957. Thereafter it rose rapidly, from 37% in 1960 to 75% in 1964. By 1968, 92% of all deep-mine output was power-loaded. Other operations were also mechanised during this period, the most notable at the face being the introduction of hydraulically powered, self-advancing roof supports. Although many tasks were still being performed manually, the introduction of power-loading equipment effectively transformed the primary cycle of coal-getting operations into a continuous, integrated process which, as Allen (1981:86), observes, 'enabled management to cut 'round the clock if they wanted to'.

The gains in terms of productivity were spectacular. In 1960, for example, the NCB had calculated that on average only 151 manshifts were needed to win a thousand tonnes of coal from mechanised faces of all types, whereas 251 manshifts were needed where coal was hand filled. The pace and extent of mechanisation during the 1960s allied with productivity gains of this magnitude had traumatic repercussions for the size of the workforce which, with the contraction of the industry, was already being reduced. According to McCormick's (1979:103-4) 'crude but confident estimate', 187,000 jobs were lost

due to technical change between 1957 and 1968. Moreover, apart from dramatically altering the labour process and the size of the workforce, mechanisation also affected its' composition. Greater numbers of tradesmen - electricians and engineers - were employed to install and maintain machinery and, as the general manpower requirements fell, the supervisory ratio increased. (See McCormick, 1979: 120; Allen, 1981:91).

The changes in the coalfields between 1960 and 1970/1 - when overall output per man-year increased from 310 to 470 tonnes (i.e. by 51.6%) - are summarized in Table A. 1. In short, the combined effects of mechanisation, closures, and the concentration of output in the most productive pits, and faces within pits, meant that in 1970 the industry was producing about three-quarters of its' 1960 output from less than half the pits and with less than half the number of men.

Table A 1. Changes in Coalmining over the Sixties.

Year End	No. of Collieries	Colliery Manpower ('000s)	Deep-Mine Output (m. tonnes).
1960	698	583.0	186.8
1965	504	446.8	1965/6 177.0
1970	293	283.1	1970/1 135.5
Net Change:	-405	-299.9	-51.3
% Change:	-58%	-51.4%	-27.5%

Source: NCB Annual Report 1980-81, and M&MC, 1983 (Table 8.6)

Re-construction and the Recession.

In the early 1970s the Middle East wars and the dramatic increases in the price of oil imposed by OPEC provided the stimulus for a major re-appraisal of the country's energy policy. Amidst a growing appreciation of the strategic significance of securing indigenous fuel supplies, coupled with the new price advantages of

exploiting these resources, the contraction of the coal industry came to a halt. Government assistance to the industry, which in the mid-1960s had taken the form of specific grants towards redundancies and other social costs arising from pit closures, was extended. A programme of capital reconstruction was called for, to compensate for the virtual cessation of capital projects in the 1960s, and the Coal Industry Act of 1973 gave assistance in this direction. In addition the Act empowered the government to make operating grants (e.g. coking coal subsidies and financial aid towards the costs of stocking coal). These were to assist the industry to weather short-term fluctuations in demand which might otherwise jeopardize long-term mine renewal investments.

Reflecting these changing circumstances a new 'Plan for Coal' was published in 1974, after having been reviewed by the then newly established Coal Industry Tripartite Group (composed of Government, NCB, and the unions). The plan, which projected a market for a total annual output of 135 - 150 m. tonnes by 1985, was essentially a 'holding' strategy aimed at re-construction. A major programme of capital investment was outlined - and endorsed by the government - to create 42m tonnes of new colliery capacity by 1985. Approximately half of this was to be provided by improvements to existing mines and half from sinking mines to exploit new areas of reserves. Exploration had proved the existence of the latter : vast untapped reserves of good quality coal in the Selby coalfield of South Yorkshire and in the Yale of Belvoir in N.E. Leicestershire. Subsequent reports and plans projecting developments to the end of the century were optimistically, albeit modestly, expansionary. Based in part on the development of new technologies - notably the synthetic production of liquid fuels made from coal - demand for coal by the year 2000 was forecast in the region of 170m. tonnes p.a. To meet these new possibilities an investment programme was called for from the mid-1980s onwards which would increase rather than simply replace deep-mine capacity.

While prospects for the future of the industry had been re-vitalized, the immediate market situation during the 1970s continued to deteriorate. Coal's share of the energy market had stabilized after 1972 at around 35 - 37%, but the size of the market itself was being hit by the recession. Moreover, although there was a steady increase in the consumption of coal for electricity generation, this was insufficient to offset the decline from traditional industrial customers, such as British Steel, which were contracting dramatically. At the same time the conversion from competing fuels to coal amongst other industrial users, and amongst commercial and domestic users, was occurring at a slower rate than had been

anticipated. The net effect was a decline in inland coal consumption from 150.7m tonnes in 1970/1 to 120.3m. tonnes in 1980/1. In relative terms, this exactly matches the 25% drop in inland coal consumption over the sixties.

The industry's response to the recession-related changes in its product market during the 1970s summarized in Table A 2, did not match its response to the structural market changes wrought by the inroads of competing fuels over the preceding decade. In the first place the NCB was committed to a programme of capital reconstruction and geared towards the targets outlined in the 'Plan for Coal' - a strategy which successive governments endorsed. The closure of older mines continued, but at a much slower rate than this strategy had originally estimated. In part this was due to the introduction of a new Colliery Review Procedure in 1973, whereby the performance and prospects of every colliery in

Table A 2. Changes in Coalmining over the Seventies.

End Financial Year	no. of Collieries	Colliery Manpower ('000s)	Deep - Mine Output (m. tonnes)
1970/1	292	286.4	135.5
1975/6	241	243.7	114.5
1980/1	211	224.8	110.3
Net Change:	-81	-61.6	-25.2
% Change:	-27.7%	-21.5%	-18.6%

Source: NCB Annual Report 1980-81, and M&MC, 1983: (Table 8.6)

an Area are periodically reviewed jointly by the NCB and the unions. This contrasted with the previous 'jeopardy procedure' whereby the unions had simply been advised of those mines where closure was deemed imminent and consulted as to the best means of implementing redundancy and redeployment agreements. According to the M&MC (1983: para. 12.18) use of the new procedure for consultation about closures could involve a delay of over six months 'from the time management decides that closure is desirable to the time when it may proceed to effect it.' (!) More

fundamentally, however, the slower rate of closures was related to delays in obtaining planning approval for new sites and associated delays in bringing new mines such as the Selby Complex 'on line'. To compensate more new capacity had to be created in existing 'long-life' mines in order to meet the output targets agreed to in the 1974 Plan. The capital investment projects initiated to this and effectively protracted the life of many high cost - low productivity units.

It should be noted that the closures which did take place under the Plan for Coal were concentrated in the older, economically marginal coalfields. Thus, of the 46 closures effected over the 7 year period 1974/5 to 1980/1, Scotland, Durham, and South Wales accounted for 29. (see M&MC, 1983:Table 8.7). The number of mines in the Scottish Area had been almost halved, from 23 in 1974/5 to just 13 by 1980/1. Nor were the prospects of such areas significantly rejuvenated by the capital re-construction programme originally outlined. Although the subsequent shift to creating more new capacity in existing units increased investment, the Scottish coalfield has remained at the bottom of the 12-Area league table in terms of capital projects instigated under the Plan. (see M&MC, Appendix 3.15). There are no prospects of a new mine being sunk, and of the major investment projects underway at 4 of the Area's 'High-Tech' pits, those designed for the merger of two or more collieries' underground workings will reduce the manpower at existing units. The continued contraction of the older areas in the changed circumstances of the seventies has been reflected in the differential rate at which the labour force has been reduced. Colliery manpower in Scotland, for example, had fallen more or less in line with the national average between 1956 and 1970/1 (from 79,000 to 30,200 / -61.8%, compared with a national net drop from 697,600 in 1956 to 286,400 in 1970/1 i.e. -58.9%). But between 1970/1 and 1980/1 there was a net reduction in colliery manpower in Scotland of 10,372 / 34% (from 30,138 to 19,766) compared with the net drop nationally of 21.5%.

Although the older areas bore the brunt of the contraction which did take place during this period, the legacy of the sixties together with the delays in introducing new capacity meant that by the end of the seventies only 13% of the industry's deep-mine output was coming from collieries which had been sunk after World War II (Hall, 1981:245). This, together with the slower overall rate of closures, and the fact that technical changes in the 1970s could not reproduce the startling effects which face mechanisation had had in the 1960s, largely account for the fact that productivity rates signally failed to improve. Unable to improve performance or reduce costs in

this manner, and carrying the costs of a heavy capital investment programme, deep-mine trading results deteriorated as the recession deepened.

The industry's immediate market problems were exacerbated when the newly elected Conservative government lifted import quota restrictions on coking coal in 1979. (These had been imposed on public corporations such as British Steel and the CEBG in the mid-'60s to ease the pace of the industry's contraction.) EEC figures for 1979 had indicated that the UK was producing coal more cheaply than its European counterparts, and with the smallest operating subsidy. Nonetheless, Australian coking coal produced from opencast sites - with high exchange rates adding to its price advantage - threatened to make significant inroads in an already declining market. Of more immediate significance, however, was the shift in policy adopted by the new government which, reflecting its monetarist orientation, focused on short-term profitability rather than long-term targets. The Coal Industry Act of 1980 imposed a stringent limit on the Board's recourse to borrowing as a means of financing its investment programme and required the industry to break-even within 3 years.

By the end of 1980, with coal stocks at their highest level since 1960 and facing the prospect of the withdrawal of all operating grants, the industry's predicament was acute. Output and demand had to be brought in balance at a time of falling sales, the losses on deep-mine trading activities had to be eliminated, and at the same time investment for the future of the industry had to be sustained/protected. The Board's response was to announce its intention to reduce capacity by 10m tonnes. To meet this target the colliery review procedure was to be bypassed in order to accelerate the rate at which older units were closed. As is well known, union reaction had a decisive impact in preventing the implementation of this plan. Strikes throughout the coalfields prompted government intervention and the infamous 'U turn' of February 1981 (see Hall, 1981:247-67; also Allen, 1981:301-14). At the government's request the NCB withdrew its programme of accelerated closures and agreed to continue to deal with closures under the colliery review procedure. The government's commitment to the Plan for Coal was emphasized by the Minister of Energy (Howell), concessions were made concerning coal imports, and the financial constraints imposed on the NCB were relaxed.

As the research work for this study was conducted at Scottish collieries between September 1980 and November 1981, this is the appropriate juncture at which to end this section. Thus far, the industry has been shown to have passed through three distinct phases since nationalisation in 1947. The first was characterized by plans for

modernization and rationalization, inhibited by attempts to meet the immediate market demands for coal. But the expansionary plans of the first decade were suspended in the late 1950s and then reversed in the 1960s as the industry contracted dramatically in response to the displacement of coals traditional monopoly of the energy market by competing fuels. The emphasis on output and investment targets switched to concern for the industry's commercial viability and performance in a newly competitive market. Cost-cutting through closures and the introduction of new mining technology during this period had a profound impact on both the labour process and the size and composition of the workforce. Contraction of the industry came to a halt in the early 1970s when changes in the world energy market re-vitalized coal's prospects as a major energy supplier. In the 1974 Plan for Coal there was a renewed commitment to planned output targets and investment for the future, but this programme for re-construction was embarked upon in the midst of a steadily worsening general market recession. The election of a Conservative government in 1979 signalled a change in policy for the industry in that its interpretation of 'public interest' was firmly based on financial criteria and commercial viability in the short term. During 1980-81, attempts to implement this new policy through closures were successfully resisted. In retrospect, it is clear that the industry gained no more than a temporary reprieve and that the events of this period formed part of a new transitional phase in the post-nationalisation history of mining. Recent events are reviewed in Part III of this Appendix. In the next section, consideration is given to the changing characteristics of industrial relations.

PART II

THE UNIONS AND INDUSTRIAL RELATIONS.

One of the objectives of nationalisation, following the turbulent and bitter confrontations of the inter-war years, was to improve the industry's labour relations. To this end the Nationalisation Act of 1946 obliged the NCB to recognize 'appropriate groups' for the purposes of negotiation. In addition, in order to secure 'the benefit of the practical knowledge and experience' of its employees, the Board was required to set up joint consultative machinery covering 'the organisation and conduct of (mining) operations and other matters of mutual interest'. This section looks first at the representational arrangements which have evolved and then at the changing pattern of collaboration and conflict which has characterized the modern history of industrial relations in mining.

Representation.

When the industry was nationalised the vast majority of miners were represented by the National Union of Mineworkers (NUM). Formed in 1945 in anticipation of the transition to public ownership, the NUM retained many of the organizational features of its predecessor, the Miners' Federation of GB. The formerly independent county unions and other affiliated associations were re-constituted as the NUM's 'areas'. Since its inception, one of the primary organizational pre-occupations of the NUM has been to forge these constituent organizations into a unified entity. Nonetheless, the union's structure reflects the fact that success along these lines has been limited. There are currently 14 geographic and 8 occupational 'areas', each of which is entitled to representation on the NUM's National Executive Committee (NEC). Of the occupational areas, two consist of tradesmen's associations. Group 1 covers three organizations - Durham Colliery Mechanics, Durham Enginemen, and Northumberland Mechanics. Group 2 consists of the Scottish Colliery Enginemen, Boilermen and Tradesmen's Association (SCEBTA), and what remains of the Midlands and the Lancashire tradesmen's associations. The other areas consist of the Barnsley based Cokemen, two Power Groups of workers who have dual affiliations with either the T&GWU or GEMBAT, and a white-collar section - the Colliery Officials and Staffs Association (COSA).

The reverberation of immense local and regional variations in organisational traditions persist to date, reflected constitutionally in the high degree of autonomy exercised by individual areas. On a more public plane it is also illustrated by the popular characterization of different areas as 'militant' or 'moderate' and in the political complexion of area leaderships. Thus, for example, Nottingham, the home of Spencerism, has consistently produced 'moderate' or 'right-wing' leaders (i.e. adherents to the centralist orthodoxy of the Labour Party), whereas miners in the traditionally militant coalfields of South Wales and Scotland have fielded left-wing or communist candidates for leadership positions at Area and national level. There have, however, been some notable shifts. Left-wing leadership of the Yorkshire area, for example, is a phenomenon of the 1970s.

The persistence of sectionalism has inhibited attempts to alter the pattern of representation on the NUM's NEC in line with the changing distribution and composition of the membership which has occurred with the industry's structural transformation. The inequity of the current arrangements are illustrated by the fact that in 1979 membership of the 17 areas entitled to one

seat on the NEC ranged from nearly 19,000 for COSA to 914 for Cumberland. (see Allen, 1981:269; Eaton and Gill, 1981:29-30). Nine such areas have less than 6,000 members each whereas the Yorkshire area with more than 64,000 members, is entitled to only three seats. (ibid). Aligned in terms of the left - right politics of the areas' leaderships, the left-wing collectively represent the majority of miners within the union but can be outvoted on the NEC. These representational anomalies are to some extent counteracted constitutionally by the authority over major policy decisions vested in delegate conferences, where the number of an area's delegates is closely tied to membership. Moreover, the union provides for an unusually high degree of direct participation by members through ballots on major policy issues, particularly in relation to resolutions committing the union to industrial action. Yet, reflecting the political complexion of the union's President and General Secretary, the tactics used by the NEC in convening special delegate conferences and referring issues to membership ballots have varied over the union's history - and accordingly influenced courses of action.

While the issue of representation remains a source of contention within the NUM, it has until recently also been the subject of disputes with other unions which recruit NCB employees: i.e. - the National Association of Colliery Overmen, Deputies and Shotfirers (NACODS); the British Association of Colliery Management (BACM); and the Association of Professional, Executive, Clerical and Computer Staffs (APEX). As McCormick (1979:62) has noted, it was only in 1971 that jurisdictional disputes in Scotland and the North East between the NUM and NACODS were brought to an end by an agreement whereby all colliery officials were to become members of the latter. Earlier, both the NUM and NACODS had contested - and then in 1953 agreed upon - the sphere of influence claimed by BACM in representing professional, technical and managerial staff. The NUM's white-collar section, COSA, continues to compete for non-industrial clerical staff members with APEX. The latter is the only union recognized by the NCB which does not recruit its members solely from the mining industry or ancillary operations. The NCB has had union membership agreements with BACM since 1973 and, in relation to non-industrial staff, with COSA and APEX since 1976. While no formal union agreement exists between the Board and either the NUM or NACODS, apart from those relating to the deduction of dues from wages, both unions have effectively operated closed shops since nationalization. Reflecting the pattern of union membership the NUM and NACODS are represented on the joint consultative councils and committees established at all levels of the industry, and BACM participate at national and area level. (see M&MC Report 1983, Appendix 12.4).

In broad terms the consolidation in union organization which has taken place under nationalisation is indicated by the fact that the density of union membership increased from 86.4% in 1948 to 97.1% in 1979. (Price and Bain, 1983:54). The transformation which the industry has undergone over this period has resulted in a net drop in union membership of 57% - i.e. from 691,400 to 297,600 (ibid). The changing composition of the workforce, notably the increasing number of white-collar and managerial employees stationed at area and national level, accounts for the fact that this reduction has been less dramatic than the 67.5% net reduction in colliery manpower experienced between 1948 and 1979. (i.e. 718,000 to 233,200). Although its membership figures have dwindled the NUM has had an assured organizational monopoly throughout this period, and the constituent areas of the union collectively represent about 90% of the mining workforce. As such, the NUM is commonly regarded as this country's closest approximation to an industrial union. (see Clegg, 1978:46; McCormick, 1979:63).

Under public ownership, then, the mineworkers' unions have attained many of the aspirations of both their predecessors and contemporary counterparts in other industries: - almost universal coverage, secure negotiating rights, and a form of participation through the industry's joint consultative machinery. Antagonistic resistance to trade unionism on the part of many colliery owners has given way to the policies of a single, multi-plant corporation whose commitment to the responsibilities placed upon it by the Nationalisation Act and to the 'orderly conduct' of industrial relations has elicited much comment. (see e.g. Scott, 1963:21; McCormick, 1979: 57). Indeed, according to the M&MC (1983:para.12.12), the NCB's concern to maintain good relations with the unions has meant that 'in all aspects of operations the Board and management give a high degree of consideration to the industrial relations implications of alternative policies and approaches to problems'. The manner in which 'industrial relations implications' have affected the policies adopted by the NCB and the 'problems' associated with industrial relations per se are reviewed next.

Collaboration and Conflict.

Having long advocated public ownership of the industry the NUM, from the outset, closely identified with the aims and success of nationalisation. The radical shift in the union's stance pre- and post-nationalisation has been described as a transition from 'protest unionism' to 'administrative unionism', with the union's officials being increasingly involved in 'sitting on joint committees with management and working to solve problems which

traditionally were managerial'. (Scott, 1963:21-22). However, it rapidly became apparent that while the 'new spirit' of collaboration dominated at national level, it was not as effectively reproduced at colliery level.

Efforts to increase output by intensifying the work pace resulted in a major stoppage in the first year of nationalisation - the month long Grimethorpe Stint Strike of 1947 - and there were other large strikes over wages in the Yorkshire coalfields in 1955 and 1961. (see McCormick, 1979:180-189). The dominant pattern, however, was of small, localized disputes involving primarily coalface workers, and lasting no more than a shift. The vast majority of these, over piecework prices and conditions affecting piecework earnings, occurred before even the first stage had been reached in the elaborate conciliation and arbitration procedure agreed to between the NCB the NUM. The result was that during the first decade of nationalisation there was an annual average of about 1,200 strikes in the coalfields, not one of which had union recognition. Between 1957 and the late 1960s there was a reduction in such activity, followed by a revival in the large scale militancy customarily associated with mineworkers in the unofficial strikes of 1969 and 1970 which each involved more than half of the workforce. It was not until 1972, however, that the NUM sponsored such action and called the first official national strike in its history. This was followed in 1974 by another official strike which pitted the industrial and political pressure power of the union against the Heath-led Conservative government's incomes policy - an action which effectively toppled that government in the 'Who Governs Britain?' elections called in the midst of the dispute.

This changing pattern of collaboration and conflict has been the subject of numerous analyses (see e.g. Lynch, 1978; McCormick, 1979; Winterton, 1981; also Hall, 1981; and Allen, 1981). As most authors have noted, the commitment of the NUM's leadership to nationalisation and to the 'new spirit' of co-operation was a key factor shaping the picture of labour relations up until the late 1960s. Unitary rhetoric was certainly the order of the day. In 1963, for example, a pamphlet critical of the NUM's passive policy was drawn up by an informal grouping of left-wing leaders within the union and sympathetic academics, and circulated in the coalfields in 1964. (see Allen (1981) who writes from his experience of involvement in this group and in 'the forum' of left-wingers which emerged in 1967). Official reaction to this alternative 'Plan for the Miners' reflected the then dominant managerial ethos, with the NUM President Sidney Ford declaring at the union's 1964 conference that -

'People who foster the idea that
there are two sides in this industry

with separate and conflicting interests not only do a great disservice to those who rely upon this industry for their livelihood, but their attitude (also) serves to project a distorted image of nationalisation.'

(as cited by Hall,
1981:123).

That there should have been a high degree of role interpenetration (Parker, 1973), with union officials speaking like managers and managers like union officials, is hardly surprising in view of the fact that many ex-union officials staffed positions in the upper echelons of the NCB, particularly those concerned with labour relations.

The philosophy shared by the right-wing leadership of the NUM and Robens, Chairman of the Board at that time, goes some way towards explaining the union's quiescent response to the contraction of the industry, and its passive acceptance of the rapidly introduced changes wrought by mechanization on the size of the workforce and the labour process. The prevailing mood of fatalism also played a significant part. Closures and job losses were seen as being the result of market forces, over which the NCB had little control. The NUM embarked on a political campaign for protectionism, and in the meantime concerned itself with ameliorating the impact of closures through redundancy and re-deployment agreements. Reflecting the dominant ideology, a notable feature of the latter was that the Board's prerogative in deciding which pits were to close and how many men were to be made redundant was never challenged by the NUM. (see McCormick, 1979:107). Rank-and-file response was equally fatalistic. There were a few protest strikes over closures, but the dominant trend was an increase in individual manifestations of disaffection - notably an increasing rate of absenteeism and labour turnover. (ibid: 138 et seq).

Towards the end of the 1960s it was apparent that the NUM's political campaign for protectionism had won scant ground from Labour as well as Conservative governments. (see Hall, 1981:Ch.4 'The Miners and the Government'). Yet disaffection on this score alone does not account for the re-emergence of large scale industrial action with the strikes of 1969 - 1974. The central issue of these disputes was not the industry's contraction, but wages - and it is this factor which most authors focus on in accounting for the changing pattern of strike activity.

Labour costs in mining have consistently constituted the largest single element in total operating costs. As a result, the issue of pay determination and control over the level of wages has been a crucial component in the NCB's corporate strategy. At nationalisation, the NCB embarked on a lengthy process of rationalizing the diverse and inequitable payment systems which it had inherited. In tandem, the NUM adopted a policy of voluntary wage restraint geared towards eradicating the differences in earnings accruing to particular occupational groups within and between areas. Most surface workers and ancillary workers underground were paid under a mixture of time and piece-rate systems, and the process of standardizing the wage structure as it related to these occupational groups culminated with the 1955 Day Wage Agreement. However, the vast majority of face workers continued to be paid under a complex range of piecework systems. The heterogeneity of face conditions within and between pits meant that progress towards standardizing piecework rates was limited, and the NCB could not control the wage drift associated with local bargaining over price lists and allowances. The advent of face mechanisation provided the basis for change - which culminated with the 1966 National Power Loading Agreement (NPLA). Following the pattern established in earlier agreements, the NPLA mapped out a five-year schedule for achieving a uniform day wage for coalface workers throughout the UK. In effect, face workers in the high-productivity coalfields such as Yorkshire were required to forgo any significant increases (i.e. to take a drop in real wages) while their lower paid counterparts in areas such as Scotland and South Wales caught up.

The centralization of pay determination which resulted from these changes was associated with a shift in the locus of power away from pit and area to national level. In effect, this transition from piecework and its attendant workplace bargaining to uniform day wages negotiated nationally meant that, for the first time in the history of mining trade unionism, 'the wage issue changed from being a divisive factor to become a single, unifying issue'. (Allen, 1981:318). But while the advent of uniform time rates laid the foundation for the national stoppages of 1969 - 74, this action was unanticipated. As McCormick (1979:92) points out, it was thought that greater central control of wages 'would render the NUM impotent at national and local level. At local level there would be nothing to negotiate about and at national level the union leadership would be severely controlled by the competition from other fuels.' By all accounts the NUM's leadership as well as the NCB were caught unawares by the mood of rank-and-file militancy which triggered the wave of large-scale strikes over national pay claims.

A number of factors have been associated with this new militancy, first exhibited in the unofficial action of 1969. Included amongst these are (a) the deterioration in miners real and relative wages after years of voluntary restraint; (b) the narrowing of the escape valve of full-employment which had enabled miners to find jobs elsewhere as the industry contracted; and (c) the growing influence of 'the coterie of Communists and left-wing Labour Party members' (Allen, 1981:319) within the union. Whatever the relative significance of each, the combination provided a catalyst which - with the successful national strikes of 1972 and 1974 - dramatically demonstrated that the passive compliance which had dominated the union's response to policies adopted by the NCB since nationalisation could no longer be relied upon.

During the mid-'70s wages and the industry's wage payment system remained the prime sources of contention, but the emphasis shifted from industrial action to intra-union conflict over NUM policy. The focus of this internal discontent was support for the incomes policy inherent in the Social Contract between the Labour government, elected after the debacle in 1974, and the TUC. Traditional loyalties to the Labour Party, which in the changed circumstances of the mid-'70s had demonstrated its commitment in government to the future of the industry, in part accounts for the acceptance of wage restraint. But by the summer of 1977, as Hall (1981:232-3) has noted, opposition to the pay policy was almost total within the union. The right-wing on the union's NEC, led by the President Joe Gormley, were faced with the problem of how to negotiate substantial increases without breaking the 10% pay limit set by the government at that time. As a result, the controversial issue of a productivity deal gained favour.

The transition to the day-wage structure had been associated with a fall in the 'effort' component of productivity amongst face workers, and since 1972 the NCB had attempted unsuccessfully to re-introduce the link between payment and productivity. A production incentive scheme was seen as an important means of increasing output and simultaneously containing wage costs at a time when the programme of capital re-construction and the impact of the recession on sales were taking their toll on the industry's physical and financial performance results. (see 'Coal for the Future', NCB, 1977:9). But while the right-wing within the union now strongly advocated the re-introduction of incentive schemes, such a move was bitterly opposed by the left-wing led areas primarily on the grounds that such a scheme would once again divide pits and areas on the crucial issue of wages. Delegate conferences had consistently rejected earlier proposals to re-introduce incentive schemes, and a membership ballot in 1977 confirmed rank-and-file opposition. Nonetheless,

amidst a furore of protest, Gormley sanctioned Area agreements. (see Allen, 1981:269-281). Nottingham, Leicester, and South Derbyshire were the first to make such agreements, and resistance in other areas collapsed as the reported gains in earnings were publicized.

By the end of 1978 the productivity bonus scheme had been introduced in this piecemeal area-by-area fashion throughout the coalfields. The effects were much as had been anticipated. Overall, productivity and average earnings improved, but wide variations between pits and between areas soon materialized. Thus, for example, while face workers in the high-productivity areas such as Nottingham were able to earn £60 - £70 a week in incentive payments, many of their counterparts in the low-productivity areas such as Scotland were earning £10 a week or less. (see Eaton and Gill, 1981:33). The shift back to local bargaining over allowances and methods of work, as productivity payments comprised an increasingly significant proportion of underground workers' gross weekly earnings, was accompanied by an escalation in local stoppages over wages. These effectively replaced concerned action over nationally negotiated basic rates.

While the basis for the unity exhibited in the 1969 - 1974 strikes had been fractured during the mid-'70s, the collective militancy which had characterized that era re-surfaced in the early 1980s around the issue of closures. The conflict engendered by the threat of pit closures was unprecedented and signified a marked change in traditional attitudes over the issue. (see Allen, 1981:301-323). In the first place, closures due to exhaustion or 'exceptional mining difficulties' are an inevitable facet of mining activity and, during the 1960s, prevailing 'market forces' arguments over the closure of mines with workable reserves had been widely accepted. Secondly, even where the grounds for closure were disputed, protests over the issue were traditionally regarded as divisive. Attempts by left-wing area leaders to promote concerted action over particular closures which were disputed in the late 1970s, notably in South Wales, had failed to win the backing of the majority of miners at the affected pits as well as elsewhere. With ^{the} revival of the industry's prospects during the 1970s the general picture was one of acquiescence to closures channelled through the joint colliery review procedure.

During 1979 the attitude in the coalfields had begun to change as the new Conservative government indicated its readiness 'to break the consensus of support for the industry'. (Hall, 1981:254). The same 'market forces' arguments which had been proffered and accepted in the 1960s, when coal had seemed to be a fuel of the past, were rejected in the changed circumstances of the 1980s.

Militant rhetoric was the order of the day when, as Allen (1981:306) observes, it became apparent that the shift in government policy meant that 'it was no longer a case of processing occasional closures through the Colliery Review Procedure but of confronting the possibility of the destruction of whole coalfields or parts of coalfields'. When the NCB announced its plans to reduce capacity in February 1981, at an ordinary meeting of the industry's joint consultative council, the reaction of the NUM's NEC was one of predictable opposition. While less predictable, the reaction in the coalfields was similarly immediate. Even as the NEC announced its intention to hold a national strike ballot, miners at threatened pits throughout the coalfields struck in protest and others joined them. As had been noted, the result was the government's 'U turn' of 1981, and the withdrawal of the programme of accelerated closures.

To Recap : Under public ownership the organisation and conduct of industrial relations in the mining industry has undergone significant changes. Dealing with a single employer receptive to trade unionism and to the 'orderly conduct' of industrial relations, the mining unions have attained virtually total coverage of the workforce and secure negotiating rights. From the outset the NUM has had an organisational monopoly, but the persistence of sectionalism and the union's 'incipient party system' (McCormick, 1979:63) have proved potent sources of intra-union conflict over representation and union policy. The NUM's initial transition to 'administrative unionism' and the subsequent revival of 'protest unionism' in the late 1960s reflect in broad terms the changing pattern of collaboration and conflict which has characterised labour's response to the implementation of corporate management policy on investment and de-investment, the introduction of new technology, wage control and pay determination. As regards 'the high degree of consideration' which the Board has given to the 'industrial relations implications of alternative policies and approaches to problems' (M&MC, op cit), the NCB's 'management of industrial relations' does not appear to differ significantly from that which Purcell (1983:4-5) has ascribed to modern corporations per se. Namely, that

'to senior managers and corporate planners trade unions are a constraint to be dealt with at the level of operating decisions. What strategies there are towards industrial relations are therefore largely aimed at minimizing the impact of these constraining forces and the conflict associated with

them... (And hence) we are deluding ourselves if we assume that industrial relations activities either would or should form a major or even moderate part in the determination of corporate strategy unless the level (of) labour unrest was of such magnitude to deflect the organisation'.

In mining, the strategy adopted by 'senior managers and corporate planners' has been determined in large part by government policy and thus sensitive to political pressures as well as market forces. These pressures have stemmed (a) from the NCB's 'external environment' as regards the contribution of coal to the country's energy policy and the associated costs and (b) from its 'internal environment' as regards labour and incomes policies in that successive governments have exhibited a desire, reinforced after the debacle of the Heath government in 1974, to avoid confrontation with one of the leading and politically most powerful unions in the British labour movement. The events of 1981 were a visible demonstration of the impact of the NUM's industrial and political pressure power in that 'the level of labour unrest' was of sufficient magnitude to block the implementation of closure plans and force a revision in stated government policy towards the industry.

PART III

THE INDUSTRY AND INDUSTRIAL RELATIONS: A POSTSCRIPT

Purcell's (1983) analysis of the management of industrial relations in the modern corporation provides a useful general framework for reviewing recent events in the mining industry. Along with other industrial relations commentators (see e.g. Terry, 1983; Roberts, 1984), Purcell has pointed out that the late 1970s have proved to be a 'watershed' in that, on both the industrial and political front, the consensus politics and pluralism which dominated most of the 1960s and 1970s have given way to 'unitary policies based more on coercion than co-operation'. Although the union 'threat' remains, the degree of constraint exercised by trade unions over corporate decisions 'is generally seen as both slight and diminishing' in the 1980s as (1) 'the reduction in product markets, or market share is linked in macro and micro terms to growing surpluses in the labour market' reducing the basis of union power; (2) 'The case for tough policies seems increasingly unanswerable as short-term benefits in productivity improvements and union acquiescence become widely reported'; and (3) the shift from co-operation to coercion is largely unchallenged as 'the unions have neither the power, nor the members

the will, to mount a major campaign against the policies which are portrayed as "common sense" and the "economic facts of life". (from Purcell, 1983:13). Given that this is an astute synopsis of the industrial relations 'scene' in Britain in the early 1980s, the events of 1981 in mining and subsequent developments culminating with the national strike of 1984-5 are outlined in this section with reference to (a) how the NCB's senior managers and corporate planners have coped with the 'constraint' exercised by the NUM and (b) the willingness of both the NUM's leadership and the rank-and-file to go against 'common sense' arguments in defence of their own defined interests.

The 'U Turn' of 1981.

It is worth noting that when the details of pit closures were revealed in February 1981, the picture fell far short of the 'hit list' of 50 closures thought to be involved in meeting the Board's stated intention of reducing capacity by 10m. tonnes. Rather, it transpired that 23 pits were listed for closure in 1981/2 which would collectively reduce capacity by only 4¹/₂m. tonnes. This, together with the piecemeal area-by-area fashion in which the list was announced, sponsored, rumours that the Board had engineered the dispute. (see Hall, 1981:266). Certainly, while such allegations were categorically denied, and cannot be proved, this was a theme repeated time and again by ordinary working miners at the Scottish collieries visited by this researcher. Moreover, the dominant impression gained at Area as well as colliery level was one of the NCB and the NUM aligned in defence of the industry against government policy. The following observations concerning the strike, made by two managers during an informal 3-way interview at Area level, illustrate the point:

The NUM are good strategists when it comes to strike action - in '72 and '74 they employed different strategies and this one'll be different again. It's not at all the case of the NCB v. the NUM - this strike's against Tory government policy which is bleeding the industry to death.

We're in an absurd situation. We've record levels of stocks and half of it's sitting in CEGB yards which they don't pay for 'til they actually use it - that's millions of pounds (£) on tick, enforced 'credit' which

is costing us. And at the same time the country's importing record amounts of foreign coal which gets huge subsidies. This Coal Industry Act (1980) is not only going to remove the miserable subsidy which we get on the coal we're producing more cheaply anyway, but it's also going to penalize us further by taking away stocking aid.

and

You'll always get reports in the papers about workers who're on strike - especially miners - 'holding the country to ransom' and calling them near enough criminals. But to my mind the real criminals are those who close pits down and put men on the dole at the snap of their fingers because they may not be making what's regarded as 'a suitable profit'. And to my mind importing coal now is just plain wrong. Why should we be making our men redundant to keep miners in other countries in their jobs? If Thatcher and her lot don't accept that the situation's ridiculous then the miners'll make her turn - it's all very well this business of 'the lady's not for turning' but if she doesn't on this issue, she'll follow Heath and find herself out!

Certainly there was a confidence in the industrial and political 'muscle' of the miners, and similarly the precedent of the Heath government was instrumental to Thatcher's 'U turn' in 1981 - a reaction which McGahey, President of the Scottish NUM, described as 'not so much a U turn as a body swerve'. However, the above remarks have been interjected in full not only because they encapsulate the issues perceived to be at stake and the strength of feeling prevailing at that time, but also because they illustrate a remarkable degree of role interpenetration in the midst of strike action, conventionally projected as a management v. union conflict situation.

Whether this sense of besieged identification with protests over closures was an element present in the 1984-5 strikes is a matter for speculation. Certainly, the issues at stake were ostensibly the same: whether

'de-investment', the closure of existing capacity, was the appropriate response for bridging the recession and ensuring the future viability of the industry as a major energy supplier. But allegations that the strike action of 1984 was 'engineered' have been directed at the NUM's left-wing leadership rather than at the newly appointed Chairman of the Board, McGregor, whose handling of the closure issue reportedly 'horrified many at the Coal Board'. In short, between the reprieve gained through strike action in February 1981 and the renewed protests over closures in 1984 the ground had shifted considerably with significant changes occurring on all fronts.

Retrenchment.

In retrospect, it is clear that the Conservative government's 'U turn' of 1981 was a tactical retrenchment rather than an abdication of its manifesto policy concerning the reduction of subsidies to all nationalised industries with a view to their financial self-sufficiency (and eventual privatisation). Shortly afterwards the Monopolies and Mergers Commission was directed to investigate the NCB. The Commission's terms of reference were narrowly financial : to investigate whether the NCB could, in relation to the development, production and supply of coal, improve its efficiency and reduce costs. In essence the Commission's Report, published in June 1983, attributed the Board's worsening financial straits to overcapacity; in particular to the continued existence of loss-making, high-cost low-productivity units. The financial viability of the industry was seen as being dependent on a stringent closure programme, with the Commission estimating that 'if capacity could be reduced by 10% and the reduction could be concentrated on those pits with the largest operating losses per tonne, the NCB's finances would be improved to the tune of £300m. p.a.' (para. 19.16).

As the Commission itself noted, its terms of reference excluded matters such as the pricing structure for coal and whether or not the NCB was conducting its operations in a manner consistent with 'the public interest'. As such it can be argued that basic political and economic questions requiring consideration in any assessment of the NCB's performance were left begging. That is, questions as to whether there should be a framework of government protection and support for the industry and, if so, what level that support should be if the John Bull citizen is to get 'value for money' both in terms of current and future energy needs. The strategic undertones to energy policy, the balance between imported and indigenous supplies, projections as to the rate of depletion of existing indigenous oil and gas reserves and uncertainties

as to the performance prospects of alternative sources such as nuclear energy are amongst the factors which make up the case not only for public ownership and central control but also for a degree of support. The latter, at least in terms of support for the industry to weather short term fluctuations in its product market, is reinforced by the fact that price advantages between coal and its primary contemporary competitor, oil, have fluctuated considerably and, given the characteristics of the Middle-East oil cartel and its impact on the world commodity market, are inherently unstable. To ignore such considerations is to produce, by default or design, an attractively simple formula whereby 'public interest' is equated with financial self-sufficiency in the short-term.

While the politics of energy per se received little more than passing reference, the broader question of 'the public interest' was raised in the press coverage which followed the publication of the M&MC's report. The figure of a 10% reduction in the industry's high-cost, low-productivity capacity which the M&MC claimed to have chosen 'purely by way of example was translated in predictable terms; as Huxley of the Sunday Times (26.6.1983) put it, 'Shut 10% of this uneconomic capacity and the taxpayer could be saved £300m. a year'. The M&MC's detailed analysis was held to add up to a damning indictment of mining as 'one of the great industrial horror stories of our times', with the NCB's management being castigated for its 'anti-market' orientation and the Morrisonian model of nationalisation criticised for its 'failure to reconcile the demands of efficiency and equity'. The NUM leaderships 'insistence with Luddite fervour on the retention of exhausted pits' and government acquiescence in increasing subsidies were also implicated in the poor deal of the taxpayer and consumer. Ill-informed opinion and misinformation there certainly was, but, as conspiracy theorists would point out, the report was a successful prelude to confrontation with the NUM in 'priming' public opinion leaders on the issue of closures - if not in support of the government's policies then at least in weaning public sympathy from the miners' case. For with the terms of debate having been framed in narrow commercial terms, press reaction to the M&MC's findings distilled the 'economic facts of life' for mining and the 'common sense' of closures.

Given this background it is worth making a number of points here concerning 'common sense' from the perspective of both managers and miners interviewed in 1980-1, particularly as the strike of 1984-5 centred on the 'non-runner' of apparently dogmatic insistence that no pit with workable reserves should be closed, an associated refusal on the part of the NUM's leadership to countenance the closure of 'uneconomic' mines, and repeated demands

that the industry should adhere to the protective reconstruction strategy outlined in the 1974 Plan for Coal. In the first instance, the events of the 1960s and 1970s obviously provided many within the industry with a fairly harsh school of experience concerning the 'economic facts of life'. Thus as one mineworker put it:

Everyone knows there's no point in keeping a pit open if the reserves have been worked out and it's exhausted. But a lot of the pits closed down in this area had millions of tonnes of high quality coal left in them - I know mine had. Robens closed them down because the signs were all towards oil then, but he was caught on the hop when the price went up and brought coal back again. But there wasn't a lot left to laugh about by then because the fact is you can't just open up a mine again after it's been abandoned ...it's lost, you can't pick up where you left off.

Second, developments in mining technology have meant that reserves which were simply not feasible to work in engineering, let alone economic, terms are currently being worked. Steep-seam mining in Fife is a case in point. Coastline collieries in Fife are currently working undersea reserves which lie on an almost vertical incline on the edge of the Scottish coal basin; seams which, as one safety engineer put it, 'we never would've touched 20 years ago'. Technological developments of this nature have also enhanced the commercial viability of working thin seams elsewhere and protracted the productive life of some of the ageing units. Linked with this, there appeared to be a fairly widespread belief in the re-vitalising effects of investment. As one colliery under-manager put it;

We've all seen turnabouts...with investment you may be able to turn this years loss-maker into a profit-maker with a good few years run in it. It's not a rule, but we've all heard a few cases...and as I see it the Board's been tight with us when it comes to investment.

Added to the above, there was an acute awareness of the social consequences of 'de-investment' coupled with a

strong sense of local history and traditions. For example, one of the NUM's safety agents gave this researcher what can only be described as a lesson in industrial archaeology; a guided tour through the 'ghost villages' of Ayrshire which had, in his boyhood, been the sites of mining communities. Taken together with the observations of Area managers cited earlier, the 'mood' thus appeared to be one of scepticism as to what was 'economic' at any particular point in time overlaid by a threatened sense of having 'seen it all before'. There were, then, beliefs and systems of argument amongst both mineworkers and mine managers which favoured protectionism and a rejection of the prevailing 'common sense' logic of market forces arguments.

The above should not be taken to mean that acquiescence to selective closures ceased. Sir Norman Siddall was appointed as Chairman of the Board in 1981 on Ezra's retirement. As 'an NCB man borne and bred', the appointment of Siddall was astutely sensitive to the introspective ethos of the industry and the prevailing mood, summed up by one of the BACM representatives interviewed as follows:

There's a feeling that the industry should be run by mining men...He'll be less inclined than the politicians (like Robens) or the imported guns they're keen on (like Edwards in Leyland and MacGregor in steel) to run the industry - or run it down. - to suit the hue of the Party that put him in.

Under Siddall's low profile chairmanship closures were effected through the colliery review procedure. Between 1980/1 and 1983/4 there was a net reduction in the number of collieries from 211 to 174 (37/17.6%) and in colliery manpower from 224,800 to about 180,000 (20%). Nonetheless, while Siddall had called for 'a new spirit of realism' to face up to the problems revealed in the M&MC Report, the pace was to be accelerated. The Report contained the Commissioners somewhat disingenuous claim that it 'it did not attempt to define by precisely how much capacity should be reduced, in what period the reductions should be made, or what individual collieries should be involved' (para. 19.23). Yet, apart from 'the example' of a 10% cut in capacity (close to the figure which Ezra as Chairman of the Board had proposed in 1981), the report's minute analysis and pit-by-pit tabulations of costs and performance results provided a programme in all but name. In effect, it provided both the mandate and blueprint for McGregor, the 'imported gun' appointed as Chairman in September 1983, to embark on the course of action shelved in 1981. The media-dubbed 'Survival Plan' outlined in February 1984

projected 20 pit closures, involving the loss of about 20,000 jobs over the year 1984/5. The intention to bypass the colliery review machinery as a means of accelerating closures was made plain in the announcement in March 1984 that Cortonwood Colliery in South Yorkshire was to be closed within four weeks.

Opposition from the NUM's leadership was expected, but their ability to mobilize union members in a 're-run' of 1981 was not at all certain. Arthur Scargill had been elected as President of the NUM in late 1981, a leading left-winger who gained public prominence and his reputation for militancy as a lay official during the national strikes of 1972 and 1974. His election upset the 'traditional' balance of power on the union's NEC whereby since the war there had typically been a right-wing President and a left-wing General Secretary. (see Eaton and Gill, 1981:26; also Allen, 1981). Nor was the position simply reversed for another left-winger, Peter Heathfield, was subsequently elected as General Secretary in 1983. Scargill's personal style, and notably his militant political rhetoric concerning the use of the miners' industrial pressure power as a means of opposing the policies and labour laws enacted by the Conservative government, ensured that his Presidency was controversial from the outset. Initially, however, it appeared that the gap between unofficial rank-and-file reaction and the collaborative policies advocated by the NUM's leadership in the 1950s and 1960s had been turned upside down.

During 1982-3, the left-wing leaders on the union's NEC attempted to promote a 'fight-back' against the perceived threats associated with government policy to jobs and the future of the industry. Their efforts met with a patchy response in the coalfields. Reflecting the belief that concerted opposition to closures could only be won and sustained if it was linked to the issue of wages, three national ballots twinning the issues were held in these two years. Each failed to win the overall majority necessary to embark on national strike action. In the meantime the consultative machinery at national level, characterised by Scargill as 'nothing more than the NCB's dirty tricks department', appeared to have ceased to function as a medium of communication and conciliation. The breakdown reportedly stemmed from the failure of the NCB to advise the NUM of evidence on wages, costs and closures which it was providing for the M&MC. The matter was belatedly placed on the National Consultative Council agenda after protests that the NEC had been informed of developments through the press, but the meeting was subsequently boycotted by Scargill.

There was a marked shift in both the tactics of the NUM's leadership and apparently in the reactions of members following the return of the Conservative Government to a second term of office after the election of 1983 and the subsequent appointment of MacGregor as Chairman of the NCB. Notable events have been:

- (a) Strike action at the traditionally militant Monktonhall colliery in Scotland in September 1983 which was given official backing by the NUM's NEC. As David Gow of The Scotsman (28.9.1983:1) reported, this was 'the first time in union history that an individual pit strike has been declared official and a sign of the importance NUM leaders attach to this evidence of a fight-back in the pits.' While miners at this colliery persisted with the stoppage, they were not joined by miners from other pits.
- (b) An overtime ban subsequently called for by the NEC in October 1983 in protest over pay and pit closures was unanimously approved by the union's delegate conference and took effect from 1st November 1983,
- (c) 5 months later, during which time the overtime ban persisted, strike action on an area-by-area basis on the sole issue of closures, sparked off by the first attempt to implement the Board's new programme of accelerated closures in March 1984.

The Strike(s) of 1984-5.

The strike action embarked upon in 1984 turned out to be one of the most protracted and violent disputes in modern British history. The action officially ended, without a settlement having been drawn up between the parties, just short of a year after it began. With the drift-back to work of individual miners having passed the psychological break-point of 50% of the membership, an organised return to work of striking miners was recommended in a motion proposed by the NUM's South Wales area at the national delegate conference held on 3rd March 1985. The motion was opposed by Scargill but carried by the delegates with the narrow margin of 98 to 91 votes.

The strike has been compared in intensity and effects to the General Strike and Lock-Out of 1926. The obvious difference, and no doubt the focus of Scargill's recriminations, was the relative isolation of the NUM from the outset as the T.U.C. and leaders of affiliated unions proved either unwilling or unable to lend their members support through sympathy action. Certainly, the strike raised a number of issues which have repercussions beyond coalmining; on the subject of trade union democracy and institutional immunities; on the role of government and the symbolic use of labour law but the tacit avoidance of testing its instrumental effects concerning the 'legality' of proscribed practices such as mass picketing; on the use of civil laws and the policing of industrial action. These issues, together with accounts of the course of events have been the subject of detailed retrospective reviews in the press (see particularly The Financial Times, 4.3.1985). As such, this final section simply makes three main points on the dynamics of the strike as follows.

First, from the outset neither the course nor outcome of the strike was predictable. Positions became more firmly entrenched and the language hardened into that of a 'win-lose' confrontation. But throughout the succession of negotiations and initiatives to re-open negotiations it seemed primarily a matter of time, particularly after a revamped colliery review procedure was agreed to between the NCB and NACODS in October 1984, before the rejectionist stance adopted both by the NUM and later by the NCB (in refusing to re-open negotiations unless the NUM first accepted the NCB's right to make decisions about uneconomic capacity) would give way to a conciliatory settlement. What the NUM and the NCB will make of the return to work without any conditional settlement, even in terms of an 'amnesty' clause for the re-instatement of men dismissed during the dispute, is at the time of writing uncertain. Second, the tactics adopted by the left-wing on the NEC in relying on delegate conferences and action on an Area basis rather than calling a national strike ballot, the focus of much hostile and critical commentary, had a precedent in Gormley's actions in the mid-1970s concerning productivity agreements. The inability of the left-wing then to overturn the NEC's ruling on area agreements on the grounds that it was contrary both to conference decisions and national ballot results and thus unconstitutional, and the associated disillusionment with the union's democratic and representational processes (see Allen, 1981:272-83), were undoubtedly instrumental in shaping the tactics adopted in 1984. Against this background McGahey's oft-quoted statement that 'we will not be constitutionalised out of action' takes on a different light to that widely projected in the media at that time of the NEC setting itself 'above the law' and setting the union on a course of action which was

reportedly unconstitutional by its own rule-book. Moreover, despite the spectre of breakaways in Nottingham and the emergence of working miners willing to take the national organisation and its' leaders to court, there was demonstrable sympathy for this view within the union, if not in the wider trade union and labour movement. Third, despite the formation of an 'emergency cabinet' in April 1984 concerned with the dispute, the government adopted back-seat tactics and the P.M. avoided direct intervention. With a glut of oil and high coal stocks compared with the energy crisis which formed the background to the NUM's successes in 1972 and 1974, and on firmer political ground than in 1981, the government's intention - and ability - to sit out the dispute was made plain. Visible government action occurred primarily on the ideological front and, coupled with practical assistance provided by the NCB, focussed on the divisions within the NUM as a means of ending the strike; in particular through promoting the activities of the self-selected 'leaders' of the working miners.

The strike of 1984-5 was clear testimony to the willingness of both the leadership and members of the NUM to challenge the political basis of corporate policy decisions in mining in embarking - and staying - on a course of action which ran counter to prevailing definitions of 'common sense' and 'the economic facts of life'. If seen in terms of a 'cause' rather than simply in terms of the case on the table, the closure of 'uneconomic' capacity, then the strike of 1984-5 adds a twist to the peculiarly apt observations made by McCormick (1979:231-2). viz:

'Mining, as a microcosm,...indicates that industrial relations cannot be divorced from the principles governing social relations. The miners attempted to create a social dividend in one industry but ran into difficulties... Mining also indicates the tremendous inertia that pervades industrial relations. Despite nationalisation, mechanisation and other sweeping changes the NUM is, like its predecessor the MFGB, concerned with the preservation of the individuality of the pit villages.

At the time of writing the aftermath effects of this strike have yet to take shape. But what does seem clear, at least as regards the short-term consequences, is that the 'threat' of labour unrest has been diffused if not de-fused and that

the 'constraint' which the NUM exercizes over corporate decisions has, at least for the time being, been marginalised. How the shift in the balance of power settles or is reflected in the re-negotiation of 'order' now taking place at national, area and colliery level is a matter for speculation. But with the scene having been set for managerial re-organisation and the upheaval of closures, the future prospects of mining in the older coalfields such as Scotland look bleak.

APPENDIX BTHE ROLE OF THE INSPECTORATE IN CONSTRUCTION :
POPULAR PRESCRIPTIONS AND PRACTICE

This appendix provides a brief review of popular views on the role of the state inspectorate in construction as expressed by informants interviewed and information on the practices of HMFI's Construction Industry Group. The contrast with the "in-house" regulatory practices favoured by the M&QI could hardly be less dramatic.

Expectations

Table B.1 summarises the responses of the trade union informants, SBEF official and safety officers interviewed when questioned as to their expectations of the state's inspectorate. As indicated, the role ascribed to HMFI inspectors was defined first in terms of law enforcement, with 'promoting safety' and the protection of workers and of bona fide firms almost invariably being referred to as objectives served by law enforcement. (e.g. safeguarding the worker through curbing management abuse; 'hammering the cowboys' and thereby protecting the 'safety conscious' firms from unfair competition, and so on). As regards this basic outline, there is little of note to distinguish between the expectations of informants and the basic policy objectives which HMFI Chief Inspectors have frequently discussed in the prefaces and texts of HSE publications.

Table B.1Expectations of State Regulation in Construction

	ROs %	Site reps %	SOs %	Total % (no.)
1. LAW ENFORCEMENT / CONTROL				
- Apprehension & Punishment of Offenders	57	75	-	53 (10)
- Ensuring Voluntary Compliance	43	25	100	47 (9)
2. PROMOTING SAFETY*				
- Dissemination of Information	57	38	75	53 (10)
- Accident Prevention	29	13	75	32 (6)
- Problem Identification & Solution	-	-	50	11 (2)
3. PROTECTION OF WORKERS	43	63	-	42 (8)
4. PROTECTION OF <u>BONA FIDE</u> FIRMS	43	25	75	37 (7)
No. of Responses :	19	18	15	52
No. of Informants	7	8	4	19

* 68% (13) of these informants referred to one or more of the elements grouped in this category.

That is (1) 'protecting those at work from the consequences of the way in which work is done'; (2) ensuring 'equity in compliance', which in construction means principally enforcement action directed at ensuring firms' learn 'that cutting corners on safety no longer brings the financial advantages that will permit lower pricing and hence the obtaining of contracts'; and (3) advisory and promotional activity designed to encourage voluntary self-regulation beyond the minimum of compliance with the law.¹ All these were elements referred to and discussed in similar terms by the HMFI Construction Group inspectors interviewed. But while there may thus be broad agreement on the ends served by law enforcement, views as to the appropriate means of influencing (contractors') conduct and behaviour diverge quite radically. As Table B.1 indicates, most of the union informants favoured 'policing' interpretations, activity directed simply at the apprehension and punishment of offenders, whereas the hallmark of the HMFI's enforcement policy is its traditionally reformist character (a preference for ensuring voluntary compliance through persuading employers of the need to conform with best trade practices rather than simply to avoid conflict with the law.)

Popular Views and Traditional Prescriptions

The efficacy associated with the Inspectorate as a change agency clearly stems in part from expectations as to the appropriate forms of action and in part from knowledge and beliefs as to how the Inspectorate currently operates. The basic divergence, along classic lines, between the policing role popular among trade union informants and the HMFI's adopted enforcement policy thus provides an obvious source of 'discontent'. Another stems from the combination of ignorance and popular wisdom (the meanings imputed to such personal contacts as

informants have had or heard about) concerning HMFI inspectors' activities. The outcome is a curious mixture of respect and antagonism, with the dominant role in views expressed by informants being ambivalence - in some cases tinged with hostility. Thus, on the one hand the trade union informants, SBEF official and safety officers interviewed referred to HMFI inspectors in positive terms as being vested with recognised power and authority and as having a demonstrable impact on management attitudes and the conduct of site operations. On the other, the effectiveness of the Inspectorate as a regulatory agency was considered by most to be limited; with informants responses to questioning on this theme frequently being prefaced with dismissive remarks. (E.g. the RO who considered that 'the Factory Inspectorate carries about as much punch as your proverbial feather duster').

The ability of the Inspectorate to detect non-compliance, let alone ensure 'equity in compliance', and questions concerning the discretionary use of sanctions were the basic issues referred to by informants as proscribing the impact of the Inspectorate in construction. The views expressed on these subjects echo traditional and widely voiced beliefs and criticisms of state regulation. Thus, in terms of monitoring activities, popular criticisms were as follows :

- (1) that HMFI inspectors did not / could not attempt to visit all the construction worksites in their constituency;
- (2) that their workload was primarily 'reactive' in the sense of responding to complaints and investigating accidents so that, as a steward put it, inspectors are acting as ambulance chasers'.

- (3) Many of the trade union informants believed that inspectors 'gave advance warning' in notifying contractors of their intention to visit sites.

Undermanning was the principal constraint to an effective monitoring role referred to by 89% (17) of these informants. A third also questioned the personal skills and competency of inspectors, with criticism stemming largely from the fact that just under half of the union informants were unaware that HMEI inspectors were organised into specialist industry groups.

As regards the use of sanctions, the views expressed covered the entire spectrum. From those among the trade union informants who asserted that the inspectors 'don't use the powers they've got' through to the safety officer who was so disenchanted with what he considered to be 'the unbridled and indiscriminate use of their powers' that he plaintively asserted -

'It's got so out of hand that if you could invent a machine which'd throw rays over a site so that it was impossible for men to have an accident, the Factory Inspectors would come in and prosecute you for painting it the wrong colour!'

It is relevant to note that this informant had 'had a run-in with inspectors'! The more popular view was that inspectors did not / could not make more than limited use of their discretionary powers (a) to effectively deter contraventions or (b) as a means of obtaining social justice for the victim in post-accident situations. With beliefs as to the extent of inspectors powers going beyond those actually available (through prosecution and formal notice procedures) perceptions of current

practice concerning the limited use and effectiveness of sanctions were associated with a range of factors. Most informants implicated either 'loopholes in the law' and/or the small fines customarily levied on firms which were prosecuted. A few union informants also attributed the limited use of sanctions to policy constraints in that, as one put it, 'they've been told to go easy on firms with the recession'.² More frequently, trade union informants alleged that inspectors were reluctant to use sanctions in the sense of, as an RO put it, being 'too willing to compromise with contractors and heed their promises rather than hammering them for not following the rules'.

The measures advocated by informants for effective state regulation followed traditional prescriptions. That is, most informants advocated an increase in the number of inspectors assigned to construction, with some informants also favouring the recruitment of inspectors with (managerial or trade union) backgrounds in the industry. In terms of the use of sanctions, measures to rationalise policy and/or increase the deterrence effects of sanctions were also mentioned by most informants. The reforms advocated included the levying of 'spot fines' for specified offences, primarily in relation to welfare provisions, and for court officials to be obliged to adopt 'cost of life' criteria (supposedly used in assessing damages for common law compensation claims) in determining more realistic fines for those contraventions which pose accident risks and/or have contributed to an accident.

Practice

The H.M.F.I. Construction Group inspectors interviewed were well aware of the range and contradictory nature of expectations concerning their role and functions, with the Inspectorate being aptly referred to by one as 'a favourite whipping-boy'. In their own terms, typical of the responses to questioning on their role was as follows :

'We should be acting as motivators, but unfortunately we tend to be acting as safety officers in construction : give contractors a list of faults and they'll jump to it, but you've not necessarily achieved much through those little flurries of corrective activity...I can't see what else we can do except tell them what to do to avoid risk and hit them hard whenever we come across it.'

And assessments as to their effect -

'We're winning with the bigger firms and one or two of the medium sized companies in tackling this problem of motivation... but with the rest it's an uphill slog. We are succeeding gradually, but this hasn't been by going to firms and pointing out weaknesses in their organisation - it's been by causing as much inconvenience as possible to bring it home to them that it's easier to comply.'

The influence which inspectors are able to exercise through monitoring activity has been noted as being proscribed by the characteristics of construction worksites, contractors, and construction management practices and procedures. Inspectors reported that the basic priority in construction as in all the HMFI's industry groups was pre-emptive inspection work. Thus, contrary to popular belief, inspectors reported that a relatively

small proportion of their time was spent on reactive activity (estimates varying from 10 - 40%). This includes all forms : investigating reportable (fatal and serious) accidents and dangerous occurrences, acting on those complaints and queries thought to warrant investigation, and the administrative work associated with follow-up activity and formal enforcement procedures.³ As regards basic inspection work, a number of criteria were cited by inspectors as determining the pattern of activity:

- The selection of priority areas on a national basis (e.g. at the time of the survey particular attention was being given to high street sites, and preparations were underway for 'a crackdown on steel erection').
- Monitoring the activities of what one inspector referred to as 'blacklist companies'; those working in trades with particularly poor safety records (e.g. demolition and roofing), and particular firms which, as one put it, 'are known to have a poor track record and deserve more attention than others'.
- Other routine inspection activity was reported as being determined by the type and scale of work being undertaken at any point in time, ranging from 'fairly regular' inspection visits to large CE projects (i.e. at least once a month) through to the small (unnotified) sites seen and inspected by chance.

As regards procedure, all the inspectors reported that contractors were occasionally notified of an intended or impending visit⁴ but that normally, as one put it,

'the only notification you give is at the gate, which gives them about ten minutes or thereabouts for the site grapevine to get going - and if the job's in a mess then there's not a lot that can be done about it in that time.'

In terms of formal sanctions, available statistics indicate that inspectors assigned to the HMFI's Construction Industry Group (approximately 10% of the Inspectorate's total cadre) initiate prosecution proceedings and issue notices more frequently than their counterparts in other HMFI National Industry Groups (NIGs). For example, 326 prosecution cases were instituted by or for Construction Group inspectors in 1979 and 443 in 1980; that is, 27% and 34% respectively of the total number of cases brought by or for the Factory Inspectorate which were heard in those years.⁵ As regards enforcement notices, 754 (10.6%) of those issued by H.M.F.I. in 1979 were issued by the Construction N.I.G., and 853 (14.3%) in 1980. Although the total number of notices issued by the HMFI has been declining in recent years, it seems that Construction Group inspectors are making more rather than less use of notice

Table B.2

Enforcement Notices Issued by H.M. Factory Inspectorate's
Construction Industry Group, 1980.

Type of Notice	(1) Issued by the Construction N.I.G.		(2) Total Issued by H.M.F.I.		(3) (1) as % of (2)
	no.	%	no.	%	
Prohibition*	746	87.5	1585	26.5	47
Improvement	107	12.5	4385	73.5	2.4
Total	853	100	5970	100	14.3

* Includes Deferred Prohibition Notices

Sources : H.S.E. Reports.

procedures, possibly reflecting proliferation in the number of small contractors with the recession. However, as Table B.2 indicates, the most distinctive feature is that the notices issued by Construction Group inspectors are pitched at a higher level of severity; an emphasis on prohibition notices, which take immediate effect, rather than improvement notices. Figures obtained for the HSE's Scotland East Area show a marginally more severe pattern of activity, with an average of 27 notices issued per Construction Group inspector in 1981 compared with an average of 16 apiece by other HMFI inspectors. Moreover, 99% of the (161) notices issued in that year by the Construction Group inspectors in the Area were prohibition notices.

The inspectors interviewed cited moral, legal and cost - effective criteria as determining the use of formal sanctions. As regards prosecution, a clear distinction was drawn between actions instituted in pre- and post-accident situations. In the event of a fatal or serious accident, as a senior inspector observed -

'Cost - effectiveness doesn't come into it - we have a duty to prosecute in order to publicly punish the company...(and) We have to be seen to punish offenders in such cases in order to maintain our credibility as an enforcement body'.

The problems of obtaining 'sufficient evidence' and 'pinning down responsibility' were cited by all inspectors as primary constraints, with particular reference to the difficulties in construction of (a) establishing precise employment relationships, (b) tracing ownership of a firm and, associated with the turnover of labour on sites, (c) keeping track of witnesses. With the policy of the Inspectorate being to institute prosecution

proceedings only where there is, as one put it, 'a good chance of winning the case', the majority of accident investigations result in decisions not to prosecute. The dominant note in discussion on this theme was one of frustration rather than reluctance to act. The tone cannot be reproduced but the contributory elements are illustrated in the following observations made by a basic grade inspector -

'I've investigated two fatal and three serious accidents recently and there hasn't been a prosecution in one of them...You can be convinced that a serious breach of the law contributed to the accident and you naturally want justice on behalf of the man who's been killed or seriously injured. That's not abstract either, because you've taken statements from men who may've been maimed for life - a man with one leg won't ever find active work again and a joiner who's lost the use of his right hand can hardly continue in that trade...But if there's insufficient corroborating evidence to back-up your allegations you'll just get a non-proven verdict, which doesn't do anyone any good.'

Moreover, the fines imposed on employers convicted through summary proceedings were referred to as being appalling and 'very demoralising'; with particular reference to sheriffs in certain rural areas as being 'famous' for regularly treating offences like salmon poaching more seriously than an employer's criminal negligence. The fines imposed in the rare cases taken on indictment are significantly higher (e.g. £5,000 in the one case taken in East Scotland in 1981 compared with the range of £50 to £550 on summary convictions). However, inspectors did not differ from other informants in considering even these penalties to be, as one put it, 'a mockery when you think of the damage done and the costs which, at the end of the day, are being borne mainly by the public'.

In terms of pre-emptive action, the sense of retributive obligation to punish offenders in post-accident situations is subordinated to cost-effective criteria in determining inspectors' responses to the range of contraventions which virtually every inspection visit was said to reveal. A number of elements were referred to by the inspectors interviewed as entering into decisions on formal procedures, based essentially on assessment of a contractor's intentions and the effectiveness of alternative forms of enforcement action in bringing about the desired change in attitudes and behaviour. Thus, the severity of an offence, reactions to instruction, and where applicable the past record of response to previous instructions, warnings, notices and prosecutions all enter into decisions. Evidence of indifference, incompetence, intransigence and particularly desuberate non-compliance for gain were all grounds cited by inspectors as warranting recourse to formal sanctions. Inspectors confirmed that prosecution is, in this sense, a last resort.

The process of criminal prosecution rather than the fines was considered by inspectors to have a salutary impact on management attitudes in most cases.⁶ But for 'rogue' employers exhibiting the traits of intransigence and indifference, the administrative and financial resources involved in preparing prosecution cases⁷ was referred to as futile expenditure when, as a senior inspector observed,

'If the company can get off with a paltry fine then the Sherrif's decision means that prosecution does more harm than good.'

The effects of derisory penalties in actively encouraging non-compliance are aptly illustrated by the inspector who observed -

'Some firms you can prosecute until you're blue in the face and they still won't change...We've experience of that in this district with a number of small firms - mostly cowboys, and there's one big one we're up against too. The last time the MD was prosecuted we heard that he was boasting in the pub afterwards that he'd bought a B.M.W. with the money he'd 'saved' on safety.' Next time 'round we'll have to try and nail him on indictment. If he gets fined £5 - £10,000 - and there was a case in London recently of a £20,000 fine - maybe he'll be more prepared to listen.' But that's the basic problem - some companies just won't do anything until they're getting fines in that sort of range, and it's only then they'll think twice before risking another prosecution.'

Apart from instructions and warnings, and bluff was acknowledged to be an integral part of the process,⁸ all inspectors referred to the powers conferred on inspectors under the 1974 Act to issue notices as being particularly useful in the construction context; in enabling problems to be dealt with quickly and in improving the efficacy of 'persuasive pressures' short of prosecution proceedings. Indeed, while improvement notices were considered to be of minimal use in construction, prohibition notices were referred to by all inspectors as being the most cost-effective sanction at their disposal. As one observed -

'We find that issuing a prohibition notice often causes more distress to the company than being taken to court and fined - and it's more useful from our point of view because the effect is immediate and stopping the job hits them where it hurts most - in their pockets.'

In terms of the impact of the Inspectorate as an enforcement agency, as a senior inspector blankly pointed out,

'There are obviously political and economic pressures affecting what we can do, and as it is we're doing the best we can with the resources available to us.'

Yet apart from an age-old concern of the Inspectorate with enhancing their powers of persuasion through the imposition of more realistic penalties by the courts, questioning as to available resources did not elicit any scenario for radical changes in the scale or character of current practices. As regards manning levels, the inspectors interviewed did not consider the Construction Group to be 'understaffed', although most considered that the particular problems of site regulation merited a marginal increase (e.g. one or two more assigned to the Area). The instrumental value of a significant increase was considered to be minimal in that, as one inspector put it,

'Even if you blanketed the Area with inspectors you'd still get contraventions and accidents because the major problem is motivation.'

Moreover, inspectors considered that recourse to formal enforcement procedures beyond existing levels would have the negative consequences of shifting from the current emphasis on pre-emptive inspections to reactive 'after the event' work, and thereby considerably limit the influence they are able to exercise.

NOTESCHAPTER 1

1. See the Health and Safety Executive (HSE) Health and Safety Statistics series of reports for figures officially recorded by the state inspectorates. These are widely acknowledged as underestimating the true scale of the problem: see, for example, Theo Nichols, 'The Sociology of Accidents and the Social Production of Industrial Injury', in People and Work, Geoff Esland et al (eds). Open University Press, 1975:217.
2. See P.B. Beaumont, Safety at Work and the Unions, Croom Helm, London, 1983:1-2.
3. The lower estimate was cited by W.J. Simpson, then Chairman of the Health and Safety Commission (HSC), in 'Safety Representatives', Federation News, Vol. 27, 1977, at p.118; the higher estimate is as cited by L. Murray, then General Secretary of the TUC, in the Foreword to the TUC Handbook on Safety and Health at Work, T.U.C., London, 1978.
4. The Safety Representatives and Safety Committees Regulations 1977, H.S.C., HMSO, 1977. These regulations (hereafter referred to as the SRSC Regulations) concern safety representatives appointed in accordance with s.2(4) of the HSW Act 1974. The Code of Practice and Guidance Notes pertinent to interpretation of most of the Regulations are published in the same document.
5. The Coal Industry Nationalisation Act 1946 (s.46) placed a statutory obligation on the NCB to establish joint machinery for consultation on matters relating to employees safety, health and welfare. See also, the Electricity Act 1974, the Gas Act 1948, and the Steel Acts 1949 and 1967.
6. A separate Code of Practice (HSC 9) was subsequently published to supplement the SRSC Regulations on the specific issue of time off for the training of safety representatives.
7. The technical basis for the safety representative's role received early attention from G.R.C. Atherley, R.T. Booth and M.J. Kelly, in 'Workers' Involvement in Occupational Health and Safety in Britain', International Labour Review, June 1975, pp. 469-82.
8. The expansion of the TUC's educational provision over this period has been reviewed by A.I. Glendon and R.T. Booth, 'Worker Participation in Occupational Health and Safety in Britain', International Labour Review, Vol.12, no.4, 1982, at pp. 407-8. For a more general review see T.Smith, 'Trade Union Education: Its Past and Future', Industrial Relations Journal, Vol.15, no.2, 1984, pp. 72-90.

9. See, for example, the TUC Handbook (op. cit.) and guides for safety representatives published by various unions (for example, by the AUEW, TGWU, GMWU, NUBE, and UCATT) and by the Labour Research Department. In terms of booklets and articles see, for example, M. Cunningham, 'Safety Representatives: Shop Floor Organisation for Health and Safety', Studies for Trade Unionists, Vol.4, no.13, 1978; P.B. Beaumont, 'Safety Legislation: The Trade Union Response', Occasional Paper in Industrial Relations, no.4, Universities of Leeds and Nottingham in Association with the IPM, 1979; R. Benedictus, Law at Work: Safety Representatives, Sweet and Maxwell, London, 1980.
10. This review included works specifically concerned with safety and health, for example, Sir Andrew Bryan, The Evolution of Health and Safety in Mines, Ashire, 1975; as well as labour histories, for example, R.P. Arnot, The Miners: Years of Struggle, Allen and Unwin, London, 1953; autobiographical accounts, for example, Lord Robens, Ten Year Stint, Cassell, London, 1972; and recent works dealing with industrial relations in the industry, for example, B.J. McCormick, Industrial Relations in the Coal Industry, Macmillan, London, 1979.

CHAPTER 2

1. For a brief discussion of the early regulations concerning the employment of 'free' children and parish apprentices see E.P. Thompson, The Making of the English Working Class, Penguin, London, 1968, at p.378. See also M.W. Thomas, The Early Factory Legislation, Thames Bank, 1948. The latter has pointed out that the 1802 Act, in relating solely to parish apprentices, is more appropriately regarded as an extension of Elizabethan Poor Law rather than 'factory legislation' per se.
2. H.M. Chief Inspector of Factories, in H.S.E. Health and Safety: Manufacturing and Service Industries 1979, H.M.S.O. 1981. Foreword.
3. See A. Wilson and H. Levy, Workmen's Compensation Volume One: Social and Political Development, Oxford University Press, 1939, at pp. 20-1.
4. The first Parliamentary Select Committee to inquire into these matters was appointed in 1835, inquiries pre-dating this having been conducted by quasi-official bodies in coal mining areas. For a review of the latter see Bryan, 1975, op cit, at p.18 et seq.

5. The basic principles of mines' safety regulation and a state inspectorate were first drawn up in France prior to the French Revolution, and re-established thereafter by a Napoleonic Decree of 1810. For an account of this and the other 'continental systems' see Bryan, 1975, op cit, Chapter 1. Tremenheere, the Mines Commissioner appointed under the first British mines Act of 1842, was sent to study these systems and his reports, which were influential in shaping the content of subsequent British legislation, enthusiastically recommended emulation. For a detailed review see E.L. and O.P. Edmonds, I Was There: the Memoirs of H.S. Tremenheere, Shakespeare Head, Oxford, 1965.
6. For a detailed history of this process as regards factory legislation see Thomas, 1948, op cit; also B.L. Hutchins and A. Harrison, A History of Factory Legislation, Frank Cass, London, 1966, 3rd edition. In relation to mining legislation see Bryan, 1975, op cit; also the perceptive study by George Rosen, 'The Beginnings of Social and Protective Legislation', pp. 424-57 in A History of Miners' Diseases: A Medical and Social Interpretation, Schumans, New York, 1943. For a synopsis of developments in protective legislation generally, set out in chronological form, see P. Kinnersly, The Hazards of Work, Pluto Press, London, 1973, at pp.
7. Sidney Webb (1910), at p. ix of the Preface to Hutchins and Harrison, 1966, op cit.
8. For a succinct, critical review of these various interpretations see P.W.J. Bartrip, 'Safety at Work: the Factory Inspectorate in the Fencing Controversy, 1833-1857', Working Paper No.4, March 1979. Centre for Socio-Legal Studies, Wolfson College, Oxford. SSRC.
9. See K.W. Wedderburn, The Worker and the Law, Penguin, 1971 (3rd edition) at p. 239. Thompson, 1968, op cit p.378, provides some insight into the 'uneasy alliance' between philanthropists and workers' short-time committees in agitation for a ten hour day. See also Bartrip, 1979, op cit, for an overview of the (negligible) influence exerted by the early factory inspectors in shaping the form and content of factory legislation. The academic debate concerning the influence of the Benthamites is reviewed by J. Hart, 'Nineteenth Century Social Reform : A Tory Interpretation of History', pp. 39-61 in Past and Present, Vol. 31, 1965.
10. The term is derived from Dickens' caricature of the National Association of Factory Occupiers (NAFO), formed by a powerful group of Manchester industrialists in 1855 to oppose certain fencing requirements contained in the Acts, as 'the National Association (for the protection of the right to mangle operatives)'. see Bartrip, 1979, op cit, pp. 35-40.

11. Ashley's Bill (1832) contained proposals not only for the fining and imprisonment of offenders, but also for an employer to be tried on charges of manslaughter where the death of an operative was found to have been caused by an employers' negligence over the fencing of machinery. As Carson has noted: 'Whatever their effectiveness as a deterrent, such penalties would have denied the existence of any moral distinction between the offending mill-owner and the common criminal.' In the event, the 1833 Act contained only modest punitive sanctions. See W.G. Carson, 'Symbolic and Instrumental Dimensions of Early Factory Legislation', pp. 107-38 in R. Hood (ed), Crime, Criminology and Public Policy, Heinemann, London, 1974.
12. Sadler's Committee of Inquiry, which received no submissions from manufacturers, presented evidence of appalling deprivation and human exploitation which amounted to a massive indictment of the factory system as a whole, the imputation being that the logic of industrial capitalism was at odds with the precepts of common humanity. The Factories Commission was established, in effect, to counter these imputations of avarice and cruelty and to vindicate the position of manufacturers as a body. This it did, endorsing the view that such abuses as existed were confined to small mills and sweatshops. See Carson, 1974, ibid, at pp. 129-36.
13. For a fuller exploration of this theme see W.G. Carson, 'The Conventionalisation of Early Factory Crime', pp. 37-60 in International Journal for the Sociology of Law, Vol. VII, 1979; W.G. Carson, 'White Collar Crime and the Institutionalisation of Ambiguity: the Case of the Early British Factory Acts', pp. 142-73 in White Collar Crime, G. Geis and E. Stotland (eds), Sage, Beverly Hills, 1980; cf P.W.J. Bartrip and P.T. Fenn, 'The Conventionalisation of Factory Crime: A Reassessment', pp. 175-86 in International Journal for the Sociology of Law, Vol. VIII, 1980.
14. Combinations of workmen were made illegal through a succession of statutes dating from 1315, the most notable being the Combination Acts of 1799 and 1800. These statutes were partially repealed in 1825, but full legal and political freedom to combine and act collectively was not achieved until the emancipatory statutes of 1871-75. It is also worth noting that the paternalistic ideology promulgated by reformers such as Shaftsbury was essentially anti-union; such organisations being considered to pose 'a great evil' to the interests of the working class. See Roy Lewis, 'The Historical Development of Labour Law', pp. 1-17 in British Journal of Industrial Relations, Vol. XIV, no. 1, 1976; also Roy Lewis, 'Collective Labour Law', pp. 361-92 in Industrial Relations in Britain, G.S. Bain (ed), Basil Blackwell, London, 1983; cf Bob Hepple, 'Individual Labour Law', pp. 393-417 in Bain (ed), 1983, ibid.

15. See J.L. Williams, Accidents and Ill-Health at Work, Staples Press, London, 1960, at p.122; also T.K. Djang, Factory Inspection in Great Britain, Allen and Unwin, London, 1942, at p.36, Williams (loc.cit) notes that the minutes of factory inspectors meetings at that time showed that the 'request' had been made officially. Nonetheless, as Djang has recorded, when objections were raised in the House of Commons that political duties were being assigned to inspectors and that the government was resorting to 'an odious system of spying', the government disclaimed all knowledge of the matter. The demand which had been made for a Select Committee to inquire into the employment of inspectors as Home Office informers was subsequently dropped. The only recorded consequence seems to have been that the sub-inspector who 'leaked' the Home Office communication to an MP was sacked.
16. Rosen, 1943, op cit at p. 438, points out that arguments against vesting mines inspectors with powers of compulsion akin to those of factory inspectors were made on these grounds; that there was no similarity, allegedly, between 'the power to order a simple defence against dangerous machinery (a reference to factory inspectors) and directions for the improvement of ventilation, or as to methods of working collieries or prescribing the many other changes which may be desirable for their safety'.
17. See E.J. Hobsbawm 'The Aristocracy of Labour Reconsidered', in proceedings of 7th Economic History Congress, International History Association, Edinburgh, 1978; also Royden Harrison (ed), Independent Collier : The Coal Miner as Archetypal Proletarian Reconsidered, Harvester Press, Hassocks, 1978.
18. In Scotland indentured labour and the enserfment of vagrants were the traditional measures adopted by mining lairds to secure an adequate pool of mine labour. The Master and Servant laws of 1592 and 1606 relating to the serfdom of Scottish colliers were only repealed in 1799, when the demand for mine labour was rapidly outstripping that which could be ensured by these means. Annual bonds were another measure adopted in some English coalfields to secure mine labour. See Arnot, 1955, op cit Chapter 1; also J.U. Nef, The Rise of the British Coal Industry, Vol. II, Routledge and Sons, London, 1932.
19. Some comparative data on colliers earnings is provided by A.B. Campbell, The Lanarkshire Miners: A Social History of their Trade Unions, 1775-1874, Donald, Edinburgh, 1979, Chapter 1.
20. Under the 'big butty' system a contractor leased a small pit or seam from the owner, provided his own capital, hired the required labour (often on a sub-contracting basis), and sold the coal. As the size of pits increased this gave way to the 'little butty system' whereby

contractors worked a particular face or district. See A.J. Taylor, 'The Sub-Contract System in the British Coal Industry', in Studies in the Industrial Revolution, L.S. Presnell (ed), London University, London, 1964. McCormick, 1979 op cit, at p.5, has noted that this system persisted in a modified form in North Staffordshire up until the 1950s. The licensing system, whereby small reserves which the NCB is not interested in working itself are let to private operators, could plausibly be regarded as the current equivalent to such practices.

21. Contracting of this nature persists to date insofar as the NCB lets contracts to civil engineering firms to perform certain tasks underground and on the surface.
22. Longwall techniques were being utilized in a few large Scottish collieries as early as 1805. See Baron F. Duckham, A History of the Scottish Coal Industry. Volume 1, 1700-1815, David and Charles, Newton Abbot, 1970, particularly pp. 136-40.
23. The ideology of the 'independent collier' associated with such practices, together with the methods used by miners attempting to ensure conformity and the counter-measures employed by mine owners and agents to break such restrictive practices are discussed by Alan Campbell and Fred Reid, 'The Independent Collier in Scotland', pp. 54-74 in R. Harrison (ed), 1979, op cit. See also Campbell, 1979, op cit, Chapters 3 and 9.
24. See Nef, 1932, op cit and Wilson and Levy, 1939, op cit at p.20 concerning the occurrence of firedamp explosions in the 17th and 18th century.
25. See Bryan, 1975, op cit. The worst disaster to have occurred in Scotland, where 'fiery' mines were less common than in some other coalfields, was the 'Blantyre Calamity' in 1877: an explosion of fire-damp in Dixon's Pit at Blantyre, Lanarkshire, which wrecked the workings and caused the death of 207 men and boys. See Arnot, 1955, op cit, p.60 et seq.
26. Some large iron companies were involved in leasing coalfields and subsequently in mining from the late 18th century. The penetration of commercial capital into the Scottish coalfields which was gathering pace at that time and the impact on the coal industry are discussed by Duckham, 1970, op cit, Chapter 7, 'The Rise of the Coal Companies'.
27. See Campbell, 1979, op cit, Chapter 8 : 'Independence, Industrial Discipline and Social Control', for an analysis of the 'offensive' conducted in the mining villages as well as at pits, which encompasses measures such as the truck system and tied-housing through to

activities in the field of education and religion, The profit-sharing schemes pioneered in the 1860s by the coalmaster Briggs and Co. are also considered in this light by Harvie Ramsay, at pp. 483-4 in 'Cycles of Control: Worker Participation in Sociological and Historical Perspective', Sociology, Vol. 11, no. 3, 1976, pp. 481-506.

28. Under the longwall system hewers worked on a continuous face rather than being dispersed in a honeycomb of stalls, with the superincumbent strata being allowed to collapse behind them as they advanced into the seam. Roadways had to be specially constructed to secure access to the shaft. Roadway maintenance in particular entailed a greater division of labour, and a higher proportion of 'oncost' or ancillary workers to hewers, than pillar-and-stall methods. Where longwall methods were used there was some experimentation with labour-saving devices such as endless-rope haulage, and experiments with coal-cutting machines were being made as early as 1860. However, before the turn of the century the amount of coal mechanically cut was negligible. The hewers' task of holing and cutting coal with a pick, 'hand-got' methods, remained substantially unaltered by mechanization until the this century. For a review of the early technological innovations, see NCB, A Short History of the Scottish Coal Industry, NCB, 1958, Chapters 3 and 5.
29. Rule 41, which was directed at preventing combination amongst miners, was subsequently repealed in the 1870s. (Arnot, loc cit). Campbell, 1979, op cit at pp. 269-70, considers the miners' hostile reactions to the Code as a whole in terms of its job specifications being part-and-parcel of the process of de-skilling colliers, and cites the complaint of Ayrshire colliers that if they were to comply fully with these rules 'the miner would in many cases have nothing to do but work for the master and not for himself'.
30. The mining interests of the lairds and landed class represented in the House of Lords were not identical to those who had drafted the General Rules, which were drawn up by the more entrepreneurial colliery owners at meetings convened on the initiative of the Northumberland and Durham Coal Trade Association. See Bryan, 1979, op cit, p. 57 et seq.
31. Rosen, 1943 op cit, at p. 440 comments on the rare actions instituted against mine owners' agents in this period following major disasters. An indication of the frequency and relative severity of actions instituted against colliers is to be gleaned from the repeated references to fines levied on workmen by Alexander, Mines' Inspector for the Eastern District of Scotland, in his reports for

1870 (PP. 1871. XIV), 1871 (PP. 1872. XVI) and 1872 (PP. 1873. XIX).

32. Longwall methods were most suited to thin-seam mining. Pillar-and-stall methods thus continued to be employed not only in small mines, but also in thick-seam areas such as Lanarkshire, and Northumberland and Durham, well into this century. Related to this, employers in Northumberland and Durham managed to obtain exemption from the duty of the 1911 Act obliging them to appoint deputies as full-time safety supervisors, with deputies in these districts being formally entitled 'to continue the custom of performing production tasks along with their safety duties'. See Report of the Royal Commission on Safety in Coal Mines, London, HMSO, 1938 (Cmd.5890) at p.182.
33. This federation had a rival in the Amalgamated Association of Miners (formed in 1869 by some of the more militant county unions) until 1875 when insolvency forced the AAM into merger with the Miners' National Association. For a brief review of the different policies pursued by these two federations see V.L. Allen, The Militancy of British Miners, Moor Press, 1981, at pp.23-4. For a synopsis of the succession of miners' federations and associations, see J.Eaton and C.Gill, The Trade Union Directory, Pluto Press, 1981, at pp.25-6.
34. 'The Junta' is a term which S. and B. Webb used in referring to a group of leading officials from the amalgamated skills unions who subsequently operated as the Parliamentary Committee of the TUC. In the Webbs' view these officials were guilty of 'abandoning the fundamental principle of Trade Unionism - the compulsory maintenance of the workman's Standard of Life'. S. and B. Webb, The History of Trade Unionism: 1666 - 1920, Longmans and Green, London, 1926, at p.301.
35. The pattern was obviously not uniform within or between coalfields; considerable variations arose according to whether a colliery supplied fuel mainly for domestic or industrial consumption, and whether it served inland or export markets. See Alan Campbell, 'Honourable Men and Degraded Slaves : A Comparative Study of Trade Unionism in Two Lanarkshire Mining Communities, 1830-74', pp.75-113 in Harrison (ed), 1978, op cit.
36. Arnots' comments are rather curious in view of the fact that the 1860 Act required the checkweighman to be appointed from among those regularly employed at a pit, but provided no safeguards against victimization. As Rosen (1943:442, op cit) has noted, 'the owners proceeded to nullify the law by discharging the checkweighman or preventing their access to the weighing machines. It was

obvious that for all practical purposes the Act of 1860 was a 'dead letter'. These provisions were amended in the Mines Act of 1872 to enable 'non-employees' to act as checkweighmen.

37. Although Tremenheere, the Mines Commissioner appointed under the first Mines Act of 1842, is commonly referred to as the first mines' inspector, he was not expected to - and apparently never did - make any 'subterranean' inspections. See Bryan, 1975, op cit, at p.37.
38. The concept of worker-inspectors appears to have been popularly advocated in mining circles more generally, with demands for participation along these lines having been discussed at international miners' conferences in 1894, 1896, 1898, 1903 and 1907. See R.P. Arnot, The Miners: A History of the Miners' Federation of Great Britain 1889-1910, Allen and Unwin, London, 1949, at pp.381-9.
39. The Webbs (1926:371, op cit) record that 'For years Congress had passed emphatic resolutions in favour of the selection of practical working men as Factory Inspectors. Great was the jubilation at the appointment in 1882 of J.D. Prior, General Secretary of the Amalgamated Union of Carpenters, and a member of the Parliamentary Committee, to the post of Inspector.' Although referring to Prior somewhat misleadingly simply as 'a workman', Hale has pointed out that this case, which involved waiving the Inspectorate's qualifying exams, was regarded as a 'special experiment' and deemed a success as such in that Prior rose to the grade of Deputy Superintending Inspector. A.R. Hale, The Role and Training Needs of Government Health and Safety Inspectors, Ph.D. Thesis, University of Aston, Birmingham, 1978, at p.175.
40. Similar suspicions were voiced in relation to the activities of the early factory inspectors, the first recorded complaint being made in the 1830s by a workers' committee at Birstall which alleged that government officers inquiring into the operation of the Factory Acts visited mills 'without duly notifying it, to dine with the masters,...and... we shall learn from 'high authority' that the law is effective - and in proof of it, there have been few, if any, convictions.' As cited by Thomas, 1948, op cit, p.109 et seq.

41. This system of appointing mines' inspectors, referred to in passing by Bryan (1975:63), was in line with standard practices of the times in that, prior to the introduction of the competitive emanation system in the 1870s, all civil servants were appointed through 'ministerial patronage'. The fact that the Mines Inspectorate recruits its' inspectors from the industry's pool of qualified mining engineers has meant that the issue of inspectors' professional allegiances and independence has been one of enduring sensitivity. See, for example, the reactions of NUM leaders to the ex-Chief Inspector of Mines (Bryan) who, after his retirement from the Inspectorate, acted as an official for the colliery managers association (BACM); as described by Abe Moffat, My Life With the Miners, Lawrence and Wishart, London, 1965, p.255 et seq.
42. Reservations on these grounds were voiced a century later by Collison, speaking on behalf of the TUC General Council in 1962 against a resolution that Congress should seek statutory provisions concerning the appointment of safety representatives and the establishment of safety committees. See J.L. Williams, Organising Workplace Safety, Labour Research Department, London, 1963, pp.13-14.
43. The struggle being played out during the 1870s between the 'old unionism' of the independent collier, espoused by MacDonald, and the 'new unionism' with its more radical concepts of collective interests and demands for state intervention are discussed by Fred Reid, 'Alexander MacDonald and the Crisis of the Independent Collier, 1872-74', pp. 156-79 in Harrison (ed), 1978, op cit.
44. Despite these new provisions, miners' unions appear to have persisted in their demands for sub-inspectors. This is indicated by Bryan's comments (1975:62 op cit) viz: "About half a century later (after the 1865 Committee rejected the notion) the proposal to appoint H.M. Sub-Inspectors of Mines was accepted and implemented but it achieved only limited success and was ultimately abandoned." Thus, albeit with an appreciable time-lag, the outcome appears to parallel the experience of 'worker-inspectors' in the Factory Inspectorate.
45. For a detailed point by point description of these provisions see Williams, 1960 op cit p.125 et seq.
46. See Report of the Royal Commission, 1938 op cit at pp. 138-46.
47. This section is based mainly on secondary sources. Reports of the Scottish District Mines Inspectors for selected years between 1870 - 1900 were scanned, but

the laborious task of sifting through all the reports of all the District Inspectors for references to workmen's inspectors - probably the best source for information on the use made of the provisions - was considered to be a project in itself. Similar reservations prohibited a search for union records.

48. See Report of the Royal Commission, 1938, op cit, Table 21 at p.139.
49. Report of the Royal Commission on the Coal Industry, 1925, Cmnd. 2600. HMSO, London, 1926. Vol. 1. p.211.
50. See Report of the Royal Commission, 1938, op cit at pp.140-1, which refers to a certain Mr. Emerson as being "one of six such workers' inspectors in the county Durham". This, together with the fact that 114 of the 253 mines operating in Durham during 1937 were subject to workmen's inspections, points to itinerant activity on the part of a few men. Evidence given by Emerson which the Commission cites suggests that he worked as part of a collective, viz: 'He said there was not in fact any systematic arrangement at present for making complete examinations at regular intervals, and that "we generally go to where the troubles are, with the idea of raising the safety factor a little".'
51. See, for example, Allen, 1981 op cit at p.17. He notes that the clause in the 1860 Act stipulating that the checkweighman must not interfere in the management of the colliery was still being used in the 1930s to dislodge full-time men.
52. That is, officials engaged full-time as safety inspectors rather than simply full-time officials who acted occasionally as workmen's inspectors.
53. Collieries in South Wales, and to a lesser extent in the Northern coalfields, were prone to the problems of methane gas accumulation. South Wales in particular suffered more than most from frequent explosions, with the worst single disaster in the history of British coalmining having occurred in this area - at Senghenydd colliery in 1913, when 439 miners were killed. (See H. and B. Duckham, Great Pit Disasters : Great Britain 1700 to the Present Day, 1973). It seems reasonable to suggest that the frequency of such disruptive and/or disasterous events was instrumental in focussing the attention of miners and their unions on preventive activities related to the safe management of the mine, and that employers were more receptive to such activity than in areas where the risk of losing a pit through disaster was less acute. Another angle worth mention is the possible relationship between modes of production, attendant managerial practices, and activity on the part of workmen's inspectors.

It has been noted that pillar-and-stall systems, with their looser managerial control structure, remained the dominant mode in Northumberland and Durham. It is possible that the higher rate of workmen's inspection activity in this coalfield is related to concern with factors affecting workflow which were outside the immediate control of the miners relatively autonomous work-groups, and the fact that part-time deputies in these districts had less scope to act (like their full-time counterparts in other areas) as arbitrators and first-line negotiators; i.e. to mediate between work-groups and management in resolving problem as and when they arose at the point of production.

54. From approximately 53m. tonnes in 1850, output had increased to 229m. tonnes by 1900, peaking at 292m. tonnes in 1913. The mining workforce, approximately 200,000 in 1850, had doubled by the 1880s and in 1913 approximately 1.1 m. were employed in over 3,000 mines. For an analysis of the economic history of mining for the period 1870-1940s, see M.P. Jackson, The Price of Coal, Croom Helm, London, 1974. Also, M.W. Kirby, The British Coalmining Industry 1870-1946: A Political and Economic History, Macmillan, London, 1977.
55. The changing political ideology and allegiances are reviewed briefly by McCormick, 1979, op cit at pp.30-2, 'The Abandonment of Liberalism'. The trade union history of this period is documented by R.P. 3 Arnot, 3 volumes on The Miners: (a) A History of the Miners' Federation of Great Britain 1889-1910 (1949); (b) Years of Struggle - A History of the MFGB from 1910 (1953); (c) In Crisis and War - A History of the MFGB from 1930 (1963), all published by Allen and Unwin, London.
56. See Ken Coates (ed), Democracy in the Mines: Some Documents of the Controversy on Mines Nationalisation up to the time of the Sankey Commission, Spokesman, Nottingham, 1974. See also Carter L. Goodrich, The Frontier of Control : A Study in British Workshop Politics, first published in 1920, re-published by Pluto Press, London, 1975, with an introduction by Richard Hyman.
57. For a short review of Spencerism and the events leading to the dissolution of the Miners' Industrial Union in Nottingham see Allen, 1981, op cit at pp.18-19. The development of company unionism in Durham, where it appears to have been rejected by most mineowners as well as by miners (a by-product being non-unionism) is reviewed by W.R. Garside, The Durham Miners 1919-60, Allen and Unwin, London, 1962. For an account of the intense opposition to this phenomenon on the part of the Federation in South Wales, see D.Smith, 'The Struggle against Company Unionism in the South Wales Coalfield, 1926-39', Welsh Historical Review, VI, 1973. For Scotland, where company

unionism appears to have gained scant ground except briefly at the Lochgelly Iron and Coal Co. pits in Fife, see Moffat, 1965, op cit.

The development of Spencerism in different areas, apart from the inter-'union' rivalry generated by this phenomenon, may well have been a significant influence affecting the use made of the provisions for workmen's inspectors. Spencer himself, along with the mineowners federation, is cited by the Royal Commission of 1938 (op cit at p.142) as being among those who advocated the appointment of workmen's inspectors with compulsory inspection duties; an intriguing alignment of interests in promoting workmen's inspection activity directed towards 'securing the workmen's co-operation in safety matters'. Any views which the MFGB may have had on this matter are not cited by the Commission.

58. Allen, 1981 op cit points out that although labour costs on average constituted about two-thirds of all operating costs, the proportion was higher among the multitude of small, marginal operators where, arguably, competitive pressures were most keenly felt. The market dominance of a few large suppliers is indicated by figures for 1924, which show that there were about 1,400 colliery companies owning 2,481 pits - but 323 of these pits produced 84% of total output.
59. The Commission (1938, op cit at p.142) recommended that the existing provision should stand but that - "there should be an overriding requirement that an inspection of the mine shall be made once a quarter by two persons appointed by the workmen employed at the mine, or in default of such an appointment, by the representative body of mineowners in the district. The cost of any voluntary inspection should continue to be borne by the workmen, but half the cost of the compulsory inspection should be borne by the owners of the mine." The fact that the Commission should view inspections by workmen's representatives or by 'the representative body of mineowners' as being inter-changeable is consistent with the unitary perspective adopted by the Commissioners, itself no doubt re-inforced by the alignment of interests in favour of such a move. This recommendation should also be seen in terms of mineowners' interests in 'policing' competitors.
60. See Report of the Royal Commission, 1938 op cit at p.82. The right to propose special regulations, or to lodge amendments to regulations generally, is continued in the Mines and Quarries Act 1954, Second Schedule, Part II. Evidently, participation in the general rule-making process can be said to have occurred indirectly - through the lobbying activities of the miners' unions.

61. As regards coal mines, the appointment of workmen's inspectors thus became the sole province of the NUM. In relation to other workplaces covered by the 1954 Act, s.123(1)(b) stipulates that where there is no single organisation representative of the majority of employees, then the panel of workmen's inspectors may be appointed 'jointly by associations or bodies which are together representative of such a majority'.
62. Figures on inspection activity are given in the text of the Mines Inspectorate's annual reports, with some Chief Inspectors providing fuller information on the matter than others. The figures provided for inspections by Safety Board Examiners from 1949 onwards give an indication of activity on the part of full-time union officials, which was previously the subject of guesswork. Nonetheless, as the legislative provisions specifically allow for the involvement of non-employees, it cannot be assumed that all inspections conducted under s.16 of the 1911 Act or s.123 of the 1954 Act were undertaken by men regularly employed at the mines.
63. Support for this point comes from the Mines Inspectorate's annual reports. Although no distinction is made between inspections conducted at private coal mines and those conducted at NCB mines, any (rare) commentary made by Chief Inspectors on the changing pattern of use made of the provisions refers solely to NCB mines. For example, the decline in workmen's inspection activity in 1948 is attributed to the 'interest of workmen in safety matters... being exercised more...through the medium of the safety and health sub-committees...set up under the joint consultative machinery now well established in the coal mining industry'. Report of HM Chief Inspector of Mines for the year 1948, Ministry of Fuel and Power, HMSO, London, 1950, at p.4.
64. The upsurge in activity is not, in fact, as dramatic as the widely cited rise in coverage, from 33% in 1956 to 75% in 1957, calculated by Williams (1960 op cit p.161). The Chief Inspector's report for 1957 states blankly : 'A total of 9,913 inspections were made by workmen's inspectors at 1,082 separate mines'. (p.8). It is clear from previous and subsequent reports that this figure refers to all inspections conducted on behalf of workmen (i.e. including those conducted by Safety Board examiners), whereas Williams has taken the figure to refer solely to the activities of inspectors appointed under the legislative provisions, and calculated coverage accordingly.

CHAPTER 3

1. This chapter is based largely on a published article. See C. Codrington & J. S. Henley, 'The Industrial Relations of Injury and Death : Safety Representatives in the Construction Industry', British Journal of Industrial Relations, Vol.19, no.3, 1981, pp. 297-315.
2. The revival of agitational activity concerning safety legislation after the 1939-45 war has been documented by Williams, 1960, op cit, pp. 458-78. The extension of statutory standards to workplaces not already affected, notably non-industrial sectors of employment, had been recommended by the Gowers Committee in 1949, but by the late 1950s statutory minimum standards applied to less than half the working population. Although still incomplete, coverage was extended with the Factories Act 1961 and, coinciding with the growth of white collar unions, by the eventual extension of similar protection to non-industrial occupations with the Offices, Shops and Railway Premises (OSRP) Act 1963. When the Robens Committee reviewed the situation in 1970-72, there were nine main groups of statutes regulating different spheres of employment or particular processes, supported by about 500 subordinate statutory instruments (regulations and orders). The fragmentation of the legislation was paralleled in its administration, with seven separate central inspectorates (the largest being H.M. Factory Inspectorate) coming under the jurisdiction of five central government departments - with Local Authorities also being involved in relation to premises covered by the OSRP Act 1963. See Safety and Health at Work: Report of the Committee 1970-72, Chairman : Lord Robens, Cmnd. 5034, 1972, paras. 97-109.
3. Accident statistics for all sectors of employment for the years 1961-70 are collated in the Robens Report, ibid, at pp.161-2.
4. Major disasters such as Flixborough and Sevaso have dramatically demonstrated hazards associated with the scale of modern industry. More significant, however, have been changes in production processes resulting in the very rapid increase in the number of dangerous chemical substances to which workers in almost every occupation are exposed. Many of these substances have never been properly tested for their toxic and carcinogenic effects. The oft quoted example of vinyl chloride monomer, used in the production of P.V.C., serves to illustrate the lack of control over the introduction and use chemical substances : first mass produced in the 1930s, it was not until 1974 that the U.S. Manufacturing Chemists' Association acknowledged that it caused a rare liver cancer. See D.D. Doniger, Law and Policy of Toxic Substances Control : A Case Study of Vinyl Chloride,

John Hopkins U.P., 1979. For a synopsis of the economic, medical and scientific factors affecting the testing and control of toxic substances see Lawrence McGinty, 'Stemming the Tide of Toxic Chemicals', New Scientist, pp. 432-5, 9 August, 1979.

5. The most well-publicised example in this respect is asbestos. See Alan J.P. Dalton, Asbestos Killer Dust, B.S.S.R.S. Publications, London, 1976. Medical evidence that exposure to asbestos dust causes extensive and fatal lung scarring was presented to a government enquiry into compensation for industrial diseases in 1906 - yet regulations for the 'safe' use of asbestos were not drawn up until 1931. These, however, fell far short of controlling the hazard - a fact clearly illustrated by the Ombudsman's 1976 Report on Acre Mill, an asbestos factory owned by Cape Industries at Hebden Bridge which operated from 1939 to 1970. From 1949 onwards, the Factory Inspectorate found conditions at the factory unsatisfactory, breaching even the inadequate standards of the 1931 Asbestos Regulations, Yet as Max Madden, the local MP, pointed out : 'At Acre Mill where at least forty former employees have died of asbestosis, and scores more of my constituents are suffering the disease, no prosecution in connection with the asbestos regulations was brought by the Factory Inspectorate during the thirty years the factory was processing asbestos'. (Letter to the Sunday Times, 30.5.1976, as quoted by Dalton, ibid).

6. The Robens Committee was commissioned by the Labour government in 1970 against a background where proposals for new legislation circulated by the Department of Employment (the First Consultative Document, 1967) based on the revision and merger of the Factories Act 1961 and the OSRP Act 1963 were abandoned when it became clear that the end product would be 'more of the same'. The objective had been to provide a more flexible, enabling statutory instrument, capable of meeting the problems of rapid technological change, and to provide for greater powers on matters of instruction, training, and the establishment of organisational machinery. (See Robens Report, 1972, ibid, Appendix 8). On the matter of workplace organisation, as an interim measure in 1970 the Labour government introduced the Employed Persons (Health and Safety) Bill. This enabled safety representatives to be appointed by recognized trade unions in any factory employing ten or more workers, and obliged employers, in factories employing over 100, to form safety committees at their request. The Bill was, however, lost in the dissolution of Parliament in that year. Two Private Members' Bills along similar lines failed to gain much ground, with the succeeding Conservative government declaring its intention to await the recommendations of the Robens Committee before framing

any legislation.

7. See Williams, 1960, op cit, pp. 165-75. Provisions vary considerably, but employers have been obliged to appoint safety officer(s) in potteries since 1913; celluloid manufacture since 1921; shipbuilding since 1931; and in building since 1948.
8. Employees obligations under the HSW Act 1974 (s.7 and s.8) are substantially the same as under previous statutes : to take 'reasonable care' for his own safety and that of those who may be affected by his acts of omissions, to cooperate with his employer in complying with duties and measures designed for safety, and not to 'intentionally or recklessly' interfere with anything done or provided in the interests of safety, health and welfare. The disciplinary character of such obligations and the absence of positive legal rights prior to the 1974 Act are discussed by R.W.L. Howells, 'Worker Participation in Safety : The Development of Legal Rights'. Industrial Law Journal, 1974 (3). pp.87-95.
9. The forms of worker representation advocated related to (a) the composition and (b) the functions of the state inspectorates. The issue of worker-inspectors has been commented on in Chapter 2. The question of worker representation being part of an inspectors' functions was raised in the related field of compensation. Atherley et al, 1975 (op cit at p. 474) point out that this matter was first raised in 1841 by the Select Committee appointed to review the operation of the early Factory Acts : 'The Committee saw that injured workers could not themselves afford legal proceedings and therefore recommended that factory inspectors should be empowered on their behalf to sue for financial recompense'. This recommendation became law in 1844. A recent study which traces the origins of the Workmen's Compensation Act 1897 from the earlier factories, mines and other protective legislation has been provided by P.W.J. Bartrip and S.B. Burman, The Wounded Soldiers of Industry : Industrial Compensation Policy 1833 - 1897, Clarendon, (SSRC Oxford Socio-Legal Studies) Oxford, 1983. On the theme of inspectors acting for workers, see Ch.3, 'Inspectorates and Industrial Legislation 1844-80'.
10. For a detailed review of the promotion and development of workplace safety committees see Williams, 1960, op cit, pp. 183-220. More recent activity in this area is discussed by Beaumont, 1983, op cit. See also Ramsay, 1976, op cit, for an analysis of schemes for worker participation generally being promoted in 'cycles' or 'waves' at times when managerial authority is felt to be facing a challenge'.

11. The arguments advanced for and against 'compulsion' have been reviewed in detail by Williams, 1960, op cit, particularly pp, 175-181, and pp, 206-219. Apart from employers' concerns to safeguard prerogative in this field, it was argued that the 'special relationship' necessary to effective joint effort in workplace safety arrangements depended upon voluntary commitment, and that such commitment could not be legislated into existence. Similar arguments had been aired during the 1920s when the Factory Inspectorate flirted briefly with the notion that employers in certain dangerous industries should be obliged to make appropriate organisational arrangements for safety to appoint safety officers. Trade union ambivalence on the issue of statutory provisions stemmed primarily from concerns that these would shift the onus of responsibility for safety from the employer and could jeopardize compensation claims. Questions as to how the issue of employers duties and responsibilities before the law affect the sharing of authority in determining safety conditions at the workplace are discussed by G.R.C. Atherley, 'Strategies in Health and Safety at Work', The Production Engineer, January 1975, at pp. 51-3. See also Brenda Barrett, 'Safety Representatives, Industrial Relations and Hard Times', Industrial Law Journal, Vol.6, 1977, particularly pp. 177-8.
12. See H.A. Clegg, The Changing System of Industrial Relations in Great Britain, Basil Blackwell, Oxford, 1979, particularly Chapter 2 on 'Shop Stewards and Workplace Bargaining'.
13. A number of interesting retrospective analyses of these developments, written with a view to appreciating the impact of the changed economic and political circumstances in recent years on the 'climate' of industrial relations, have recently been published. See, for example, B.C. Roberts, 'Recent Trends in Collective Bargaining in the United Kingdom', International Labour Review, Vol.123, no.3. 1984, pp. 287-306; M. Terry, 'Shop Stewards through Expansion and Recession', Industrial Relations Journal, Vol. 14, no.3, 1984, pp. 49-58; also C. Hanson and P. Rathkey, 'Industrial Democracy: A Post-Bullock Shopfloor View', British Journal of Industrial Relations, Vol.22, no.2, 1984, pp. 154-68.
14. Barrett (1977, op cit) asserts that the HSW Act 1974 was not 'political' in the sense that both major parties, in government, proposed essentially similar Bills based on the Robens Report's recommendations. There was, however, a significant difference in that the Conservatives' Bill, which was lost with the dissolution of Parliament for the ('who governs Britain') General Election of 1974, followed the Robens Committees own expressed preference for making the matter of arrangements for worker participation the

subject of an advisory code rather than statutory provision, whereas the Labour government re-drafted the Bill to include statutory provisions. Although the HSW Act came into effect in 1975, the provisions for safety representatives did not have the force of law until the SRSC Regulations became operational in 1978. In the meantime as Barrett herself documents, the repeal of s.2(5), which conferred the right to appoint safety representatives on all employees, with the Employment Protection Act 1975 was a direct political by-product of the 'social contract'; expressed as concern over the 'disruptive' influence which non-union workplace representatives would have on the 'orderly' conduct of industrial relations.

15. See the Chief Inspector of Factories Foreword to Health and Safety : Manufacturing and Service Industries 1980, H.S.E., H.M.S.O., London, 1982.
16. ibid. The Act is comprehensive in the sense of applying to virtually all workplaces, and in applying to various parties involved directly or indirectly in safety and health at work : to the owners of premises, to the designers, manufacturers and suppliers of equipment, and to the self-employed as well as to employers and employees. For a detailed guide to the Act and its interpretation see Richard Howells and Brenda Barrett, The Health and Safety at Work Act : A Guide for Managers, Institute of Personnel Management, Management Paperbacks, London, 1975. See also J. Ritson, Health and Safety at Work, Ravenswood, Kent, 1983.
17. This is amplified upon in sub-sections 2(2)(a)-(e), which require affirmative action towards the provision of safe systems or work, including the provision of adequate information, supervision, instruction and training. All these general duties are qualified by the reasonably practicable' clause. Defined in Edwards v. the NCB (1949), the clause is interpreted to mean that an employer is not obliged to do everything physically or technically possible in the way of ensuring safe systems or work, but only in so far as the severity or extent of a hazard can be held to justify the resources and / or costs involved in implementing control measures. This balancing exercise between risk and the costs of hazard control is used to determine norms and standards in those situations where an employer's obligations are not defined otherwise by statute.
18. Provision was made for the drafting of detailed standards on particular matters and for the existing body of law to be replaced and/or updated by subordinate instruments - regulations and non-statutory codes of practice. In view of the almost infinite variety of industrial activities

the object of such instruments is not to cover every conceivable situation but to supplement the general duties of the Act. HSE policy on this matter is set out clearly by the Chief Inspector of Factories in the annual report, Health and Safety...1980, *op cit*, Foreword.

19. There is, for example, an Advisory Committee on Major Hazards, on Noise, and on Asbestos. In all there are about 20 bodies dealing with particular industries or hazards, most of which will have one or more sub-committees looking into particular matters. The HSE has recently been criticised for excessive bureaucracy in that it 'continues to proliferate its committee structure'. See W.T. Singleton, 'Occupational Safety and Health Systems: A Three-Country Comparison', International Labour Review, Vol.122, no.2, 1983, pp.155-168.
20. Arrangements for safety representation in coal mining continue to be governed by the provisions of the Mines and Quarries Act 1954. These were supplemented by voluntary agreement in 1978 to bring existing arrangements in line with the SRSC Regulations on the matter of representation by colliery unions other than the NUM, payment and time-off for training. The exemption of coal mines from the SRSC Regulations is discussed in some detail later.
21. Preface to the SRSC Regulations, *op cit*.
22. See Williams, 1960, *op cit*, particularly Chapter 26 on 'What is Wrong with the Present System', and Chapter 28 'Next Steps'. See also Society of Labour Lawyers Report, Occupational Accidents and the Law, Fabian Research Series 280, the Fabian Society, London, 1970.
23. See Foreword to Health and Safety...1980, (*op cit*)
24. The Robens Committee's views on this point (see para.211) are not radically dissimilar to those voiced by Tremenhore in 1847, who considered that mines inspectors should be appointed to act in an advisory capacity (rather than being vested with powers of compulsion) in the belief that : 'the exchange of information between the Government Surveyor and the managers of imperfectly ventilated collieries would not only lead to many suggestions tending to remove known defects, and thereby to diminish the occurrence of fatal accidents, but would in many cases act as a stimulus even to well meaning and benevolent employers, by directing their timely attention to the best means of providing for the health and safety of people working in their mines'. (As cited by Rosen, 1943, *op cit*, at p.437).

25. As it was argued in 1842 : '...derangements of machinery are very expensive accidents to remedy, and if the mill-owners of Lancashire were as reckless of human life as the worst of their assailants have chosen to describe them, they certainly are not men likely to disregard their own pockets. I have had some opportunities of estimating the cost of accidents and I know that the engineer's bill is considerably heavier than the surgeon's. Without at all giving mill-owners credit for more than the average philanthropy of their countrymen, I am quite ready to repose confidence in their anxiety to prevent accidents, because their own obvious interests are a tolerably safe security for their humanity'. W. Cooke Taylor, Notes on a Tour in the Manufacturing Districts of Lancashire, London, 1842 as cited by Bartrip and Burman, 1983, op cit, at p. 11.
26. For a summary review of the research on attitudes and accident causation see A.R. Hale and M. Hale, 'A Review of the Industrial Accident Research Literature', National Institute of Industrial Psychology, Committee on Safety and Health Research Paper, H.M.S.O., 1972. The most influential single theory in the history of accident research has been the concept of accident 'liability' or 'proneness' and much of the literature on causation has concentrated on the personal attributes and personality characteristics of accident victims. The concept of accidents as a form of 'work retreatism', a variation on the accident prone theme, has retained a lingering influence in attempts to explain variations in accident absenteeism, although the basis of the research has been discredited. See, for example, W. Baldamus, 'The Concept of Truly Accidental Accidents', Discussion Paper, Series E, no.14, Faculty of Commerce and Social Science, University of Birmingham, 1969. cf Theo Nichols, 'The Sociology of Accidents and the Social Production of Industrial Injury', pp. 217-29 in People and Work, Geoff Esland et al (eds), Open University Press, 1975. For a comprehensive collection of papers on accident research, with commentary, see W. Haddon, E. Suchman and D. Klein (eds), Accident Research : Methods and Approaches, Harper and Row, New York, 1964. Other good reviews are by Hale and Hale, 1975 (op cit), and H. Kay, 'Accidents: Some Facts and Theories', pp. 97-117 in Psychology at Work, P.B. Warr (ed), Penguin, 1978 (Second Edition).
27. The pioneering work in this field is by H.W. Heinrich, Industrial Accident Prevention (first published 1931, 4th edition 1959, McGraw-Hill). The HSE, on the basis of considerable empirical research conducted by the HMFI's Accident Prevention Advisory Unit (APAU), adheres to this school, viz: 'Even in industries associated with high technology, underlying causes of accidents are often organisational rather than technical...accidents are

caused by failures in control. They are not, as is often believed, the result of straightforward failures in technology : social, organisational and technical problems interact to produce them.' HSE, Managing Safety, HMSO, 1981, at pp. 3 & 6. See also N.A. Ashford, Crisis at the Workplace : Occupational Disease and Injury, M.I.T. Press, London, 1976, p.111 et seq.

28. See Haddon et al., op cit, Chapters 9 & 10. Also W. Haddon, 'The Prevention of Accidents', in Clark D.W. Macmahon (ed), Textbook of Preventive Medicine, Little, Brown & Co., Boston, 1966. Atherley, 1975 (op cit), elaborated in Atherley, Booth and Kelly, 1975 (op cit), classifies a range of preventive measures according to 'the two broad classes of concepts' relating to how accidents and ill-health are associated with work; 'safe place' and 'safe person' concepts of the danger-harm process. 'Safe person' strategies are oriented towards influencing the attitudes and behaviour of individuals (e.g. safety propaganda) whereas 'safe place' strategies are aimed at reducing the general level of danger arising from 'machines', defined in the broadest sense (e.g. extractor fans, machine guarding etc). This dichotomy is somewhat misleading, for the implication is that 'safe place' and 'safe person' concepts of danger - and hence the strategies for prevention - are somehow mutually exclusive. Little consideration appears to be given to a third 'broad class of concepts' influential in recent research on accidents causation, which Hale and Hale (1972, op cit) refer to as 'interactionist models' and Kay (1978, op cit) brackets as 'working-social environment'. Thus, 'safe person' concepts as to the source of danger may well result in 'safe place' preventive strategies, and vice versa.
29. F. Lantier and P. Pin, 'Some Psychological Aspects of Safety in Mines', Bulletin de Centre d'Etudes et Recherches Psychotechniques, Vol. 6, no.4, p.429. As quoted by Hale and Hale, 1972, op cit.
30. See the Robens Report, 1972, op cit, at p.140. Also Chapter 16 on 'The Costs of Accidents', and the listed elements of accident costs on p.195.
31. Such assertions have been reiterated on the same premises by others. See, for example, the statement made by W.J. Simpson, then Chairman of the H.S.C.: '...I want to emphasise the point that I do not believe that safety costs money. I think it is the intelligent, economic way in which to run a business in this stage of development in our society.' W.J. Simpson, 'Safety Representatives', Federation News, Vol.27, pp. 118-29, at p. 118. (Analogues to 'profitable production' for enterprises in the public and service sectors would be the maintenance of liquidity and the cost-effective provision of goods and services.)

32. The most dramatic example in the recent history of deep-mining in the U.K. which demonstrates this inter-dependence was a serious fire at the Michael colliery in Fife in 1967. This resulted not only in multiple fatalities but also in the loss of the mine.
33. See the Robens Report, 1972, op cit, Appendix 9, particularly the costing exercise for the NCB submitted by the Department of Trade and Industry at pp. 190-5. See also, J.L. Collinson, 'Safety: the Costs of Accidents and their Prevention', Mining Engineer, Vol. 139, no.220, 1980. An empirical study of the application of the Power Press Regulations 1965 points to significant savings arising from the requirement for regular maintenance checks in averting press breakdowns - i.e. accidents which involve no personal injury. See P. Morgan, 'The Costs and Benefits of the Power Press Regulations (1965)', British Journal of Industrial Relations, Vol. XXI, no.2, pp. 181-96.
34. The Robens Committee believed that once the costs of accidents can be made 'to show up clearly on the balance sheet', then 'the message' as to the economic benefits of prevention will be obvious. To this end the Committee advocated the use of techniques such as 'damage control' and 'total loss control', so as to 'bring out the full costs of accident occurrences within the firm, and the pattern of these costs, thereby providing essential data for management control' op cit, para. 49. No mention is made of the fact that the costs of prevention will show up even more clearly on the other side of the same balance sheet and accordingly affect managerial decision-making as to whether or not the 'economic return' from prevention justifies the expenditure involved. In adopting a one-sided approach the Report overlooks the more sophisticated aspects of developments in 'cost-benefit' approaches to improving health and safety which do attempt to incorporate the costs of prevention. This oversight is curious in view of the fact that a thorough analysis was published in a research paper of the Committee's own commissioning; see T. Craig Sinclair, 'A Cost-Effectiveness Approach to Industrial Safety', Committee on Safety and Health at Work Research Paper, HMSO, 1972.
35. See J. Mendeloff, Regulating Safety: An Economic and Political Analysis of Occupational Safety and Health Policy, M.I.T. Press, Cambridge, Massachusetts, 1979. Also, Assefa Bequele, 'The Costs and Benefits of Saving Lives at Work: Some Issues', International Labour Review, Vol. 123, no. 1, 1984, pp. 1-16; and G.R. Baldwin & C.G. Veljanovski, 'Regulation by Cost - Benefit Analysis', Public Administration, Vol. 62, no. 1, 1984, pp. 51-70. It is generally acknowledged that the conceptual and methodological problems of cost-benefit analysis limit the utility of such techniques as an aid to decision-making in relation to occupational safety, health and welfare,

both at the policy formulation level of state regulation and in terms of corporate decision-making. Apart from the problems of placing an economic value on life and limb, there are inherent difficulties in estimating and apportioning the resource costs involved in implementing preventive measures. On the benefit side of the equation, there are additional problems of forecasting and costing the returns which will accrue to particular parties, individually or as a group (e.g. to employers, employees, shareholders etc). The practical limitations of this technique are well documented in the few empirical studies of the subject to date. See, for example, Morgan, 1983, op cit; also, the Discussion Document produced by the Economic Development Committee (EDC) for the Chemicals Industry, Industrial Review: Health, Safety and the Environment, NEDO, London, 1981.

36. HSE, Managing Safety, 1981, op cit. at p.9. For example, as the Robens Committee itself pointed out, to an employer the cost of a fatality in terms of lost output ceases when the worker is replaced but - 'in terms of the national economy the worker is irreplaceable and a valid calculation of the output loss must include a projection into the future' (op cit, para. 421). Nor is the employer held fully accountable for costs incurred by the National Health Service or for other welfare state benefits. Also, despite the availability of DHSS benefits, it would appear that the families of those disabled by industrial injury of disease not uncommonly bear the entire financial burden through failing to claim such benefits as they are entitled to - either through ignorance or through unwillingness to embark on a procedure which they envisage as being both bureaucratic and demeaning,, with little tangible benefit at the end. Common law actions for compensation claims in this country are only instituted in about 10% of accident cases involving trade union members and, without the backing of trade union legal services, the chances of non-unionists receiving damages are considered even slimmer. See Geoff Latta & Roy Lewis, 'Trade Union Legal Services', British Journal of Industrial Relations, Vol. 12, 1974, pp.56-70. Even in the event of a successful claim, the insurance company will normally bear the brunt of the cost and the size of an employer's insurance premium will more often than not be only marginally affected. See Phillips, 1976, op cit.
37. This may be a blinding glimpse of the obvious, but it is the primary conclusion of studies such as that by Mendeloff (1979, op cit); that state intervention is required to alleviate the conflicts engendered by the mismatch between optimal levels of hazard control on the part of a particular enterprise or industry, and socially optimal levels on the macro-scale of the political-economy. See also, Walter Y. Oi, 'On Socially Acceptable Risks',

- pp. 35-72 in J. Phillips (ed), Safety at Work, Centre for Socio-Legal Studies, Wolfson College, Oxford, (Conference Papers, no.1) SSRC, 1977.
38. H.S.E., Fatal Accidents in Construction, 1978, HMSO (1979), at p.8. This is a common theme throughout the HSE's various sector and general reports.
 39. See J.E.T. Eldridge and B.M. Kaye, 'Wages and Accidents: An Exploratory Paper', in Onderneming en Vakbeweging, University of Rotterdam, 1973. Also see John Wrench, 'Speed Accidents: A Study of the Relation between Piecework and Industrial Accidents'. University of Birmingham, Faculty of Commerce and Social Science, Discussion Paper Series E, No. 17, May 1972. Also P.B. Beaumont, 1979, op cit at p.2.
 40. See the HSE's report Health and Safety: Manufacturing and Service Industries 1982, HMSO (1983) at p.58, Table C. Preventive measures to avert the fatal accidents which occurred in 1980, for example, were classified as being wholly or partly under the control of the various parties as follows : management 49%; workpeople 23%; jointly 14%; others/reasonably practicable precautions not available, 14%. The Mines Inspectorate's annual reports and the HSE's 'Black Spot' reports on fatalities in the construction industry employ similar causal classifications.
 41. For example, the County Council Association proposed, as part of its general programme of spending cuts, that the appointment of safety representatives and safety committees should be made subject to managements' discretion rather than, as the Act specifies, a union matter. See Safety, August 1979, p.1. Indeed, the Association proposed that all the general requirements of the 1974 Act should be 'left in abeyance' in relation to local authority premises, 'thereby giving discretion in the carrying out of much costly improvement work which has been required by inspectors...' ibid. In relation to the private sector, a survey of 100 manufacturing companies conducted by the magazine Engineering, reported a similar general complaint - that compliance with the provisions of the Act was at the expense of increases in production and design costs. (Financial Times, 19.8.1979, p.8, 'Safety at Work Act Hampers Industry'.)
 42. The first Consultative Document on the matter of safety representatives and safety committees, published by the H.S.C. in November 1975, proposed that regulations should be brought into operation by May 1976. Following lengthy criticisms by the T.U.C. and the C.B.I., a revised and agreed document was submitted to the Secretary of State for approval in autumn 1976. On 19 November 1976 the then Secretary of State for Employment stated in the House of

Commons, in response to questions about the continued delay in issuing the regulations, that : 'It has been decided, in view of the estimated costs involved and the current need to restrict expenditure, not to bring these regulations into force for the time being' (quoted by Barrett, 1977 op cit, p.17). Providing safety representatives will be paid time-off both for training and the performance of their functions were the main costs to employers which were given as the reason for procrastination. For example, local authorities estimated that the costs of paying safety representatives and administrative overheads would amount to £80m. p.a. (The Times, 2.12.1976). See Simpson, 1977, op cit, on the reactions of the TUC and the HSC and the lobbying by these organisations to expedite the passage of the SRSC Regulations, which eventually came into effect in October 1978.

43. On construction sites, where conditions are constantly changing, the provisions in the SRSC Regulations allowing representatives to make inspections at three-monthly intervals (reg. 5(1)) is obviously of little value. The more relevant provision is that entitling representatives to make additional inspections whenever there has been a 'substantial change in the conditions of work' (reg.5 (2)). However, a policy document 'leaked' to the British Society for Social Responsibility in Science (BSSRS) reveals how 'a major building firm' is particularly concerned with this provision: 'Lack of management control over the frequencies and extent of site inspections will prove costly. Due to the nature of a construction site, conditions of work are continuously changing. It is in this area that the union activist will seek to exploit the frequencies of site inspection. It is for site management to argue that the erection or alteration of scaffolding, new or extensions to excavations, etc., are conditions mainly inherent in the industry and do not require inspections at every change, in an endeavour to maintain the 3-monthly intervals.' (Hazards Bulletin, No.14, December 1978, BSSRS, London.)
44. See P.B. Beaumont, 1979, op cit, at p.16. Similarly hostile reactions to Paling's Safety in Employment (Inspection and Safety Organisation) Bill of 1954 are recorded by Williams, 1960, op cit, at p. 207 et seq.
45. See, for example, Anthony D. Woolf, 'Robens Report - The Wrong Approach?', Industrial Law Journal, Vol.2, 1973, pp. 88-95. Although it was rare, according to factory inspectors, for an inspection visit not to reveal a number of breaches of the law for which criminal proceedings could be instituted (see Robens Report, op cit, para. 259), two government surveys conducted in the mid-1960s illustrated the shortcomings in terms of the scope of existing law: (i) In 1966 HMFI monitored 140 construction sites for a period of six months. Of the 270

reportable accidents during the period of surveillance, only 50 (19%) could be attributed to clear breaches of the regulations. (Ministry of Labour, Accidents in the Construction Industry. Report of a Survey made during 1966, HMSO, 1967). (ii) A study of 0.5% random samples of accidents (other than those on construction sites) notified to HMFI during a six month period in 1968 revealed that only 18% could be regarded as due to clear breaches of the law. (Department of Trade and Employment, Accidents in Factories: The Pattern of Causation and the Scope for Prevention, HMSO, 1974). On the plausible assumption that accident rates could well have been higher but for the existence of these specific statutory requirements, Woolf, 1973, op cit, argues that there should be more rather than, as the Robens Committee recommended, less of such specific legal regulation.

46. In England and Wales inspectors have the power both to institute proceedings and to prosecute cases before a magistrates' court concerning an offence under any of the relevant statutory provisions. Under the Scottish legal system, inspectors used to have the same powers in relation to cases brought before a Sheriff's court (see, for example, s.149(b) of the Factories Act, 1961), but the power to act in court was withdrawn under s.39(2) of the HSW Act, 1974. Inspectors now recommend action to, and brief, the Procurator Fiscal (Scottish equivalent to the Director of Public Prosecutions) rather than, like their counterparts elsewhere in the country, handle court cases from beginning to end themselves. According to informants in the HSE, the Law Society of England and Wales is exerting some pressure to restrict the right to conduct all court cases, including those brought under health, safety and welfare legislation, to members of the legal profession. Proceedings for breach of health and safety legislation may also be instituted by the D.P.P. following a coroner's inquest, or in Scotland by the Procurator Fiscal following a public inquiry under the Fatal Accidents Inquiry (Scotland) Act, 1895, or the Fatal Accidents and Sudden Deaths Inquiry (Scotland) Act, 1906. In the U.S.A., under the Occupational Safety and Health Act 1970, workers' safety representatives can apply directly for court orders requiring inspectors to enforce regulations and to stop a process or machine which they consider to be dangerous. (See David Lewis, 'Worker Participation in Safety: An Industrial Relations Approach', pp. 96-104 in Industrial Law Journal, Vol.3, 1974; also Ashford, 1976, op cit). Similar powers were not made available to safety representatives in the U.K. under the HSW Act 1974. For a review of the rights of employers - and the prohibitions placed on employees and their organisations - to institute legal proceedings for

contraventions of health and safety legislation, see Howells, 1974, op cit, at pp. 89-90.

47. The variations between the early factory inspectors in the manner in which they exercised their discretionary powers, and the impact this had on safety at work, has been studied by Bartrip and Fenn, who conclude that individual inspectors effectively acted 'as autonomous policy-forming agents'. See, P.W.J. Bartrip & P.T. Fenn, 'The Administration of Safety: The Enforcement Policy of the Early Factory Inspectorate, 1844-1864', pp.87-102 in Public Administration, Vol. 58, no.1, 1980. The Factory Inspectorate is the most active of the inspectorates in terms of recourse to the courts, whereas the Mines and Quarries Inspectorate and the Railways Inspectorate rarely institute proceedings. In 1974, for example, 1,826 prosecution cases were brought by or for the Factory Inspectorate, compared with 3 brought by or for the MQI, and none by or for the Railways Inspectorate. See the HSE's Health and Safety Statistics series of reports for 1975 et seq, for a statistical review of prosecution cases brought by or for the various enforcement authorities and their outcomes. The variation between the Factory Inspectorate's different industry groups in their recourse to sanctions, and between the different Inspectorates - conventionally related to variations in their respective constituencies rather than to differences in enforcement policy per se - are discussed later in the text of the thesis.
48. See W.G. Carson, 'White-Collar Crime and the Enforcement of Factory Legislation', British Journal of Criminology, (10) 1970(b). Carson made an empirical study of the types of enforcement decisions taken by inspectors in respect of offences recorded by inspectors during workplace inspections. The spectrum of such decisions ranged from 'no formal action' to prosecution, with a variety of administrative measures notifying the offender of matters requiring attention inbetween, including the threat of prosecution. The pattern to emerge is 'one of substantial violation countered almost exclusively by the use of formal administrative procedures other than prosecution of offenders' (ibid at p.201).
49. See A.E. Peacock, 'The Successful Prosecution of the Factory Acts, 1833-55', pp. 198-206 in Economic History Review, Vol. XXXVII, no.2, 1984; particularly p.204 where Horner is cited as having complained, in his report of 1836, that instead of imposing exemplary penalties, the magistrates were mitigating fines to such an extent that they would encourage offenders rather than check them. The problem of meagre fines persists. For proceedings instituted by HMF I in 1975, for example, the average fine per information laid was £75. (Each prosecution case will

normally comprise 2 or more informations, i.e. specific contraventions). The level of maximum fines permissible under the HSW Act 1974 was increased from £400 to £1,000 between November 1977 and July 1978. As anticipated, the higher ceiling has helped to raise the average level of fines, but maximum penalties are rare. In 1981, for example, of the prosecutions instituted by or for HMFI, the average fine per information laid was £187. (See HSE, Manufacturing and Service Industries, Health & Safety 1981, HMSO, 1983). As Woolf (1973, op cit, at p.92) trenchantly observes: 'For the employer who is indifferent to his obligations, the inspectorate is a small paper tiger with rubber teeth; he need not attend to what it says unless he wishes to; he is most unlikely to be prosecuted if he does not, and if he is prosecuted, it will not hurt. In this situation the inspectorates' enforcement work can only be a bluff, and this knowledge has dominated its thinking. It has had to operate by persuasion and co-operation with employers to the maximum extent...in order not to have its bluff called sufficiently often to expose its untenable position'.

50. See W.G. Carson, 'Some Sociological Aspects of Strict Liability and the Enforcement of Factory Legislation', pp. 396-412 in Modern Law Review, 33(4), 1970(a). Also Carson, 1970(b), op cit. For confirmation that such views are still very much adhered to, see HSC, Report 1977-8, HMSO (1978), p.21.
51. H.M. Chief Inspector of Factories, Annual Report for 1969, Cmnd. 4461, HMSO (1970). This statement was prefaced with a common analogy to motoring, viz - 'It is no more thinkable that there should be so many Inspectors that one could be permanently stationed in every works that that, say, every fifth motor car should be a police car to enforce the Road Traffic Act.' This analogy between voluntary compliance on the part of employers and that practiced by motorists is not particularly apt given the different enforcement policies of the police and the inspectorates, but it was cited with approval by the Robens Committee (para.208) in support of its own general philosophy.
52. About 8m. workpeople previously outside the scope of health and safety legislation were covered for the first time by the HSW Act 1974, and most of these fell within HMFIs 'constituency'. (See HSE, Manufacturing and Service Industries..., op cit, p.50). The HSE estimated that at least 300 additional inspectors would need to be recruited and trained in order to cope with the scale of these additional responsibilities which 'has been and will continue to be a serious strain on the resources of the Factory Inspectorate'. (HSE Director General's Report to the HSC, 1 January 1975 to 31 March 1976, in HSC Report 1974-76, HSC, HMSO, 1977, p.25). The phased process of

recruitment and training - estimated to be completed by 1983 - was, however, affected by government cutbacks in public expenditure, so that this 'serious strain' on existing resources was only partially alleviated. For details of the reduction in expenditure required, see Safety, January 1980. For the HSC's prognosis as to the effects in terms of the work of the HSC and the HSE, see the letter to the Employment Secretary, James Prior, from T.C. Carle, Acting Chairman of the HSC, published in Safety, November 1979, pp20-1.

53. Apart from the administrative procedures which had evolved within the inspectorates (see Carson, 1970(b) op cit), factory inspectors could also apply for court orders under s.157 of the Factories Act 1961 requiring an employer to rectify a contravention within a specified time period. This procedure suffered from the same drawbacks as prosecution in the sense of being both lengthy and cumbersome, and there is little evidence of it being used. The new notice procedures are more effective in that they are issued directly by inspectors. Under s.21 of the 1974 Act an inspector is empowered to issue an improvement notice whenever he is of the opinion that any relevant statutory provision has been or is likely to continue to be contravened. This requires the person(s) involved to rectify the situation within such a time period as the inspector deems fit. Under s.22 of the 1974 Act an inspector can serve a prohibition notice which has the immediate effect of stopping the job, on similar grounds to those warranting an improvement notice (s.22(1)) or whenever he is of the opinion there exists an imminent risk of serious personal injury (s.22(2)). Section 22(4) also permits the issue of a notice which is half-way between an improvement and an immediate prohibition notice - deferred prohibition notice - to take effect at the end of a period specified by the inspector unless the situation to which it applies has been rectified in the meantime. This notice facility was new to all the inspectorates except the Mines and Quarries Inspectorate, for similar provisions empowering inspectors to issue notices existed under s. 146 of the M&Q Act 1954 (although they do not appear to have been used).
54. For example, in 1975, the year in which the 1974 Act became operational, HMFII inspectors issued 6,397 enforcement notices, 97% of those issued by all the HSE inspectorates and HSC agencies. The only other inspectorate to have made much use of the notice procedures is the Agricultural Inspectorate, and these two agencies between them account for all but a couple of the notices issued by the HSE inspectorates and agencies. E.g. of the 9,917 notices issued in 1979, HMFII inspectors issued 7,090 (72%) and Agricultural inspectors issued the rest (2,817). Local

Authority inspectors have been increasingly active in using these enforcement notices, with the numbers issued increasing year by year from 979 in 1975, to 7,274 in 1979. Since 1979 the number of notices issued by all these enforcement authorities appears to have dropped off, possibly reflecting reduced rates of industrial activity with the general economic recession. See HSE, Health and Safety Statistics series of report, 1975 et seq.

55. HSE, One Hundred Fatal Accidents in Construction, at para. 56 (HMSO, 1978). The issuing of notices follows the inspectorates' traditional pattern in that enforcement decisions are weighted towards the less threatening forms of action. For example, every year since 1975, between two-thirds and three-quarters of all the enforcement notices issued by HMFI inspectors have been improvement notices. See HSE, Manufacturing and Service Industries series of reports, for 1975 et seq.
56. Robens Report, 1972, op cit, para. 66 and Chapters 7 & 9. Whether it has materialized or not, current HMFI policy particularly in relation to routine monitoring appears to rely heavily on 'self-regulation'. See Forewards by the Chief Inspector to the Manufacturing and Service Industries series of reports, particularly for the years 1978, 1979, and 1980.
57. See ss. 27 & 28 of the HSW Act 1974, particularly s.28 (8), and reg. 4(1)(h) of the SRSC Regulations. Inspectors have a duty to disclose 'factual information' to employees or their representatives as is necessary to keep them 'adequately informed' about matters affecting their safety, health and welfare, and about any action he has taken or proposes to take in connection with the premises. In so far as he does this, he is obliged to give like information to the employer. The Act does not entitle representatives to see inspectors' reports, a right which has been sought periodically by certain trade unions since the last century. (see Williams, 1960, op cit, Chapters 8 and 10).
58. HSC, 'Safety Representatives and Safety Committees Regulations: Guidance on Enforcement'. (This is an undated, unpublished three-page document.)
59. This stance could, perhaps, be influenced by the fact that the SRSC Regulations are permissive with respect to employees belonging to recognised trade unions (it is up to them to initiative the appointment of safety representative and thus make the regulations operational) while the employers' obligations are mandatory once such action has been taken. Whether or not this is so, the HSC's reluctance to see inspectors becoming involved in conflictual issues is not a new development. A number of statements to this effect made by various

Factory Inspectorate spokesman over the years have been cited by J. Grayson and C. Goddard, 'Industrial Safety and the Trade Union Movement', W.E.A. Studies for Trade Unionists, Vol.1, no. 4, 1976 (second edition) at pp. 5-9.

60. The confusion as to what actually constitutes 'consultation' as distinct from 'negotiation' or collective bargaining' is no doubt involved in the HSC's reticence to consider enforcement. Indeed, Robens' use of the term 'consultation', while having the collaborative overtones consistent with the Committee's philosophy, would appear to be very similar to the term 'collective bargaining', as used in the context of the U.S. N.L.R.B.'s ruling - that job safety was a mandatory subject of collective bargaining rather than the exclusive prerogative of management. See Ashford, 1976, op cit, p.199 et seq.
61. HSC, op cit p.3.
62. Strike action over safety issues is not unknown even in poorly organised industries such as construction. In the 1960s, for example, strikes were called to demand safety officers, safety committees, or simply better safety standards in the London area on power station sites; in South Wales at the Baglan Bay petro-chemical complex; and during the construction of the Anchor steelworks in Scunthorpe. (See Grayson and Goddard, 1976, op cit, at p.4). Industrial action on such matters is, however, relatively rare. Beaumont (1979, op cit, at p.4) has pointed out that over the period 1966-74 strikes over working conditions' issues (of which health and safety matters would only be a part) ranged from only 5% in 1969 to 8.2% in 1973. Moreover, in the few cases where industrial action had been taken over safety matters, 'it was not usually part of the pressure exerted by unions to bring about an acceptable bargain. Instead, it is a protest at the employers' failure to comply with safety legislation or in order to persuade the factory inspector to take action about unsafe working conditions.' (P. O'Higgins, Workers' Rights, Trade Union Industrial Studies, Arrow Books, London, 1976. at p.79, as cited by Beaumont, ibid). If this is in fact the case, then the HSE's reluctance to see inspectors use their enforcement powers in such situations is doubly ironic.
63. Chief Inspector of Factories, Foreword to Health and Safety: Manufacturing and Service Industries 1978, HSE, HMSO, 1980.
64. See Williams, 1960, op cit, Chapter 16 on 'Trade Union Activity'. As Williams has pointed out, trade union activity on a variety of issues (such as the extension of statutory standards to fields not already covered, the strengthening of the Factory Inspectorate, the prescription of a particular illness as an industrial

disease, etc), can be said to add up to an accident prevention programme of a kind, but that the absence of 'a formulated policy on accident prevention as a whole is the significant feature'. (p.321).

65. Much of the agitational activity on the part of the trade union and labour movement up until the mid-decades of this century focussed around demands for legislation to abolish the restrictive doctrines then governing common law claims. See Wilson and Levy, 1939, op cit; also Workmen's Compensation, Volume 2. The Need for Reform, Oxford University Press, London, 1941. For a summary of changes in the laws of compensation during the 1940s see Roy Lewis, 1976, op cit, at p.7. See also, Latta and Lewis, 1974, op cit.
66. Commenting on TUC evidence to the Royal Commission on Personal Injury Compensation, a spokesman for the TUC General Executive pointed out that: 'Many unions at present value the damages action in the absence of the serious use of criminal sanctions against negligent employers.' (see the TUC 106th Annual Report, 1974, at p.109). For a critical analysis of deterrence interpretations of the law of torts, see C.G. Veljanovski, 'Economic Myths about Common Law Realities - Economic Efficiency and the Law of Torts', Working Paper No.5, March, 1979. Centre for Socio-Legal Studies, Wolfson College, Oxford, SSRC. Part of this paper consists of a statistical analysis of the impact of modifications to common law on accident rates in British coalmining over the period 1880 - 1976. In all, this work, as Veljanovski himself concludes, 'casts serious doubts on the view that negligence is or was an economically efficient response to accidents in society'. A line of argument adopted by the Robens Committee is that 'the insurance principle has the effect of reducing the incentive to take positive accident-prevention measures'. (See the Robens Report, 1972, op cit, Chapter 17 on 'Compensation and Prevention'). Other have pointed out that even where employers are not insured - e.g. the NCB, the Gas Board - 'it does not appear that any direct relationship exist between damages claims and accident investigation and prevention'. See O.H. Parsons, 'A No-Fault System?: Not Proven', pp.129-37 in Industrial Law Journal, Vol.3, 1974. The escape valves open to non-insured employers and the defences popularly used by insurance carriers to avoid paying damages are reviewed by R.A. Hasson, 'The Employers' Liability (Compulsory Insurance) Act 1969 - A Broken Reed', pp. 79-87 in Industrial Law Journal, Vol.3, 1974. For an interesting analysis of the potential effectiveness of various insurance schemes which, by obliging firms to meet the full cost of accidents, would act as an economic incentive to improving health and safety, see J. Phillips, 'Economic

Deterrence and the Prevention of Industrial Accidents', pp. 148-163, Industrial Law Journal, Vol.5, 1976. Phillips has pointed out that insurance premiums in the U.S.A. are both higher and more variable than in the U.K. For a radical critique of the North American system, see D.M. Berman, Death on the Job: Occupational Health and Safety Struggles in the United States, Monthly Review Press, New York and London, 1978. See particularly Chapter 4 on 'The Compensation-Safety Apparatus'.

67. Early examples of such safety agreements concerned the appointment and functions of safety representatives, some of which were signed before the SRSC Regulations came into effect. E.g. an agreement was reached at the end of 1977 between the three rail unions (NUR, ASLEF, and TSSA) and the British Railways Board on the appointment of safety representatives from amongst shop stewards and for time-off to attend TUC courses. (See Health & Safety Information Bulletin, no.29, May 1978, at p.12). Lack of familiarity with the new law on the part of full-time officials evidently caused some problems. For example, the BSSRS 'Guide for Safety Representatives' (London, 1978) refers to UCATT regional officials as having signed agreements which, on the matter of the number of inspections which safety representatives are entitled to make, 'actually downgrade the minimum rights given in the Regulations'.
68. A study by Ramsay indicates that workers would ideally like to have a great deal more influence in 'safety matters', with the interest expressed in greater control over this aspect of their work being higher than concern expressed for greater participation in other aspects (e.g. methods of payment, fixing of work standards, etc). See H. Ramsay, 'Participation : The Shop Floor View', pp. 128-41 in British Journal of Industrial Relations, Vol. XIV, no.2, 1976; particularly pp.130-33, 'Participation on What Issues?'.
69. These studies draw mainly on the Workplace Industrial Relations surveys of 1972 and 1973 (S.R. Parker, OPCS, Social Survey Division, HMSO 1974 & 1975). See, for example, David Lewis, 'The Health and Safety at Work Act 1974: New Opportunities for Worker Participation', pp. 19-34 in J. Phillips (ed), 1976, op cit; also, A.I. Glendon, 'Safety and Health : Workplace Bargaining', Mimeo, Department of Occupational Health and Safety, University of Aston in Birmingham, July 1976.
70. Hence the TUC's early projections, yet to materialize, that the number of safety representatives appointed by unions would eventually approach the number of other lay union officials (250,000 or more). See Glendon and Booth, 1982, op cit.

71. Some early work on this subject, based on a questionnaire administered to safety representatives attending TUC training courses, was produced by P.B. Beaumont, 'The nature of the relationship between safety representatives and their workforce constituencies', pp. 53-60 in Industrial Relations Journal, Vol.12, no.2, 1981.
72. 'Safety Appointed', at pp. 55-8 in Employment Gazette, Vol.89, no.2, February 1981.
73. See HSE, Foreward to Construction Health & Safety 1979-80, HMSO, 1981.

CHAPTER 4

1. Loveridge presents a critical analysis of contingency models of participation, with particular reference to the concepts of participation 'potential' and 'propensity' put forward by Walker (1975). See R Loveridge (1980), 'What is Participation? A Review of the Literature and Some Methodological Problems', British Journal of Industrial Relations, Vol XVIII, no 3, pp 297-317. See also, M Marchington and R Loveridge (1983), 'Management Decision - Making and Shop Floor Participation', in K Thurley and S Wood (eds), Industrial Relations and Management Strategy, Cambridge, Cambridge University Press.
2. See B J McCormick (1979), Industrial Relations in the Coal Industry, London, Macmillan, at Chapter 5, 'Absenteeism, Accidents, Strikes and Labour Turnover'. For a critical review of the studies on accidents as a form of work retreatism, pioneered by Hill and Trist (1953), see Hale and Hale (1972) op cit.
3. The HSE's Construction Sector Reports and Construction 'Black Spot' series are the best available sources. Other publications dealing specifically with health and safety in construction are manuals written for civil engineering students, and compilations of the EEC and UK legislation affecting the construction industry. See, for example, P T Armstrong (1980), Fundamentals of Construction Safety, London, Hutchinson. Also J S Armitage (1981), 'Health and Safety Management in the Construction Industry', in S S Chissick and R Derricott (eds), Occupational Health and Safety Management, Chichester, Wiley.
4. Following up leads from these and other sources, a number of other researchers based at Universities and Colleges throughout the UK were contacted. Eventually a caucus was formed and informally dubbed the Safety Representatives Research and Teaching Group. Meetings were held on an ad hoc basis, the first being in 1980. Trade union employees, full-time and lay officials

from a number of unions and TUC tutors also attended these meetings. The Group has since been formally constituted as a Society, administered mainly by staff at the Department of Occupational Health and Safety, University of Aston, Birmingham.

5. Lady Victoria, one of the oldest mines in Scotland which was being run down for closure at the time of the study, has been turned into a mining museum on similar lines to that at Chatterly-Whitfield (Staffordshire). Mining conditions, methods and machinery are difficult to visualise in the abstract, and visiting the Chatterly-Whitfield museum was a useful preliminary exercise. The different types of coal-getting equipment and machinery used over different periods are exhibited in situ underground, thus demonstrating the dramatic character of technological changes in the coal-getting process over the last few decades.
6. The length and format of TUC courses varies quite considerably. General day-release courses, initially over five weeks and then over ten weeks, were run for safety representatives from all industries. The researcher acted as a tutor on such courses from 1978 to 1980. Early studies of safety representation were based on data obtained in these classroom situations (see, eg P B Beaumont (1981), op cit). Sector courses of a similar duration (eg for construction workers) were a later development, although the researcher was involved in the design and teaching of some of the forerunners (eg one-day courses for members of the Banking, Insurance and Finance Union, BIFU).
7. 'Workmen's Safety Representatives in the Coal Mining Industry : A Case Study', C Stevenson, unpublished dissertation, Department of Business Studies, University of Edinburgh.
8. For a collection of papers on various aspects of 'pit culture' see J Forsyth (ed), 'Miners and the Coal Culture', New Edinburgh Review, Issue 32, 1976. Local variations in workplace industrial relations are discussed by McCormick (1979) op cit, Chapter 5. See also C Edwards (1978), 'Measuring Union Power : A Comparison of Two Methods Applied to the Study of Local Union Power in the Coal Industry', British Journal of Industrial Relations, Vol XVI, no 1, pp 1-15. Also, C Edwards (1983), 'Power and Decision Making in the Workplace : A study in the Coalmining Industry', Industrial Relations Journal, Vol 14, no 1, pp 50-69.

9. Variables such as the extent of face mechanisation, the proportion of coal power-cut and power-loaded, and methods of wage payment which affected the selection of mines by researchers a few decades ago are, in the 1980s, 'constants' cf. W H Scott et al (1963), Coal and Conflict, Liverpool University Press.
10. The pilot project had been conducted at one of the four mines scheduled to close. There is an apparent discrepancy between the sample frame as based on Area data and the number of producing collieries in Scotland listed in the NCB's Annual Reports (a total of 15 for 1980/81 and 12 for 1981/82). This is accounted for by the fact that (i) the NCB Reports refer only to those units still fully operational at the end of each financial year, whereas the actual running down and salvaging process can drag on for years after the announcement of closure, and (ii) in NCB Reports the Longannet Complex, consisting of four mines, is listed as a single unit.
11. According to these performance criteria all three mines are in the middle of the range for NCB mines in Scotland. The gauge of saleable output is not synonymous with the total tonnage raised, which includes varying proportions of dirt and rock as well as 'clean coal'.
12. NCB Area staff exhibited an obvious concern with public relations; that 'outsiders' should 'get the right picture' and 'hear the right views'. Protracted discussions about the industrial relations 'climate' at different mines entered into the selection process but access to those considered by Area managements to be 'going through a bad patch' was not restricted. Moreover, the decision to select three mines reduces the risks of a 'prize pit' study which can occur with a single case.
13. Confirmation on this point was sought through consultation and discussion with NUM Area officials. The 'typicality' of the selected units was also re-affirmed later by MQI-inspectors.
14. The sample was drawn from Grade 1 deputies whereas the deployment figures for underofficials include junior deputies, assistants and shotfirers who are not qualified to take sole charge of a district.
15. Modern deep-mines are developed wherever possible with drift rather than shaft outlets so as to avoid the bottlenecks and restrictions on the transport of men and materials associated with the latter. The

three selected units all possessed the traditional shaft outlets. There are specified periods when the pit cages are used for the transfer of men or materials so that if the winding times for manriding are missed then the man cannot go underground and loses his shift.

16. Certain individuals can arrange with colliery management to work on one or two shifts only, a concession which is common for branch officials. Only one man, A SCEBTA safety representative, worked 'constant night shift'. He was interviewed when he came to the colliery during a day shift to attend a safety committee meeting.
17. The merger between the GMWU and the ASB to form GEMBAT, announced in October 1982, reduced the number of unions recruiting in the industry to seven. Other than GEMBAT and UCATT these are : the T&GWU, the AUEW(CEU), FTAT, EEPTU, and the AUAW. For an account of the structures and respective spheres of influence of these unions see J Eaton and C Gill (1981), The Trade Union Directory, London, Pluto Press.
18. See particularly E Batstone et al (1980), Shop Stewards in Action : the Organisation of Workplace Conflict and Accommodation, Oxford, Blackwell, Chapters 2 and 8.
19. The fact that branch officials could between them name only one safety representative reflects the negligible impact of the SRSC provisions and confirms the bias which would have resulted from focussing solely on appointed safety representatives.
20. The proportion of UCATT branch officials acting as stewards probably differs between those normally employed in the private sector and those employed in the public sector. Statistics for UCATT are unavailable, but a survey of lay officials in one public sector union, NUPE, showed that a third of the branch secretaries did not act as shop stewards. See B Fryer et al (1974), Organisation and Change in the National Union of Public Employees, NUPE. The Sampling procedures used for this study indicate that public sector employees, approximately a third of UCATT's total membership, comprise the vast majority of branch officials.

CHAPTER 5

1. That is, according to informants interviewed at area and colliery level. The issue was still 'live' at the time the fieldwork was conducted in that lobbying efforts on the part of the Mines Inspectorate to be transferred back to the Department of Energy were being discussed (see, for example, Safety, August 1981, p.1, and October 1981, p.7). The field inspectors interviewed considered that any repercussions of the transfer to HSC/HSE jurisdiction which had occurred had been concentrated at the policy-making level of the inspectorate, with none reporting that the changeover had, 5 years on, had any noticeable impact on their own work. The case for exempting mining from the 1974 Act and current administrative arrangements, as put in the early 1970s, is reviewed sympathetically by Bryan, 1975, op cit, Chapter 12.
2. This is particularly so in the case of inter-industry and international comparisons. Fatalities are taken, with reservations, as the only meaningful indicator owing to variations in 'accident' definitions and reporting patterns. (See P.J. Shipp and A.S. Sutton, 'A Study of the Statistics relating to Safety and Health at Work', Safety and Health at Work Committee Research Paper, HMSO, 1972). On this basis, the safety record of the British coalmining industry compares favourably with its counterparts in Europe, the U.S.A. and Japan. (See HSE, Health and Safety Statistics 1978-79, HMSO, 1981, Table 8.4).
3. Notification requirements under the 1911 Coal Mines Act were unchanged in the Mines and Quarries Act 1954 (see s.116). However, in order to standardise the disparate notification requirements and reporting procedures existing under the various main statutes, the HSE introduced new, universal regulations on this matter - the Notification of Accidents and Dangerous Occurrences Regulations (NADO) 1980. These came into effect on 1st January 1981. The statistical series for accidents in coalmining used in this section thus ends in 1980.
4. This is more restrictive than the definition of serious (Group 1) accidents used by HMFI which, for example, encompasses all fractures, dislocations and amputations other than of a single finger or toe. (See HSE, Health and Safety Statistics 1978-9, op cit, sections 3 and 6). This broader definition was adopted in the NADO Regulations 1980.
5. Much of the literature on this subject was sponsored by attempts to explain the divergence in trends of fatal and 'over 3 day' injury accidents (the latter being notifiable

to HMFI) which first became apparent in the 1940s. (See B.J. McCormick, 1979, op cit, pp.150-5 on the rising ratio of injury accidents per fatality during the 1950s and 1960s, a trend common to factories as well as mines.) A general lowering of the injury threshold, the pain or discomfort a person is willing to sustain before taking time-off work, appears to be a valid conclusion, although the host of 'explanations' posited for this are dubious. For a review of the social, psychological and economic variables associated with accidents and attendant reporting behaviour, particularly on the themes of accidents as a form of 'sanctioned absenteeism' and a form of 'work retreatism', see Hale and Hale, 1972, op cit. See also the work by Baldamus on 'psuedo-accidents' and the general critique of such analyses by Nichols, 1975, op cit.

6. Rather than a simple ratio of all injury accidents per fatality (see McCormick, 1979, op cit), the trends can be illustrated more meaningfully if a measure of severity is included; i.e. in terms of 'over 3 day' accidents per fatal/serious (F/S) accident. Thus, for example, in 1953 there were 98.6 'minor' accidents per F/S; 146 per F/S in 1967, and 78 per F/S in 1979. The extent of the increase in the number of 'serious injury' accidents reported under the different definition of the NADO Regulations 1980 is clearly not a valid measure of changes in safety conditions, but it also serves to reinforce this point. Thus, for example, under the Mines Inspectorates' definition there were 512 men seriously injured in accidents in coal mines in 1980, whereas in 1981 there were 815 serious injury accidents reported in coal mines under the new definition of the NADO Regulations.
7. Given the magnitude and dimensions of these 'intervening variables' little was thought to be gained from attempting to quantify the impact of changes in the take-up of inspection rights; e.g. through computing a 'Coal Industry Fatality Function' along the lines calculated by Veljanovski (1979, op cit pp.50-2) in an attempt to assess the impact of common law (negligence doctrines) on accident rates. Reservations as to the utility of such an exercise centred on (a) the lack of detailed data concerning the activities of workmen's inspectors, and (b) the number of assumptions necessary (e.g. in assigning proxy variables to measure the notion of 'hazard' to compute regression coefficients were expected to produce results on such a plane of statistical abstraction as to be almost meaningless.
8. The N.C.B. estimates that 259,000 jobs were lost directly as a result of closures (i.e. 54% of the net decline in the size of the industrial workforce) with the remainder due to the other factors listed.. See Monopolies and Mergers Commission Report, 1983, op cit, (at para. 8.18).

9. Trends in the number and rates of accidents in these major causal categories are charted in the MQI's Annual Reports (see, for example, Figures 2,3 and 5 in Coal Mines Health and Safety 1978, HSE, HMSO, 1979). Although these classifications relate only to reportable (fatal and 'serious') accidents, it is plausible to assume that 'non-reportable' accidents exhibit a similar pattern.
10. See Bryan, 1975, op cit; this was also a point made during interviews with mining and mechanical engineers - particularly by the NCB and NUM safety engineers.
11. Face workers as a proportion of the total colliery workforce fell from just under half in the mid-1950s to about a third by the mid-1960s. (see McCormick, 1979, op cit p.120) Subsequent mechanisation has not changed this significantly: In 1981 face-trained miners constituted 29% of the total industrial workforce and most were deployed normally on face work. (see Monopolies and Mergers Commission Report, 1983, op cit at Table 7.10). The MQI's analysis of reportable accidents by location (Face, EBG, Surface) indicates that face work is still the site of most accidents in causal categories; 'falls of ground / objects', 'haulage and transport' and 'machinery'. The miscellaneous category is, however, not similarly broken down by location. A better picture can be gained from the NCB's Annual Digest of Statistics for Scotland (unpublished), which is based on the fiscal year. For example, in the year ending March 1980, there were 58 reportable accidents (including 4 fatal) at Scottish collieries. Of these, 53.4% (31 including 3 fatal) occurred at the face, where 24.9% of the miners employed in Scotland worked that year. This compares with 27.6% EBG, where 60.5% of the workforce were employed, and 19% (11 including 1 fatal) on the surface, where 14.6% of the workforce were employed.
12. Overall, the proportion of miners in the prime age group of 25-40 fell from 35% in 1950 to 24% in 1968. (See V.L. Allen, 1981. op cit pp. 84-5). This period is marked by an increase in individual manifestations of disaffection, notably an increasing rate of absenteeism and labour turnover (see McCormick, 1975, op cit, p.138 et seq). As the industry was contracting during a period of near-full employment, thousands of men were leaving the industry voluntarily to take up jobs elsewhere. The scale of this exodus was such that in the midst of the NCB's massive redundancy schemes for shedding labour, the industry was paradoxically faced with acute localized shortages of skilled men. (See Allen, loc cit, pp. 69-70.)

13. Measures range from the layout of underground workings to, for example, the provision of stone dust barriers to dampen the effects of any explosion. 'Dangerous occurrences', such as underground fires, were reportable to the Mines Inspectorate under s.117 of the M&Q Act 1954 and, since 1981, have been notifiable under the NADO Regulations 1980. There are currently 21 incidents on the MQI's list (periodically amended) of dangerous occurrences - including, for example, any ignition of gas or dust below ground, overwinds, and failure of breathing apparatus. In 1978, for example, there were 216 dangerous occurrences reported in coal mines - remedial action having been taken sufficiently promptly to avert disasters. (See HSE, Coal Mines...1978, op cit, pp. 16-20.)
14. A dramatically successful example of mine rescue operations occurred shortly after nationalisation : a 4-day operation mounted in September 1950 following the Knockshinnoch (Castle colliery) disaster in Ayrshire, when all but 13 of the 129 miners entombed by an inrush of liquid peat/moss were subsequently rescued. See Arnot, 1955, op cit, p. 369 et seq.
15. National committees are, for example, almost invariably established following disaster inquiries where the incident has highlighted previously unrecognized hazards or poor contingency planning; e.g. the National Committee for Safety of Manriding in Shafts and Unwalkable Outlets following the Markham Disaster, and the Steep-Seam Mining Committee formed following the incident at Seafield. In many such cases regulations will follow. The most horrifying instance of this process since nationalisation was the disaster at Aberfan in South Wales in 1966 - an exceptional case in that the hazards of deep-mining operations have traditionally been confined to those who work/have worked in the industry. 114 men, women and children were killed in this unprecedented disaster when a spoil tip stacked on the side of a steep valley slipped, without apparent warning, in a rapid lava-like flow which engulfed part of this pit village including its' school. 116 of the victims were children, most of them aged between seven and ten. The NCB strongly contested its liability for the disaster at the subsequent public inquiry - a stance which drew much critical comment. See Report of the Tribunal appointed to inquire into the Disaster at Aberfan, Chairman: Lord Justice Edmund Davies: particularly 'Addendum: The Attitude of the NCB', paras. 189-97. cf. Alfred (Lord) Robens, Ten Year Stint, Cassell, London, 1972: Chairman of the NCB at the time, Robens devotes a chapter to the disaster - in the main a defensive account of the Board's reactions. See also Bryan, 1975, op cit, pp.86-7 for a summary of the mechanics of how the disaster happened, and subsequent

legislation concerning the stability of spoil tips.

16. The exceptions, generally, are where the disease is manifest in epidemic proportions and/or poses a risk to the public - for example, asbestos diseases, the effects of radiation, or hazards from the waste by-products of chemical manufacture.
17. See HSE, Health and Safety Statistics 1978-79, op cit, Tables 10.9 and 10.10. Statistics relate to certified deaths resulting in the payment of industrial death benefit to widows or dependents. The total number of deaths from pneumoconiosis (including asbestosis) over this period was 3,748, with ex-miners and quarry employees constituting 79% of the total. On the basis of the notification rate (new cases) it is reasonable to assume that the vast majority of this 79% were ex-miners.
18. ibid. Tables 10.5 - 10.8. A total of 4,559 cases were diagnosed for all industries, with coal miners and ex-miners constituting 61.7% of all new cases of respiratory diseases diagnosed which fall within the generic category of pneumoconiosis.
19. ibid. Tables 10.2 and 10.3 for a list of 'prescribed diseases' and statistics of their incidence according to SIC. Statistics relate to the DHSS year (June-June) and are therefore not directly comparable with HSE statistics (calendar year.)
20. See S. Epstein, The Politics of Cancer, Pluto Press, 1981. For studies of this process in relation to particular substances, see Dalton, 1979, op cit, on asbestos; Doniger, 1979, op cit, on vinyl chloride. Descriptive accounts of this process in relation to the occupational diseases of miners, particularly respiratory diseases, are given by Rosen, 1943, op cit, and Bryan, 1975, op cit.
21. The association between airborne dust and respiratory diseases among miners had been documented for centuries, but it was only in the 1830s that melanosis (blackening) of the lungs was first linked with the inhalation of coal dust. The disease was known to be common among colliers, incurable, and invariably fatal. The causal connection between coal dust and this disease, also known as 'miners' asthma', was widely disputed in medical circles: both at that time and in subsequent years the established scientific orthodoxy was that coal dust was not harmful. The controversy was shelved at the turn of the century in Britain for improvements in mine ventilation designed to prevent the accumulation of gases and airborne dusts and thereby prevent explosions

also served to reduce the incidence of the disease, so that 'miners' asthma' came to be considered a disease of the past. The phenomenon resurfaced in the inter-war years with mechanisation and eventually the disease was officially recognised in the U.K. in 1943. In the U.S.A. the old orthodoxy held sway until 1965, when 'black lung' was first recognized as a compensable disease in Pennsylvania (see Berman, 1978, op cit, pp. 136-42).

22. See Report of the Royal Commission, 1938, op cit.
23. Examples of suppression at source are water jets on shearers, extraction/filtration systems and, where roof coal is left above powered supports, the use of shield supports. An example of collateral measures is the periodic X-ray screening of all miners (on a voluntary basis). It is currently believed that if the disease is detected at an early stage, and the man moved away from further exposure, it will not necessarily develop or prove fatal.
24. See Bryan. 1975, op cit, pp. 110-12. Also the Mines Inspectorate's annual reports for 1975 et seq (HSE, HMSO), each of which contains a section on airborne dust. Permissible levels, as set out in the Coal Mines (Respirable Dust) (Amendment) Regulations 1978, are set in line with developments in dust suppression techniques rather than according to medical or scientifically proven 'safe' levels of exposure.
25. See the tabulations and analyses by Williams, 1960, op cit, Chapter 3; and by Bryan, 1975, op cit, Chapter 9. See also the HSE's Health and Safety Statistics series or reports.
26. Evidence to the Pay Board Enquiry, February 1974, on the relative pay of mineworkers.
27. See Department of Trade and Industry's evidence to the Robens Committee (Vol. 2, at p.416). The theme is repeated in the Mines Inspectorate's reports for the 1970s.
28. Since the mid-1960s the NCB has been developing automatic means of monitoring the underground environment and remote control systems for coal clearance (e.g. despatch-and-receive haulage systems for conveying coal away from the face.) Early experiments were with electro-mechanical systems, but since the mid-1970s attention has shifted to the potential applications of minicomputers and microelectronic devices with the development of the Mines Operating System - known as MINOS. Current MINOS appli-

cations include automating the control of the environment (e.g. methane monitoring, ventilation control, etc), coal clearance, washing and preparation operations, and experiments are underway concerning the partial automation of shearer-loaders at the face. At present, various applications are being tried at 'model' pits, and NCB plans for MINOS are said to be projected over the next two decades. Research and development work in this field is, however, 'still a long way from either fully automating the coal-face itself, or from an integrated MINOS to automate a complete mine'. See David Fishlock, 'Extracting Coal Without Miners...But Watch the Capital Costs', Financial Times, 30 January, 1979 at p.16. Also, A. Burns et al, 'The Miners and New Technology', Industrial Relations Journal, Vol.14, no.4, 1983, pp.7-20.

29. G B Baldwin, Beyond Nationalisation : the Labour Problems of British Coal, Cambridge, Mass., Harvard U P, 1955 p 4.
30. Such occurrences can obviously be disruptive as well as dangerous. The practice of developing 'spare' face capacity is one means of alleviating the effects and maintaining planned output.
31. See the Monopolies and Mergers Commission, Report, 1983, op cit, Appendix 6.1. 'The influence of ageing of pits on productivity'.
32. Longwall methods are used in all NCB mines with the main differences being whether a seam is mined by advance or by retreat methods, the former being favoured in modern units. (see Monopolies and Mergers Commission, Report, 1983, op cit Appendix 2.3. 'Longwall Mining'). Lack of standardisation in the machinery and equipment used can be attributed in part to poor client control exercised by the NCB over suppliers and manufacturers, with the costs reportedly having been exacerbated by a spurious proliferation of components and replacement parts. See V L Allen, The Militancy of the British Miners, Shipley, Moor Press, 1981, pp 110-7.
33. Codes of Practice (like the Highway Code) are advisory documents. Failure to observe any provision of an approved CoP is not in itself a criminal offence, but it is admissible evidence in prosecution proceedings. (see s17 of the HSW Act 1974). CoPs and Regulations are now made according to procedures laid down in the HSW Act 1974 (ss 15 and 16). Some informants considered that the consultative procedures followed by the HSC and the HSE in drafting new, universally applicable regulations meant that regulations in draft from for mining (eg the use of explosives, pressure vessels) were introduced at a slower rate than had been the case under the M&Q Act 1954 procedures. Colliery managers regarded the industry's Production Instructions as being binding and took the

view that, as one put it, 'PIs will eventually become law too'. It is quite possible that PIs are being drafted in preference to HSE procedures for CoPs.

34. Consents are granted in relation to certain organisational procedures as well as technical provisions made in or under Part III of the M&Q Act 1954 (Health, Safety and Welfare - Mines) and Part IV (Management and Control - Quarries). For example, consents are issued allowing the disturbance of the site of an accident or dangerous occurrence before either a Mines Inspector or a workmen's inspector have conducted an investigation. There are normally fairly stringent conditions attached to any exemption granted.
35. In a strict sense these are enabling provisions rather than duties in that power is vested in a colliery manager 'to make such rules as he sees fit', but standard practice and subsequent approval procedures make these provisions obligatory. Support rules relate to the roof and sides of the underground workings and specify matters such as the maximum permissible distance between props on a particular face. Transport rules regulate the loading, speed and general operation of vehicles and conveyors including the specification of particular modes of transport as suitable for manriding.
36. See Williams, 1960, op cit, pp. 132-50 for a review of the inspection policies of the Factory Inspectorate, M&Q Inspectorate, Railway Inspectorate and Agriculture Inspectorate. The bulk of this analysis is devoted to the Factory Inspectorate and gradual modifications in the policy of visiting each factory annually from 1911 onwards as the size of HMFIs constituency altered. By the early 1970s it was taking 4-5 years for all workplaces in the HMFIs constituency to be visited once (see Robens Report, 1972, op cit). Following the 1974 Act and cutbacks in the HMFIs budget this policy was abandoned in favour of a selective approach. In contrast, the MQI's policy of annual inspections has remained unchanged since 1911.
37. See Bryan, 1975, op cit, Chapter 9, 'Organisation and Role of the Mines Inspectorate'.
38. These figures differ from those provided in the NCB Annual Reports which relate to productive units. Three or more mines may constitute one unit, or complex, but each will be individually registered with MQI. Moreover, a mine remains registered with the MQI when productive operations have ceased; during salvage operations and sometimes long afterwards. For example, the Rothes mine in Scotland which was closed in 1962 is

used to test diving equipment and inspected as such by the District's Inspector of Mechanical Engineering. Abandoned mines converted to museums or for any other use are similarly inspected.

39. Annual Reports of H.M. Chief Inspector of Mines (and Quarries) for the 1950s reveal a shortfall of almost 20% in the full authorised complement of 180-90 inspectors. Although Bryan (1975, op cit) provides a chronological enumeration of the changing size and composition of the inspectorate from its inception, he somewhat curiously makes no reference to recruitment problems or to the distinctive pattern of inspection activity. Williams (1960, op cit, pp.126-32) documents the manning problems experienced by HMFI and points to the relative deterioration in salaries as a concern common to the MQI as well as HMFI in affecting the Inspectorates' ability to recruit and retain sufficient numbers of 'suitably qualified' persons.
40. Four of the six M&QI inspectors interviewed referred to diminishing career prospects within the industry among the reasons cited for joining the Inspectorate (as did an HMFI Construction Group inspector who had previously been a colliery under-manager). Pay parity was acknowledged to be significant by all the M&QI inspectors, the typical response being 'I didn't join the Inspectorate to take a cut in salary!' Unofficially, NCB Area informants and senior Mines Inspectors associated MQI concern at coming under HSC/HSE jurisdiction with the fact that their BACM-linked salaries are considerably higher than the civil service pay scale of their counterparts in the HSE's other Inspectorates. It was argued that should the pay parity link with the industry be broken, and there are pressures within the HSE for such a move, (a) the ability to recruit well-qualified men into the MQI and (b) the professional authority of inspectors vis-a-vis mine managements would be adversely affected.
41. Obviously these men are not exclusively dealing with coal mines. Senior M&Q inspectors and the specialists in electrical and mechanical engineering are concerned with all worksites. Basic grade M&Q inspectors numbered open-cast sites, miscellaneous mines, related worksites, and a few hard rock quarries in their allotted sub-constituencies. There were approximately 600 quarries registered in the Scottish District at the time of the survey, but the bulk of the inspection work for these worksites is delegated to two Inspectors of Quarries.
42. The statistics for Scotland are derived from MQI District Reports. Publication of this series ceased with the District Reports for 1979 (HSE, HMSO), but the MQI

Scottish District produced its' own report for 1980 and for 1981 in mimeo format. The MQI Chief Inspectors Reports from 1979 onwards make no reference to the number of coal mines registered with the Inspectorate. The last directly comparable year is thus 1978; a national average of 30.02 inspections per mine compared with an average in the Scottish District of 37.9 per mine.

43. See Monopolies and Mergers Commission Report, 1983, op cit, Chapters 2 and 7; particularly paras. 7.29 - 7.46 on management accountability.
44. Under the Coal Mines Act 1911 a mine owner or his agent was required to appoint a colliery manager for a mine who was responsible for its 'control, management and direction'. The 'mine management concept', first lodged on the statute books in 1872, was already considered outdated prior to nationalisation for it was at odds with the realities of authority and control in large mining conglomerates. See Bryan, 1975, op cit pp. 84-5.
45. These manning obligations and the required certificates of competency are less rigorous for small mines i.e. those where less than 30 men are employed underground. The composition, duties and powers of the Mining Qualifications Board are set out in Part XII ss.147-50 of the M&Q Act 1954.
46. NCB Industrial Training Branch, Supervision : Notes for Supervising Workmen and Instructors, NCB, 1964, at p.5. This booklet was obtained from a colliery training officer and it was said that re-printed versions are still standard issue.
47. B.J. McCormick (1979, op cit, p.120) points out that underofficials constituted 5.8% of the labour force in 1957 and 6.8% by 1966. By 1981 the proportion had risen to 7.5% (Monopolies and Mergers Commission, 1983, op cit, Table 7.10). The figures cited in the text are derived from translating the above directly in terms of the labour force employed underground (80%, 83% and 73% of the total for the years cited respectively).
48. In a face district, for example, a deputy will normally have a power-loading 'pool' of 18-24 men (including GES and tradesmen) working in groups along a 2-300 yard face-line and in the roadway drivages at either end. The incline of a face together with the amount of hardware and machinery are basic factors affecting both visibility and travelling conditions. Elsewhere underground a deputy's district can cover a two mile stretch of roadway with men being scattered in ones and twos along its' length at conveyor transfer points and on belt maintenance work.

49. See 'Managers and Officials Regulations' in The Law Relating to Safety and Health in Mines and Quarries, Ministry of Technology, 1966, Part II.
50. See Robens, 1972, op cit, Chapter 11 'Safety and Health'. This describes the various safety campaigns and pit-competition schemes initiated during the 1960s when Robens was Chairman of the NCB. An ongoing scheme is the 'Colliery Safety League' in which mines are grouped according to size and ranked according to accident rates. Campaigns such as the 'Planned Safety Scheme' underway in the Scottish Area at the time of the survey use a checklist approach to focus on particular problem areas (e.g. conveyor guarding, the adequacy of energy services, etc.)
51. Figure 5.5 shows the training officer(s) as reporting to the Colliery Safety Engineer but at some mines they report to the Personnel Manager and at other units, which act as training centres for surrounding mines, training is a distinct 'department' with the staff reporting directly to the colliery manager.
52. Robens, 1972, op cit, pp.239-40.
53. A deputy is obliged to inspect the second means of egress from his district at least once a month and to report on this inspection so that, in the event of the roadway normally used being blocked, he will be able to lead the men out by this alternative route.
54. Under the M&Q Act 1954 ministerial powers to make new regulations were restricted to matters specified in the Act. Hence a new statute (the 1971 Act) was required to make provision for the appointment of persons to assist the colliery managers in certain large mines in the discharge of their statutory responsibilities (i.e. enabling the appointment of Assistant Colliery Managers as well as Deputy Managers) as well as to provide an additional line of defence for under-managers of these mines who, on written instructions from the manager, are only required to be on duty at certain times.
55. The Report of the Royal Commission on Safety in Mines (1938, op cit, at pp.83-5) tabulates the Inspectorates record of prosecutions from 1901-37 and comments on the 'steady and continuous reduction in the average annual number of cases in successive periods'; from an annual average of 32 between 1906-10 to just 9 in 1936-7. The Mines Inspectorate's annual reports since nationalisation have not provided details of prosecutions instituted by or on behalf of the MQI, but there have been references in more recent reports to 'sanctions' issued under the Respirable Dust Regulations 1978. The HSE Health and

Safety Statistics series provides details of proceedings by Inspectorate since 1975 and indicate that both the MQI and the Railways Inspectorate rarely institute proceedings. (see note 47 to Chapter 3).

56. The M&Q Act 1954 is reported to have been drafted following critical discussion of the 1911 Coal Mines Act on this point of personal culpability during the Inquiry into the Knockshinnoch disaster in Ayrshire in 1950. (See Bryan, 1975 op cit pp.85-6). Prosecution proceedings brought against individuals by the other Inspectorates are relatively rare. For example, only 2.3% (36) of the 1,533 cases prosecuted by the HMFI in 1978 were brought against employed persons (see HSE, Health and Safety Statistics 1978-79, HMSO, at Table 3.11.a).
57. As NCB management informants often spoke of 'workmen' in a way which encompassed deputies, it seems reasonable to assume that deputies were among those prosecuted for other offences as well.
58. HMFI practices in this respect are discussed by Williams, 1960, op cit, pp.139-42; see also W.G. Carson (1970) (b), 'White Collar Crime and the Enforcement of Factory Legislation', British Journal of Criminology, Vol. 10, pp.383-406.
59. See the Robens Report, 1972, op cit, p.164 (Table 5).
60. See McCormick 1979, op cit pp.47-56. For an analysis of the more radical concepts of workers' control associated with the campaign for mines nationalisation a few decades earlier, see K. Coates. (ed.) (1974), Democracy in the Mines : Some Documents of the Controversy on Mines Nationalisation up to the time of the Sankey Commission, Nottingham, Spokesman.
61. Most of the NUM's general agents come through what can be dubbed the 'traditional' school. That is, the individuals appointed or elected to full-time posts are more often than not (a) NUM members, (b) largely self-educated and (c) with background experience as active lay officials. According to NUM Area informants this was also the typical profile of candidates appointed as safety agents, with incumbents developing specialist expertise 'on the job'. One of the Scottish NUM safety agents (nearing retirement) was of this school, with a background in this case of involvement as a lay official and then as a full-time official in the NUM's Scottish craft affiliate, SCEBTA. He referred to himself as 'a dying breed', for with new and replacement appointments the personal profiles of most candidates and current incumbents apparently matched that of the Area's other safety agent : a professionally qualified mining engineer who had specialised as a safety engineer while employed by the NCB.

62. Despite the general advances which have been made in the NUM's safety services the NUM safety agents interviewed referred to the union's provision as being still in its infancy. Nonetheless, the NUM's reputation concerning safety contrasts with that of its' counterpart in the USA where breakaway unions were formed around the issue of 'Black Lung'. See Berman, 1978, op cit.
63. The effects in terms of subsidising the union's specialist organisation are quite substantial given that the bulk of safety agents' time is spent on routine inspection and investigative activities.
64. Report of H.M. Chief Inspector of Mines for the year 1948, Ministry of Fuel and Power, HMSO, London (1950) at p.4.
65. The colliery manager's statutory responsibilities for all eventualities as defined under the Coal Mines Act 1911 was probably a significant factor inhibiting the disclosure of information which could be self-incriminating. See Bryan (1975, op cit, pp.84-5) on 'the mine management concept' of accountability.
66. Surveys of workplace industrial relations in mining based on the returns of branch secretaries can give a misleading impression of uniformity, for in practice the official designated as chief negotiator varies between areas, as does the business handled by this official. See, for example, C. Edwards (1983), 'Power and Decision Making in the Workplace : A Study in the Coalmining Industry', Industrial Relations Journal, Vol.14, no.1, pp.50-69.
67. See I. Boraston et al (1975), Workplace and Union: A Study of Local Relationships in Fourteen Unions, London, Heinemann, particularly pp.129-30. Also C. Edwards and D. Harper (1975) 'Bargaining at the Trade Union Interface', in P. Abell (ed.) Organisations as Bargaining and Influence Systems, London, Heinemann.
68. The changing role of deputies and disruptions in the informal workgroup - deputy wage bargaining relationship are discussed briefly by V.L. Allen, (1981) op cit, p.80 et seq. For the position as it stood in the early 1960s, see W.H. Scott, E Mumford, I.C. McGivering and J.M. Kirby, Coal and Confllice: A Study of Industrial Relations at Collieries, Liverpool University Press, Liverpool U.P. (1963).
69. This phrase was suggested by J.S. Henley and is used here with thanks.

CHAPTER 6

1. The NCB issued two Joint Departmental Instructions which act as a code of practice for interpretation of the agreement. The first dealt only with the details of payment but all aspects of the agreement were covered in the second : 'Safety Representatives and Safety Committees : Inspection of Coalmines II', NCB (PI/1978/4). This formed the basis for more detailed Area agreements.
2. The equivalent provision of the SRSC Regulations (Reg.1 (4)) is that, 'so far as is reasonably practicable', the persons appointed as safety representatives shall have either been employed by the company throughout the preceding two years or have had at least two years experience in similar employment.
3. NCB (1978) op cit para.6.
4. The paid educational leave provisions under Regulation 4(2)(b) of the SRSC Regulations, as elaborated in the HSC's supplementary Code of Practice 'Time off for the training of Safety Representatives' (HSC 9), refers to training approved by the TUC or by independent unions. It is interesting to note that NCB Area informants, referring to the politics of NUM - TUC relationships, had been surprised at the alacrity with which the NUM had agreed to in-house provision. NUM safety agents, NCB Area and colliery management representatives and MQI inspectors were involved in running these courses, but the early resistance to TUC provision seems to have given way for shortly after the survey was completed we were informed by contacts at a local Trade Union Education Centre that NUM representatives from one mine in the Area were attending a health and safety course.
5. 135 NUM Group 1 and Group 2 inspectors, 39 from NACODS and 32 from BACM attended the first series of induction courses - figures which suggest that the full complement of representatives had initially been appointed at all Scottish mines. This had, in fact, been the case at High-Tech, vacancies in the interim arising through retirement and transfer on promotion to another unit. Replacements had yet to be appointed at this unit but a second series of induction courses was being planned at the time of the survey, in part to cater for those NUM workmen's inspectors appointed according to an agreed staggered, two-year relay system, and in part to cater for new appointments by the other unions which had arisen in a similar fashion elsewhere mid-way through what should have been these new entrants' first term of office.
6. NCB (1978) op cit para.3.
7. Guidance Notes attached to the SRSC Regulations suggest that appropriate criteria in deciding the numbers of safety representatives to be appointed include (a) the

total numbers employed, (b) the variety of different occupations, (c) the size of the workplace and the variety of workplace locations, (d) the operation of shift systems and (e) the type of work activity and the degree and character of the inherent dangers. On these lines voluntary organisations such as RoSPA suggested that, ideally, one safety representative should look after not less than 25 and not more than 50 workers (see Hazards Bulletin no.15, March 1979). The implicit model here is shop steward constituencies. A survey of 162 safety representatives from large manufacturing establishments reported that the median constituency was 50 persons somewhat larger than average size of a steward's constituency. (see P.B. Beaumont, 1981, op cit p.55).

8. A circular (No. 2/78) issued by the NUM Scottish Area concerning the 1978 agreement states that a branch official, preferably the branch secretary, should be 'attached to the panel' in order to co-ordinate and maintain organisational control of all aspects of safety work. Although a number of unions recommend that shop stewards should also be safety representatives, the policy of formal linkage advocated by the NUM does not constitute a similar recommendation that the branch secretary should act as a s.123 inspector.
9. NUM recommendations are that the branch should appoint or select adequate numbers of Accident Site Observers (ASOs) to cover every district for every shift being worked. Most branch committee members are designated as ASOs, with other popular nominees being pool leaders. For details of the notification procedures and the standard 'consent' see NUM Guide to S.123 Inspectors, London, NUM (circa.1980), pp.17-25.
10. SRSC Regulations (op cit) Regulation 4(1) (a) and (b).
11. The NUM's safety agents are formally listed as members of the s.123 panels at all mines in their Area. Exceptional cases where safety representatives need not be employees are specified under Regulation 8 of the SRSC Regulations as applying only to the British Actors' Equity Association and the Musicians' Union.
12. Guidance Notes attached to the SRSC Regulations recommend that safety representatives should make a record following inspections and that this should be brought to the notice of the employer. The internal review procedure catering for new entrants is consistent with this. But the NCB instructions issued with the 1978 agreement, in commenting on the statutory reporting procedures, expressed the hope 'that such reports will in effect be the report of the whole inspection team rather than simply of the two NUM members concerned' and recommended that the new entrant representatives should add a rider if there was any doubt about this. (NCB op cit para. 14).

13. These arrangements for subsidising the services of union full-time officials are highly unusual, but the principle remains one of displacement. That is, 'if an NUM employee is a member of a team he will take the place of another NUM member: the Board never pays for more than two NUM inspectors.' (NCB, 1978, op cit para.10). In practice the safety agents follow their own schedules of routine inspections and the NUM bills the NCB quarterly for the number of shifts, the agreed rate being equivalent to that of the highest grade NUM members employed by the Board.
14. Total service as appointed workmen's inspector (rather than substitutes) was longer in two cases at High-Tech (8 and 12 years respectively), with these men having held other branch posts in the intervening period.
15. The volume of compensation work and other union business handled by a branch secretary and the expansion of the delegate's job with the introduction of PBR group incentive schemes in 1978-9 ensure that, particularly at larger units, these officials are engaged virtually full-time on union business. Their involvement in routine inspection activities is accordingly sporadic and they will tend to act as 'substitutes'.
16. The problem is obviously not unique to mining. Difficulties in finding replacements associated with the bureaucratisation of shop steward establishments is commented on by T.Shafto, 'The Growth of Shop Steward "Managerial Functions"', pp.45-52 in K. Thurley and S.Wood (eds) Industrial Relations and Management Strategy, Cambridge University Press, 1983.
17. Convention in Scotland was for the two positions for workmen's inspector to be slated, with candidates standing at branch elections specifically for that office, whereas the substitutes were nominated or re-nominated later from among the elected committee members. Recent practice at the selected units was for all the positions to be either allocated or re-allocated among committee members or for men to be selected from among those attending branch meetings and seconded onto the committee. Atrophying of the election process was reported to have occurred at Mid-Colliery and Village Pit with the new nominations made under the 1978 agreement, whereas the practice of the branch selecting workmen's inspectors was said to date from the early 1970s at High-Tech.
18. The position of workmen's inspector was commented on by several informants as a traditional entree for men with ambitions in the union who might then stand for the post of delegate or branch secretary - and thereafter full-time official. The profiles of a few of the lay and full-time officials fitted this pattern but only one of the workmen's inspectors interviewed referred to ambitions within the union as a significant reason for taking the job.

19. Mineworkers do not differ in this respect from their counterparts in other unions. The normally low turnout at branch meetings was associated with the fact that members could, as one delegate put it, 'get most of their grievances and problems off at the pit'; ie through access to union services and contact with officials at the mine. Other factors cited as instrumental were (a) the institutionalised nature of the union organisation, the intrinsically boring nature of much branch business, the off-putting effects of political infighting, and (b) the scale of modern mining, the dispersal of the workforce, and the severance of traditional social and family connections between the workplace and the workforce community. Of the latter group the dispersal of the workforce is probably the most significant given that, even at Village Pit, men are bussed into work by the NCB from a 30 mile radius.
20. For example, the mechanic employed solely on the maintenance of haulage ropes and chains in use throughout the underground workings. The job had been created to reduce the number of fatal, serious and non-injury accidents arising through the whiplash of road breakages and runaway cars.
21. A contributory factor is that SCEBTA delegates have little influence over members' earnings except through the administration of overtime rotas; tradesmen's bonus rates are determined according to the PBR rates negotiated by the Group 1 delegate. Tensions between the benefits of the NUM's protective umbrella and identity as a craft organisation may well underpin the fact that SCEBTA branch organisations tend to be less stable than those of Group 1, as indicated by a relatively higher turnover among delegates and the dearth of 'veterans' on the SCEBTA branch committees.
22. SCEBTA representatives from another mine in the Area met at an NUM Day School claimed that inspections were still being monopolised by Group 1 and that they had not been allowed a look-in yet'; antipathy which was attributed to the displacement principle and the fact that 'they don't want to give up one of their places to a tradesman'.
23. At the time of the survey there were an estimated 350 BACM members in Scotland organised according to nine occupational groups or 'sections' of colliery and Area managements. Two representatives from each section are nominated to the BACM regional committee and meetings are held twice a year. Attendance is similar to that of the other mining unions' branch meetings in that, according to an active BACM member, 'we're usually just scraping the quorum of 25'. For a brief analysis of managerial unionism see A.J. Arthurs, 'Management and Managerial Unionism', in Thurley and Wood (1983) op cit pp.13-18.
24. NCB (1978) op cit paras. 5 & 15.

25. Delays over the introduction of a fixed-sum compensation scheme for men diagnosed as suffering from pneumoconiosis was another area in which the NUM was criticised for conservatism. For a description of the scheme see Bryan (1975) op cit.
26. Those informants who expressed dissatisfaction with existing arrangements argued for two or three more shifts per two-month interval rather than for full use of the statutory provisions.
27. Although it is generally accepted that the jobs of key branch officials are practically full-time occupations (at large units especially), the NCB does not formally concede that any employee should be engaged full-time on union business. Indeed, according to an NCB Area informant, 'the Board has sometimes used this as an excuse to get rid of a manager - that he allowed the delegates at his mine not to work at all!'
28. NUM Guide, op cit, p.8.
29. Annual Report of the National Union of Mineworkers, South Wales, for 1954-5.
30. In the financial year 1978-9 the NCB paid out over £6M. in common law claims. But according to estimates by the NCB's Chief Safety Engineer, calculated at 1979 prices, injury accidents cost the Board around £65M p.a. Liability claims thus account for less than 10% whereas the estimated value of lost output is calculated at £50M (77%) - other material damage making up the total. See J.L. Collinson (1980) 'Safety : The Costs of Accidents and their Prevention', Mining Engineer, Vol. 139, no. 220, p.566.
31. A spate of walk-outs, over heat conditions being experienced in a particular section, occurred at Mid-Colliery at the time of the survey. But such disputes, classified under 'allegedly bad/unsafe working conditions', account for less than 5% of all manhours lost through industrial action at NCB mines. See Monopolies and Mergers Commission (1983) op cit.
32. The standard Form 126 is similar to the sample forms contained in Guidance Notes to the SRSC Regulations (pp. 17-18) which are suggested for use by safety representatives in making records of inspections for reporting matters to their employers.
33. MQI basic grade inspectors that, out of all the inspections investigations conducted in the course of a year, they were accompanied on no more than 2-3 occasions by workmen's inspectors.

CHAPTER 7

1. See HSE Managing Safety : A Review of the Role of Management in Occupational Health and Safety, APAU. London, HMSO (1981).
2. For example, M&QI informants estimated that the Markham Colliery Disaster in 1973, in which 18 men were killed in a shaft accident, had cost the NCB approximately £60m in duplicating brakes on winding engines at all NCB mines.
3. See HSE Monitoring Safety : An Outline Report, APAU, London HMSO (1985).
4. Good practice is to start out in a new section setting supports at 3-foot intervals. As such the interpretation given here should be read as 'reasonably practicable' in terms of a balanced assessment between costs and risk, rather than 'practicable' which in statutory safety standards is normally taken as technically feasible. This probably also applies to the use of the term by other informants.
5. See, e.g. HSE Health and Safety : Mines, Report for 1979 (1980) and for 1980 (1981), London HMSO. Detailed classifications are given in the M&QI reports annually for transport accidents, the largest single causal category, and consistent figures of 50-55% of these accidents are classified as the result of bad operator practice or lack of discipline in one form or another. Classifications of this character should not necessarily be taken at face value. But an interesting point is that when investigating accidents M&QI inspectors are asked to state whether they think the man himself contributed towards it; and the view of some of the inspectors - and indeed many of the workmen interviewed - was that 99 times out of 100 he did!
6. Men are subject to spot searches for contraband before entering the pit cage. Possession is taken as a sign of intent; most managers will concede the difference between the deliberation of a single cigarette and a single match hidden in a man's clothing and instances where a man is discovered with a packet in his pocket and probably had simply forgotten to remove it - but both are liable to be dismissed.

7. The colliery manager at this unit was keen to foster 'a village pit' sense of identification with the mine among the workmen there. He was also a firm believer in direct communication and went in for 'state of the nation' type sessions, attended by all the under-officials and leading men, about performance and productivity in their respective sections and in the mine in general. The popular pun was that these meetings were 'insultative not consultative'.
8. Other practices such as allowing men to leave the section early if the task is completed were considered by most informants to act as a greater incentive for speed than the bonus. Any effects on the bonus scheme were expected to be felt most in face and development work teams, but as these are group rather than individual contracts the incentives for speed were seen by most informants as less significant than the piecework contracts of old had been. The effects were felt to be even less significant elsewhere, given that their bonus was calculated as a percentage of the power-loading teams' rates rather than by direct PBR calculations for men on ancillary tasks. The rates were also considered to be too low in Scottish mines to materially affect interests in speed. In short, we found a general consensus among informants that initial anxieties about the effects of re-introducing incentive schemes on rates had not, as yet, materialised.
9. At Village Pit, most of those mineworkers who considered that workmen's inspectors 'would not be missed' referred to optimistic interpretations of management interests and to the unit having 'a moderate union'; both elements can be associated with size.
10. This term was suggested by George Montgomery of the NUM Scottish Area and is used here with thanks.

CHAPTER 8

1. See HSE Health and Safety Statistics series. For employment figures see DoE Employment Gazette (statistical series S8, S9 and S16).
2. Disaggregated figures for the HSE's 21 Areas are not published. HSE Construction Group informants reported that Scotland regularly accounts for about 20% of the industry's fatalities. (In 1976, for example, 36 of the total 156/23% of construction fatalities were in Scotland). This relative risk of a fatality also appears to be higher in that Scotland accounts for only 13% of the industry's employees. (See DoE Employment Gazette, *ibid.*; also the Scottish Office Scottish Economic Bulletin, Edinburgh, HMSO).
3. See the Factories Act, 1961, s.127, for definitions of 'Building Operations' and 'Works of Engineering Construction'.
4. Recorded figures are based on those fatalities voluntarily reported or which otherwise come to the attention of inspectors. In the HSE's East Scotland Area 3 fatal accidents to self-employed men were reported in 1981 (compared with 11 fatalities to employees which were statutorily notifiable under the Factories Act 1961). Senior inspectors were confident that they 'got to hear of most (non-reportable) fatalities', but other than those directly reported from the site reliance was placed on notification by the police or reports in local newspapers.
5. See DOE Housing and Construction Statistics. Over 70% of the additional 'non-reportable' fatalities in construction relate to the self-employed as opposed to men killed on premises/operations not covered by the Factories Act 1961.
6. Construction activity, used as a gauge of economic performance generally, is particularly vulnerable to the vicissitudes of governments' policies. Public capital expenditure represents the direct source of over 50% of all construction work and the effects of monetary and fiscal policy, particularly in relation to changing mortgage rates, have a direct impact on the activity levels of private building contractors. See, P. Ward (1979), Organisation and Procedures in the Construction Industry, Plymouth, Macdonald and Evans. Also, Direct Labour Collective, (1978), Building With Direct Labour : Local Authority Building and the Crisis in the Construction Industry, London, C.S.E.

7. See DOE Housing and Construction Statistics, 1970 - 1980, Table 14, as expressed in terms of the value of work sub-contracted and payments to the self-employed. Also M. Ball et al (1981), Labour Mobility in the Construction Industry : The Employers' Perspective, CIMB Report, London, HMSO. These authors discuss the appeal of self-employed sub-contractors in terms of flexibility and savings on wage-related costs (National Insurance, redundancy, etc.) and note that the significance of these factors in determining the size of contractors' core labour force increases as the size of the firm decreases. cf. HSE, Construction Health and Safety 1981-2, (HMSO), which reports that with the recession major companies have deliberately let substantial parts of their work to sub-contractors who are 'often their former employees in a different guise'.
8. It is recognised that incidence rates will vary quite substantially between occupations, but insufficiently reliable employment data for employees precludes the calculation of occupational incidence rates. These problems are compounded in relation to the self-employed. See HSE, Construction Health and Safety, 1979-80 (HMSO) for commentary on this theme.
9. A breakdown of fatalities by occupation of the employee is provided in the HSE 'Black Spot' reports for construction.
10. DOE Housing and Construction Statistics, 1970-80.
11. According to DoE statistics (*ibid.*) the self-employed, including working proprietors, constituted just under a quarter of total construction manpower in 1980 compared with 16.7% in 1970. Statistics are based on contractors' returns and are considered to underestimate the numbers involved. cf. Leopold, E. (1982), 'Construction : the Fatal Blind Spot', Safety, August, pp.12-3, reporting on work conducted by the Building Economics Research Unit, University College (London), cites higher figures; with the proportion of the self-employed fluctuating within a dramatically rising trend from 13% in 1960 to 33% in 1978 - peaking in 1973 at 38%.
12. On the basis of fatal accident incidence rates the U.K. construction industry appears to compare favourably with that of other countries. The difficulties associated with the reliability of this measure for inter-industry comparisons within the U.K. are compounded in relation to international comparisons. See HSE, Health and Safety Statistics series; also, Eden, J.F. (1975), 'A Review of Accidents in the Construction Industry', Building, Vol.229, pp.99-102.

13. HSE, Health and Safety Statistics 1978-9, HMSO, (1981).
14. The Notification of Accidents and Dangerous Occurrences (NADO) Regulations, HSC, HMSO (1980).
15. The HSE reported that around 15,000 serious accidents were being notified directly to the HSE annually compared with around 400,000 other accidents reported annually via the DHSS system for administering Industrial Injuries Benefit. See HSC Newsletter, no.29, April 1983.
16. HSE Construction Health and Safety 1981-2, London HMSO (1983).
17. Abolition of Industrial Injury Benefit was announced in late 1981 as part of a major reform in the Social Security System. 'Self-certification' replaced the system of GP certificates and a statutory sick pay scheme was introduced obliging employers to provide compensation for absence due to injury or illness. Under the new arrangements the DHSS no longer seeks details from employers on industrial accidents and diseases unless an employee is still off work 15 weeks after the accident or illness and thus qualifies for Disablement Benefits.
18. The HSC published proposals for a new notification scheme after the DHSS reforms had been effected. See Consultative Document : Proposals for Revised Arrangements for Reporting Accidents, Ill Health and Dangerous Occurrences, HMSO, 1983.
19. The Registrar General's Reports assess death as being occupationally related on the basis of 'Standard Mortality Rates'. By this criteria bricklayers' labourers, painters and decorators appear to have particularly hazardous occupations with an excess of actual over expected deaths due to lung cancer, stomach cancer and respiratory diseases (particularly bronchitis, emphysema and asthma).
20. T. Lobstein and G. Ive 'Spot the Trend', Safety, October 1978, pp.9-10. This analysis is based on DHSS data relating to benefit claims arising from certified incapacity.
21. The extent of the exodus from the industry is indicated by the bi-modal age distribution of operatives found by Marsh et al, Labour Mobility in the Construction Industry : A Survey of Manual Workers, Office of Population Census and Surveys, Department of the Environment, London, HMSO, 1981.
22. This phrase is borrowed from an internal discussion document produced for the TUC Construction Industry Committee reporting on a TUC Construction Health and

Safety Conference held in 1982.

23. Figures for the number of construction workers registered as suffering from the physical stress conditions listed as 'prescribed industrial diseases' (beat hand, beat knee, etc) and provided in the HSE's Health and Safety Statistics series.
24. For a comprehensive account of the physical, chemical and biological health hazards encountered on sites see J. Bertinuson and S. Weinstein, Occupational Hazards in Construction, Labor Occupational Health Programme Publications, University of California, Berkeley, 1978. Also, HSE, Construction Health and Safety 1977-78, HMSO, pp.10-21.
25. See S. Epstein, The Politics of Cancer, London, Pluto Press, 1981.
26. The major departure in recent years affecting construction is the Asbestos Licensing Regulations, which came into effect on 1 August 1984. These apply to most work where asbestos insulation or coating is removed, repaired or disturbed, and cover all workers except those for whom the duration of exposure is less than one hour.
27. See HSE Construction Health and Safety reports and the HSE's Accident Prevention Advisory Unit (APAU) 'Black-spot' reports for construction.
28. HSE Fatal Accidents in Construction 1977, HMSO (1979) para.3. This is not to say that developments in scale and technique are of negligible significance. Indeed the HSE points to major collapses of plant and structures in the past and warns that 'a "Construction Flixborough", probably a vast structural failure, is waiting to happen unless the industry remains vigilant.' (ibid). There has not, however, been any dramatic spin-off in terms of safety comparable to the introduction of powered supports in mining.
29. For a detailed compilation of the legislation relating to construction see J.S. Armitage, 'Health and Safety Management in the Construction Industry', in S.S. Chissick and R. Derricott (eds.) Occupational Health and Safety Management, Chichester, Wiley, 1981.
30. The creation of the Construction Division in 1967 was a forerunner to the re-organisation of the HMFI into National Industry Groups in 1974. The recruitment drive for construction inspectors in the late 1960s was, however, a one-off affair. The graduate qualifications normally required of inspectors were waived, and the men

remaining in the Inspectorate who were recruited at that time made up about 20% of the Construction Group's complement at the time of the survey. In contrast with these 'special intake' inspectors, who have no experience (or promotion prospects) outwith the Inspectorate's Construction Division or Group, HMFI inspectors do not normally expect to spend longer than 3-4 years in any one industry group.

31. J.D.G. Hammer, Foreword, HSE Construction Health and Safety 1976 HMSO.
32. See Ward, op cit (1979) for a descriptive analysis of the different types of construction activity in the building and civil engineering sectors and their relative economic significance.
33. The diffusion of responsibilities is inherent to the standard contracting procedures whereby a client awards a contract to a main or 'managing' contractor who may then sub-contract out work, with the process being repeated ad infinitum down to labour-only sub-contractors.
34. DOE Housing and Construction Statistics 1970-80 at p.54. The figures include both voluntary and involuntary liquidations.
35. Inspectors attempt to schedule their visits to notified sites to coincide with hazardous stages. In relation to housebuilding the rule of thumb in this respect is (a) excavations/foundations, (b) once past the first floor, and (c) roofing.
36. Lothian is one of the six regions which the HSE East Scotland Area is divided into for inspection purposes. The near impossibility of keeping track of construction activity is reflected in the loose 'guesstimates' of 'hundreds' or 'thousands' given by HMFI inspectors and UCATT full-time officials concerning the number of sites operative in their respective constituencies.
37. Vernacular for the plumbers, slaters, electricians and others whom the DOE classifies as 'self-employed working proprietors' and which one informant described as 'moving in and out of the industry like pipes of gas'. Head office visits are one means employed by the Construction Group of monitoring activity but the bulk of inspectors' time is spent on site visits, with a basic grade inspector visiting, on average, between 25-30 sites per week.
38. See Professor E.H. Phelps Brown (Chairman), Report of the Committee of Inquiry into Certain Matters Concerning Labour in Building and Civil Engineering, London, HMSO, 1968. Cmnd. 3714, p.24 et seq.

39. HSE statistics indicate that, on average, small and small-to-medium sized firms account for about 80% of the industry's fatalities p.a. See HSE, Construction Health and Safety series; also HSE Fatal Accidents in Construction 1978 Appendix 5 for a breakdown of fatalities by size of firm, ownership, and site duration.
40. The minimum employment criteria amending the s.2(3) general duty of the HSW Act 1974 obliging employers to provide a written safety policy was introduced with the Employers' Health and Safety Policy Statements (Exemption) Regulations 1975.
41. A system of sub-contracting is normally associated with industries lacking a developed management structure. See T. Austrin (1980) 'The "Lump" in the U.K. Construction Industry', pp. 302-15 in T. Nichols (ed) Capital and Labour, London, Fontana. Also, R. Price (1980) Masters, Unions and Men : Work Control in Building and the Rise of Labour 1830-1914, London, Cambridge University Press. cf. A.J. Taylor (1960, op cit) on the sub-contract system in mining in the 19th century.
42. Construction Group inspectors reported that the problem of pinpointing statutory responsibility for safety organisation on multi-contractor sites had been eased with the 'Swan Hunter ruling' following the disastrous fire on HMS Glasgow in 1976. The main contractor can now be held responsible not only for those the company directly employs but for all those on site. The frequently litigated question of the control component of a 'contract' has been similarly interpreted in compensation awards to individuals injured on sites where they were employed as labour-only sub-contractors. See P. Russell, 'The "Lump" and Safety', Modern Law Review Vol.40, no.4, 1977. pp.479-83.
43. HSE Construction Health and Safety 1979-80, p.11.
44. For a sectional listing of the industry's institutional apparatus see Ministry of Labour Directory of Employers' Associations, Trade Unions and Joint Organisations, London, HMSO (first published in 1960, amended and updated periodically). See also L.W. Wood (1979) A Union to Build: The Story of UCATT, London, Lawrence and Wishart, Appendix 2. This lists national affiliations, Joint Industrial Councils and other negotiating bodies with which UCATT is connected.
45. For an analysis of how union organisation in Local Authorities has developed to meet similar environmental constraints see M.Terry (1982) 'Organising a Fragmented Workforce : Shop Stewards in Local Government', British Journal of Industrial Relations, Vol.XX,no.1, pp.1-19.
46. These features have been amply documented. See the Phelps Brown Report (1968) op cit. See also the empirical studies

of labour mobility commissioned by the now defunct Construction Industry Manpower Board Marsh et al (1981) op cit ; Ball et al (1981) op cit : and the CIMB Final Report, Department of the Environment, HMSO, 1980.

47. The victimization of active trade unionists is a generally acknowledged phenomenon, but the casual conditions of employment mean that unfair dismissals are easily hidden and, as victimization is difficult to prove, the extent of the practice defies monitoring. Blacklisting probably also occurs although opinions as to the sophistication of such systems vary. Some trade union informants alleged that the larger companies operate a national blacklist assisted by organisations such as the Economic League, which is said to have compiled a blacklist of activists involved in the 1972 national strike. An organised nationwide conspiracy of this character is hard to credit given the fragmented characteristics of construction employers. The compilation of central computer records of employees on a company basis and associated practices of blacklisting related to a particular company's sites is more plausible. This can be linked with the increase in employment legislation in the 1970s which forced companies to formalise their recruitment and employment policies and to attendant developments in the personnel function, with hiring becoming the province of the contract agent or some other person rather than the foremen. (see Ward, 1979 op cit p.89 et seq). Probably the most pervasive kind is, however, blacklisting through local reputation. Whatever the blend of fact and folklore, beliefs in organised employer opposition to active trade unionists act as a deterrent to site organisation.
48. All of the UCATT Regional Organisers (ROs) interviewed cited recruitment as a primary function. In addition, two of the UCATT Scottish Region's 16 ROs form an 'Organising Team'; they travel throughout the Region with the sole purpose of recruiting men and negotiating membership agreements.
49. It is primarily the tradesmen who continue to pay their dues at branch meetings. The growth of check-off arrangements (DES) for the payment of union dues was said to have developed further in Scotland than in other UCATT Regions, with approximately 80% of the Region's income coming from this source.
50. For example, UCATT Scottish Region branch returns for January - April 1981 showed that 1177 members had been recruited but 1711 had been lost. High membership turnover has been a persistent problem. In 1973, for example, UCATT recruited 40,000 members but lost 53,000. See J. England (1979) 'How UCATT Revised its Rules : An Anatomy of Organisational Change', British Journal of Industrial Relations Vol. XVII, no. 1, pp.1-18.

51. The commonly cited reasons are 'chasing the big penny' and as a demonstration of independence from any one contractor. See England (1979) ibid; also A.J.M. Sykes (1969) (a) 'Navvies : Their Work Attitudes', Sociology, Vol.3, pp.21-35. Site informants also reported a tendency in times of recession to 'jack' when they hear of a job with longer work prospects than the site they are currently working on.
52. E. Batstone, I. Boraston and E. Frenkel (1979) Shop Stewards in Action, Oxford, Basil Blackwell, at p.10.
53. The most dramatic example in recent years was the 1972 National Building Strike. See L. Wood (1979) op cit (presiding General Secretary) for the official UCATT version of events; for a more general, radical review of the strike and its aftermath see J. Arnison (1974) The Shrewsbury Three : Strikes, Pickets and 'Conspiracy', London. Lawrence and Wishart.
54. For complementary descriptive analyses of 'Lump' or Labour-only sub-contracting (LOSC) see the Phelps Brown Report (1968) op cit; T.Austrin (1980) op cit; also M. Gagg (1969) 'The Subby Bricklayer' pp.130-46 in R. Fraser (ed) Work 2, Harmondsworth, Penguin.
55. See England (1979) op cit; also Wood (1979) op cit pp. 59-69 particularly for a detailed account of this development and the differences between the unions in their willingness to accept payment by results (PBR) schemes.
56. Between 1965-73 the number of building workers classified as operating some form of labour-only sub-contract grew from an estimated 160-200,000 to about 400,000. See Austrin (1980) op cit.
57. The mergers between the ASP&D, ABT, ASW, and AUBTW are documented in detail by Wood (1979) op cit, and the subsequent process of rule revision is analysed by England (1979) op cit.
58. DoE records show that the number of construction workers registered as unemployed increased from 89,100 in 1973 to 216,000 in 1980 (143%). There are obviously regional variations. Scotland has been relatively sheltered until recently due to the spin-off from North Sea oil activities, with the number of construction workers registered as unemployed increasing over the same period from 17,100 to 32,500 (90%). High levels of unemployment have been accompanied paradoxically by shortages in certain skilled workers, associated in part with the large scale exodus of both skilled and unskilled construction workers overseas - particularly to West Germany and the Middle East. (For details of this exodus see Financial Times Construction Special Report 27 November 1979.) The combined effects of registered, hidden and 'exported' unemployment associated

with the worsening recession are indicated by the fact that between 1980-82 the number of construction workers fell by over 200,000; comparable to the reduction in the numbers directly employed over the decade 1970-80. (See HSE Construction Health and Safety 1980-82, HMSO (1983); cf Figure 7.4.

59. Illustrated, for example, in the UCATT Executive Committee's monatorium on the replacement of full-time officials which was operative at the time of the survey.
60. A notorious example is the dispute which erupted over ladders' wage rates at the CEGB Isle of Grain power station site in 1979 involving the GMWU, AUEW(CEU) and EETPU which has been described as 'one of the most intractable inter-union disputes in recent years'. See J. Eaton and C. Gill (1981) The Trade Union Directory London, Pluto Press, p.318 et seq.
61. For a succinct review of the trade unions recruiting in the construction industry, their respective structures and spheres of influence, see Eaton and Gill (1981) ibid.
62. The national strike in 1972 centred on the demand for a basic wage of £30 for a 35 hour week but at the same time, as Austrin (1980 op cit) has noted, construction workers (both union and 'lump') could earn up to and over £100 a week on contracts negotiated on site. The strike dragged on for three months and the high degree of unity exhibited by construction employers in registering this i.e. that wages gained in boom periods and/or according to requirements in local labour markets should be neither generalised nor consolidated in basic rates.
63. Any job for which a fixed or lump sum is paid is commonly referred to as 'price work'.
64. 'Grip' is a Scottish synonym for 'Lump'.
65. See Austrin (1980) op cit and England (1979) op cit. Common elements are the de-skilling of craft workers attendant to developments in building techniques, the inability of the craft unions to develop effective control measures over entry to trade through apprenticeship systems, and the fact that craft bonds were never reinforced through measures such as the North American and Canadian system of union control over hiring.
66. 96% of small firms and 77% of large firms surveyed for the Phelps Brown Inquiry (1968, op cit) claimed to have no sites with shop stewards. Although the UCATT full-time officials interviewed considered that sites employing more than 20 men were likely to have a shop steward, the general picture in the early 1980s was not through to differ greatly from that of the late 1960s.

67. This 'school of experience' is associated with the development of political commitments among many construction site stewards, with affiliations to the left of the Labour Party. See England (1979) op cit.
68. Joint Branch Secretaries and Shop Stewards Committees (JBS-SSC) exist in most areas and meet quarterly. Although no alternative to branch meetings as far as ordinary members are concerned, the branch informants who attended these meetings considered them useful as a means of keeping in contact with their full-time officials and with other stewards. These JBS-SSC meetings are, however, attended mainly by Local Authority shop stewards and operate according to fairly restrictive, non-policy making terms of reference.
69. K. Hawkins (1981) Trade Unions, London, Hutchinson, at p.132 cites 1976 data on the ratio of full-time officials to members for the 12 largest unions. UCATT, with 170 ROs, is shown as having the highest ratio of 1:1, 726 whereas USDAW, which has a similarly dispersed and fragmented membership, is shown as having 133 full-time officials - a ratio of 1:3,102 members. Information obtained during the survey indicates that the UCATT ratio is now much closer to that of USDAW. A reduction in the number of UCATT ROs through the 'natural wastage' rationalisation policy adopted following amalgamation in 1971 has accelerated in recent years, displaced by an Executive Committee moratorium on the non-replacement of ROs lost through retirements, resignations and dismissals. Thus, for example, in Scotland there were 29 UCATT ROs in 1971 and 21 by 1979. But by 1982 the number had fallen to 16 and three further job losses were pending. The size of ROs constituencies have thus been subject to periodic incremental adjustments. Branch records provide only a rough guide to the size of membership constituencies since an RO may be servicing men in his 'patch' whose membership is recorded in branches elsewhere, but returns for Scotland for 1982 show a ratio of ROs to members of about 1:3,000.
70. There are different NWRAs for (a) Building Operations and (b) Civil Engineering. In addition, UCATT is party to National Joint Council Agreements relating to industries as diverse as breweries and distilleries, engineering, shipbuilding and dockyards, paper and boardmaking, as well as Electricity, Gas, the NHS and Local Authorities. One RO, commenting on the complex task of interpretation, claimed that he had to deal with 59 different industry agreements in servicing members in his patch.

CHAPTER 9

1. See 'Safely Appointed', pp. 55-8 in Employment Gazette, Vol. 89, no.2, 1981.

2. UCATT Head Office sources could not provide hard statistics on safety representative appointments. Efforts to collate such data for the union's own use, to assist national officials in planning courses for safety representatives, were reported as being frustrated by suspicions on the part of Regional Secretaries as to the monitoring motives behind Head Office requests for information on the use being made of the SRSC Regulations.
3. The formal procedure for issuing credentials is related to the requirement under Reg.3(2) of the SRSC Regulations that employers must be notified in writing by or on behalf of a trade union of the names of the persons appointed as safety representatives and the group(s) of employees they represent.
4. Approximately 650 safety representatives attended TUC Construction Sector courses over 1979-80, but statistics for the number of construction workers attending wider based TUC sector and general courses in these and earlier years are not available. See T. Smith (1984) op cit; also HSE Construction Health and Safety 1979-80 at p.11.
5. A total of 16 safety representatives had been appointed by the four unions recognised in the plant (EETPU, AUEW, UCATT and T&GWU). All these representatives were also shop stewards. Close liaison and report-back arrangements were said to exist through the plant's Joint Shop Stewards Committee (JSSC) with the activities of safety representatives being co-ordinated through the JSSC convenor. A joint union-management safety committee had been established and met every two months following Works' Committee meetings.
6. The informant who had been union convenor on this site had contacted HMFII with queries on the use of asbestos. Although it is not possible to establish the precise sequence of events it seems that the arrangements for site inspection followed visits made by an HMFII inspector who may well have exercised a suggestive influence.
7. This is a trait common to most industries. The report shows that although safety representatives had been appointed in only 17% of the surveyed workplaces, these accounted for 79% of the 486,765 men and women employed at all workplaces surveyed. See Employment Gazette (1981) op cit.
8. These were neighbouring projects involving the construction of facilities for receiving and converting gas produced offshore in the North Sea oilfields.
9. According to informants a UCATT shop or job steward is more often than not representing those employed by the main contractor (an average membership constituency of 30-50 members on 'large' building sites) and only incidentally involved with those employed by sub-contractors.

10. The HSC was making general contingency plans and outlining procedures to assist inspectors in all the HSE's agencies to cope with, as a London-based contact in the HSE put it, 'the requests for information and advice which were thought would come flooding in around the time the SRSC Regulations officially took effect, from those who hadn't used the lead-in-time to get their act together.' The expected increase in workload never materialised. HSC and TUC projections concerning the appointment of safety representatives and reviewed by Glendon and Booth (1982) op cit.
11. National Working Rule 7A (Safety Representatives and Safety Committees) issued by the National Joint Council for the Building Industry. This is the primary forum in terms of UCATT's sphere of influence. The National Joint Council for Civil Engineering does not appear to have issued a similar NWR.
12. The following extracts are taken from the foreword and the introduction to the UCATT Handbook (1980) written respectively by the General Secretary and the National Organiser who compiled the guide.
13. See HSE Construction...1979-80, op cit, at p.11.
14. The difficulty in substantiating allegations of 'poaching' and 'suspect recruitment tactics' arises in part from a stated preference of UCATT officials for 'dealing with disputes in our own way' rather than referring complaints to the TUC disputes committee. For a brief review of TUC procedures for the resolution of inter-union disputes see H.A. Clegg (1979) op cit p.185 et seq.
15. See for example Batstone et al (1977) op cit; M.Terry (1982) op cit; M. Marchington and R. Armstrong (1984) 'Employee Participation : Some Problems for Some Shop Stewards', pp. 68-81, Industrial Relations Journal, Vol.15, no.1.
16. Common examples cited by informants as regards the need for protection against the effects of managerial inefficiency were (a) the manner in which earnings were affected by inadequate supplies of materials and (b) men being made idle through poor delivery scheduling.
17. A survey conducted for the Donovan Commission (1968) found that 40% of shop stewards had to be persuaded to take on the job and that a further 36% wanted it but had to be asked. See W.E.J. McCarthy and S.R. Parker (1968) Shop Stewards and Workshop Relations, Research Paper no.10, Royal Commission on Trade Unions and Employers' Associations, London, HMSO, at p.15. See also R.J. Moore (1980) 'The Motivation to Become a Shop Steward', British Journal of Industrial Relations, Vol. XVIII, no.1, pp.91-9.

18. Vandalism and other forms of abusive behaviour were seen as being a natural, if not excusable, reaction on the part of individual men.
19. The director was arrested on Sheriff's instructions for failing to appear in court so that his imprisonment was unrelated to the fact that summons had been served for offences under the HSW Act 1974. The imprisonment penalty is applicable for offences convicted on indictment rather than summary convictions (see s.33(3) of the HSW Act). Senior inspectors could foresee the prison sentence being imposed only in the exceptional circumstances of a major calamity which involved gross negligence and/or in which members of the public were killed. An example abroad is the imprisonment of company directors in Italy following the Sevaso disaster.
20. The establishment of safety groups by and for small firms belonging to various employers associations is normally the direct result of changes in legislation. One of the Groups covered in the survey was formed following the introduction of the Construction Regulations in 1961/2 which reduced the trigger level requiring the appointment of a safety officer from firms employing more than 40 to all those employing 20 or more. This was said to be the longest established Group in Scotland. The others covered in the survey were formed following the HSW Act. Many such groups fold as the diffuse threat effect of legislation recedes. With company size in these Groups ranging from 5-8 up to 150, over 200 and 450, and the median varying from 35-40 in one group to between 70-90 in the others, group membership is obviously a relatively inexpensive means of indicating 'good intent' for the larger of these 'small' firms. The dominant motive for group membership appeared to be a felt need for 'protection' against statutory intervention, although many of the original members are said to be members simply out of 'a yearning for respectability'.
21. Phrase used by the HSE Fatal Accidents...1977, op cit para.3.
22. See the Robens Report, 1972, op cit, para 28.
23. The personal choice exercised by the workman in the use of materials and equipment, quite apart from any 'improvisation' he may make, is considered particularly relevant in this respect. See HSE One Hundred Fatal Accidents in Construction, HMSO, (1978) para. 6 et seq.
24. Ibid para. 57.
25. Ibid para. 45.
26. HSE Fatal Accidents in Construction 1977 HMSO (1979) p 8.
27. HSE One Hundred Fatal Accidents.. , op cit p.17.

28. A.R. Hale and M.Perusse (1977 op cit) discuss such perceptions of responsibility in terms of the 'safe place' and 'safe person' categorisation of preventive strategies put forward by Atherley et al (1975 op cit).
29. This result is comparable with the findings of unpublished research by S.P. McKenna (Department of Safety and Hygiene, University of Aston) cited by Hale and Perusse (1977) op cit. 150 workers (occupations unspecified) were asked who could do most to reduce their chances of having an accident : 70% put themselves first, followed by other workers, supervisors, management, and unions.
30. This is despite the fact that HSE inspectors guarantee confidentiality and will not divulge the fact that a site inspection visit has been prompted by a complaint. Even so, inspectors acknowledged that these tactics offered limited protection in cases where, for example, a site had not been notified. The East Scotland Group got to hear of a few occasions (about half a dozen a year) where men have been sacked after an inspector's visit : 'because management have put two and two together and if they can identify the man who'll report to authority, be it us, the union or whoever, he'll be out at the first opportunity'.
31. G.R.C. Atherley (1975) op cit at p.56. See also Atherley et al (1975) op cit on the role associated with safety representatives with regard to 'safe person' preventive strategies.
32. The case related to a lump labourer and the steward acted with the explicit backing of the affected workgroup. The tactic was less a matter of reporting per se than 'informing the site agent that the squad refused to work with him'.
33. According to union informants site managements rarely initiate formal disciplinary proceedings, there being 'easier ways to get shot of a man'. The cases which do occur were said to relate to matters such as bringing alcohol on site, 'generally mucking about', vandalism, and pilfering materials.

Appendix B

1. See HSE Health and Safety : Manufacturing and Service Industries 1979, HMSO (1981), Foreword; HSE Construction ...1977-78, op cit, para.8; also an interview with the Chief Inspector of HMFII reported in Safety, April 1982, p.6.

2. The extent to which resource allocations determine policy is a sensitive point, but the recession is acknowledged in the Forewords to the HSE Manufacturing and Service Reports for 1981, 1982, and 1983 as being a critical factor affecting the determination of 'acceptable' standards. Government directives on this point are quite explicit. For example, in formally approving the HSC's Plan of Work for 1981/82 the Secretary of State, Norman Tebbit, expressed concern that 'the Commission should continue both to make every effort to limit the cost-burden on industry of complying with health and safety legislation and to plan its resources and activity to maximum effect.' (HSC Newsletter, No.22, February 1982, p.3).
3. The principal inspector has a controlling influence over the amount of reactive work undertaken in the preparation of prosecution proceedings through vetting all cases proposed by the Group's inspectors. Those approved for prosecution are thus a fraction of the number proposed. An interesting point as regards complaints is that all the inspectors cited information from 'rival firms' as the most useful source, second only to their own basic inspections as a means of bringing to light contraventions.
4. Usually in follow-up or investigative situations so as to ensure that a senior manager will be on site.
5. See HSE Construction...1979-80, op cit, para.58; also the HSE Manufacturing and Service Reports for 1979 and for 1980. The number of prosecution cases instituted by or on behalf of the Construction NIG have not been published in recent reports.
6. Exceptions are the chronic 'bankrupts' who start with a clean sheet in court every time they change their name. A White Paper on insolvencies based on some of the recommendations of Sir Kenneth Cork's 'Review of Insolvency Law and Practice' (Department of Trade, 1982) was published in February 1984. This is expected to curb 'the ease with which a person trading through one or more companies with limited liability can allow such a company to become insolvent, form a new company and then carry on trading much as before, leaving behind him a trail of unpaid creditors, and often repeating the process several times.' (Cork, as cited in The Observer, 19 February 1984, at p.29). Directors convicted of trading fraudulently (a difficult matter to prove) can now be barred from setting up in business again.
7. Senior HSE informants estimated that the preparation of each prosecution case was costing the HMFI on average £1,000.
8. Threatening to 'close down the site' is a popular bluff, which inspectors considered effective (a) because most contractors were unsure as to the real powers of inspectors and thus the bluff was rarely called and (b) because this was 'the only language some contractors will understand'.

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